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Patterning Archetypal Templates of Emergent Order
implications of diamond faceting for enlightening dialogue

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A. Introduction
The intention here is to explore radical new ways of reframing dichotomous relationships -- as epitomized by that between the perceiver of the world and what is perceived. Such an exploration may be considered relevant in response to calls for 'new thinking' and 'new paradigms' -- notably to understand some of the more divisive processes in society, as exemplified by the Middle East and other territorial disputes, whether geographical or otherwise.

But 'radical' here will also include revisiting some well-known archetypes and experiences -- for insights that they may openly conceal.

Two basic approaches are taken:
- explore idealized understandings of the dynamics of psycho-social perfection as a self-contained, sustainable experience.
- explore a variety of understandings of relationships between one thing and another as a way of reflecting on alternatives to more simplistic and limited understandings of that relationship.

There are many much-cited examples of psycho-social coherence. Usually they are idealized as symbols of a Golden Age, or of an ideal future -- when all live in fruitful peace and harmony. Unfortunately little effort has been made to work out exactly what are the dynamics of such a psycho-social condition. Phrases such as 'living happily ever after', or references to life in Heaven or in Eden -- or metaphorically at the End of the Rainbow -- offer few clues as to how people would survive the kind of boredom that sets in after a few weeks on an ideal holiday -- or the rejection by young people of life in an idyllic rural community. And yet these issues are central to the sustainability of any psycho-social community -- notably in the kinds of space colonies that are envisaged.

The many exhortations to humanity to live 'in peace' also offer few clues as to how this is to be done in practice. The recommendations made are unsatisfactory to many. The intentional communities that endeavour to put such utopian ideals into practice are only attractive to a small minority -- and generally have problems surviving several generations due to rejection by the younger generation (of communes, kibbutzim, etc.). Much is made of the identification of 'best practice' and 'approaches that work' but these, often innovative and courageous enterprises, tend also to be significant because of their marginalization and highly specialized focus.

Efforts to explore more sustainable dynamics in fiction, drama or movies have also not proven to be amazingly insightful and attractive. Tragically their main 'interest' to any audience comes from the psycho-dynamics of their tensions, dysfunctionalities and breakdown. The same problem is reflected in the design of games. Few games exemplifying the dynamics of peace have been successfully designed or attracted dedicated, skilled players.

B. Metaphoric examples of sustainable, dynamic coherence
All the above cases illustrate the fundamental lack of operating exemplars of alternatives to the reality which has proven so problematic and painful to many. Hence the merit of returning to those archetypes -- the function as powerful attractors -- by which people continue
to be influenced to some degree.

**Glass Bead Game**: Many have been inspired by the game so elusively described in Nobel Laureate Hermann Hesse's *Glass Bead Game* (1943). Many have been tempted to give form to the game on the web (search "Glass Bead Game resources") [more]. Charles Cameron, in considering this possibility, notes: "Rosaries are meditative devices which use beads to represent a series of prayers on a sequence of...mysteries... By analogy, the Glass Bead Game is an abacus of prayer... More specifically, it is a stringing together of ideas drawn from the whole range of human culture, within a formal meditative structure, to engender in its players, Hesse tells us, a state 'virtually equivalent to worship', a 'direct route into the interior of the cosmic mystery'" ([http://home.earthlink.net/~hjbone/Consider.html](http://home.earthlink.net/~hjbone/Consider.html)).

Inspired by the glass bead game metaphor, a study of organizational learning by Peter Delisi concludes: "To return to our earlier metaphor, we can say that the glass bead game symbolizes each of us as individuals coming together to exchange and build upon the knowledge that each has. But our ability to do this for the overall good of the organization depends vitally on our having developed some ability to transcend our functional barriers. In the glass bead game, a common language and grammar performed this role. In the organization of the future, interdependence will play the same role, as it truly unites peoples in a common cause. As we enter an era in which the value of information and knowledge will exceed that from our traditional products, can we ask for anything less?" Delisi discusses how the game might be applied in practice. ([http://www.org-synergies.com/GlassBeadGame.htm](http://www.org-synergies.com/GlassBeadGame.htm)). Aspects have been articulated in M A Foster's *The Game Players of Zan* (1979)

What remains to be explored are the ways of embodying a dynamic of this kind, with such a powerfully coherent aesthetic, as the architecture of one's own world. Namely how could such design allusions be given operational reality in one's apprehension and organization of reality -- whether as an individual or collectively as a community?

**Holy Grail**: This well-known archetype has fascinated many over the centuries. It has been anchored in physical quests, in mystical quests, in operas, and in action movies. It has been used as a powerful symbol, notably by secret societies. But, again, what may well remain to be explored is the way in which individual awareness can be structured as the embodiment of the Holy Grail -- as well as the nature of the collective embodiment of this reality implied by some of the allusions of the Arthurian Roundtable archetype. Rather than something 'out there' to be found and possessed, to what extent is it actually and fundamentally present in the moment -- although only very faintly recognized, if at all? Does the fundamental error lie in the projection of it 'elsewhere' rather than understanding of the form that it effectively provides to the sustainable dynamic of individual -- and collective -- life?

Are there ways that one's understanding of the world can be formed into a grill-like cup from which one can repeatedly drink? Why have the efforts of the Christian religion to use aspects of this in the ritual of mass lost their credibility?

That said however, what clues does it offer to the nature of that dynamic as offering an 'elixir'? Missing from the Roundtable legend is any useful account of the dynamics of the archetypal figures assembled around it. As with modern stories, the focus is only on the ways it became unsustainable -- not on the dynamics that ensured its sustainability and coherence. How can features of the world be understood as simply as the legend so strongly suggests -- without evoking the need to possess it?

**Archetypal cities (Camelot, etc.)**: There are a number of examples of cities, legendary and not so legendary, in which the dynamic supported 'high learning' and creativity -- fruitfully blending the arts and the sciences. Speculation on communities of the distant past (e.g. Pythagoras at Croton, the Essenes, Kowjagian, Ikwen al-safa, Din-e Ilahi) continue to inspire, in part because of the lack of details. The same is true of the Eleusinian "mystery schools"; the community surrounding the temple complex at Delphi, or the original "museum" in Alexandria. Some classical Greek academies are also of interest, particularly as a model for their Renaissance equivalents. Of special significance are the examples of "enlightened courts", whether primarily legendary (e.g. Arthur's Camelot) or reasonably well documented (e.g. Jacobean Heidelberg, Sagres of Henry the Navigator, Prague of Emperor Rudolf II, Fatehpur Sikri of Akbar the Great, Florence of Lorenzo the Magnificent, Samarkand of Ulus Beg).

Also of relevance, because of the mystique surrounding their original success, are some religious orders with a strong secular orientation (e.g. the Knights Templar and their network of "commanderies"), the cathedral builders, as well as some religious communities (e.g. Cathars). Such experiments of the past continue to nourish the imagination through fictional explorations of these possibilities (e.g. in Bacon's *New Atlantis*, in Hesse's *Glass Bead Game*, Foster's *Game Players of Zan* and the literature on utopias), or through participation in the rituals and mythology of some secret societies (e.g. Rosicrucians, Sufi orders, Golden Dawn, theosophy, freemasons) whatever their defects.

But in reviewing these examples the nature of the psycho-social dynamic that sustained this 'enhanced mode' is elusive. However, again the suggestion is that an individual may choose to order their own perception of the world as such a city -- or to share that perception as a communal reframing of a shared worldview. Such a city may thus be as much 'within' as an ordering of what is perceived 'without'. What are the constraints on enhancing one's own world in this way? How could such a city be ordered in the light of the many learnings about inappropriate responses to the challenge? To what extent is it necessary to 'rule' it rather than to allow it to be in some artful way -- inspired by the guiding principle of non-action advocated for Chinese Emperors?

**Garden of Eden**: What was the dynamic in the Garden of Eden -- before the mistakes were made? Why is it that there is no understanding of the pre-mistake dynamic? Why no reflection on it -- notably in religious circles? Why is understanding -- and interest -- again limited to awareness of the emergence of dysfunctionalities and the Fall?

Psychologically the Garden of Eden is normally set back in some inaccessible place and time. What are the consequences of discovering it in the present moment and within? Though overgrown, polluted and otherwise everything that a gardener would deplore, does it not still hold the patterns that would enable an enhanced form of order to emerge -- perhaps elusively and only momentarily, but sufficiently to encourage work to enable it to flourish? This challenge is of course true for a community and the planet as a whole.

But again the challenge is augmented because of the apparent lack of chases as to how such a garden might function sustainably -- in a
world so strongly conditioned to the necessity of fertilizers, pesticides, and the like. But how might the principles of permaculture apply to such a psychic garden?

**Realms of the Gods:** In contrast to the cases above, the myths and legends concerning the realms of the gods in different traditions do offer insights into the dynamics within such ecosystems. The western cultures have been most influenced by the gods of Olympus. and the Roman pantheon. Hindu culture remains strongly influenced by the dynamics of the relations between the gods of its pantheon. Other pantheons include those of Mayan, Celtic, and Egyptian cultures. [more] But it is an intriguing phenomenon of contemporary culture that it is game-playing (Dungeons and Dragons) that has given rise to widespread popular -- and even systemic -- interest in the relationships between such symbolic entities within their various pantheons [more; more].

Such symbolism has been a focus of attention by archetypal psychology initiated by C G Jung and notably a focus of the work of James Hillman. Archetypal psychology relies upon a model of soul that is variegated, with multiple connections both psychically and physically. The soul is seen as diverse or heterogeneous as opposed to being singular, separated, and homogenized. Hillman considers polytheism the most accurate model of humanity's innately diverse psychology: a model based in polytheism provides much more space for the expression of the marginal or the aspects of a person that are not of the ego. Archetypal psychology is also the heir to polytheistic attitudes derived from Greek, Renaissance, and Romantic thought: all styles of thought that considered the human situation as one that reflects the diversity and the imaginative potentialities of the world. Hillman claims that "Greece provides a polycentric pattern of the most richly elaborated polytheisms of all cultures, and so is able to hold the chaos of the secondary personalities and autonomous impulses of a field, a time, or an individual." It is through Greece that the West's images are derived, he claims, and that it is through Greece that we may find the means of imagining self that are not so far removed from our own experiences as to leave us floundering in a sea of half-understood metaphors and musings. [more]

But between the two extremes of game-playing and psychotherapy, and however they may be considered to be related, there remains the question of the degree to which individuals are able, or encouraged, to recognize the extent to which they are each the vehicle of a pantheon -- the biblical 'Know ye not that ye are gods' (Psalms, 82:6; John, 10:34)? The shifts between monotheism, polytheism and pantheism may be played out within each of us.

**Sacred sites:** Such sites have long been a focus of pilgrimage whether for purely religious reasons or because of the natural beauty often associated with them. In both cases they tend to catalyze a process of re-creation. Simon Schama's much-cited study of Landscape and Memory (1995) explores the resonances between landscape and organization of knowledge. There is a long tradition of geomancy associated with the sense of place, now a focus of widespread popular attention through the art of *feng shui*.

The question is to what degree these different dimensions can be fruitfully reflected in any framing of one's own location at a given time as being a sacred site. This relates in part to an attitude of re-enchanting the world as explored by Morris Berman in *The Reenchantment of the World* (1984). What is it that makes the experience of a site sacred and how does one contribute to that experience?

'Nature': Whether as a lived experience or as a form of nostalgia for such experience, nature is often the exemplar of coherence. This can be celebrated through the activity of gardeners, farmers, painters or deep ecologists. In different ways the web of relationships linking different species under different conditions sustains a rich and complex pattern of understanding. But curiously the dramatic loss of species, notably the songbirds of western Europe, in no way signals the kind of concern that was the case with the death of a canary used to detect dangerous conditions in a mineshaft.

It is indigenous peoples that have best articulated understandings of how the environment is intimately associated with psycho-cultural identity -- as presented by Darrell Posey in *Cultural and Spiritual Values of Biodiversity* (2000). From them there is an understanding how the loss of a bird effectively removes a psychic carrier sustaining an aspect of being and comprehension. Industrialization is effectively destroying the psychic equivalent of the songbirds in peoples lives.

Missing seems to be any understanding of how nature as a whole can be reframed as the template of coherence for one's own psyche. The many species are indeed natural carriers to hold understandings of interweaving complexity in a psychic environment in which each has a stewardship role. As analogues, the psychic elements (water, wind, etc) and their relationship to the land call for a level of care for one's own psyche through which the importance of a heightened level of care for their reified material variants whose urgency only then becomes apparent. It is through such understanding that the contrasting views of nature exemplified by the extremes of Native American mythology and fox-hunting -- as romanticized and criticized by advocates and opponents.

**Great works of art:** Such works evoke a pattern of associations that transcends the parts. This is the case in certain paintings, folk performances such as the *Mahabharata*, opera as exemplified by Wagner's *Ring Cycle*, or works of symphonic music.

**Macro-history:** Macrohistory should provide an overarching sense of the contrasting ways in which the quality of humanity is articulated and developed and passed from one kind of initiative to another. Johan Galtung and Sohail Inayatullah (editors) (1997) in *Macrohistory and Macrohistorians Perspectives on Individual, Social, and Civilizational Change* review the work of twenty macrohistorians: Suu-Ma Ch'ien, Augustine, Ibn Khaldun, Giambattista Vico, Adam Smith, George Wilhelm Friedrich Hegel, Auguste Comte, Karl Marx, Herbert Spencer, Vilfredo Pareto, Max Weber, Rudolf Steiner, Oswald Spengler, Pierre Teilhard de Chardin, Pitirim Sorokin, Arnold Toynbee, Antonio Gramsci, Prabhat Rainjan Sarkar, Riane Eisler, and James Lovelock. In his own contribution Inayatullah considers ten themes across the twenty macrohistorians and their systems: their episteme and context; their views on historiography (how they situate their own writings); the chosen units of analysis, the proposed causes and mechanisms of change, the role of metaphysics and the transcendental, the metaphors of time used, and the resulting stages and patterns of history; the role of a "vanguard" (minority leadership in transitions from one stage to another); exit from the theories (whether they claim to be the final truth or have openings to other theories); and the application of the theories to our own future. Galtung's combines the different macrohistorians, suggesting synergies between some of the possible pairings of ten out of the twenty covered.
To what extent does such a grand sweep exemplify the kinds of assumptions and struggles of an individual throughout a life? Can social history be used as a template for insights into personal history -- with its many triumphs and defeats?

**Leadership**: A leader has traditionally provided a vital form of coherence for a group of people -- or an individual -- through the pattern of interactions amongst them that s/he engenders. The leader provides a framework and a focus -- and cultivates a dynamic relationship with those lead. This is most significant in the case of the mentorship role of a guru of some kind. Recent decades have seen intense interest in leadership and its evocation as a key to collective response to social challenges. Leadership training has been professionalized - - although the acquisition of the skills of a 'natural' leader capable of motivating large groups remains elusive.

Of greater relevance to the argument of this paper however is the ability of an individual to internalize and embody the attributes of leadership in relation to the phenomena of the world.

**Groupings of people**: Coherence from this perspective may usefully be discussed under a variety of headings:

- **Community**: Much has been made of various forms of community as an ideal -- and currently in the international promotion of sustainable community. The major religions, in their different traditions, have long developed the model whether in the monasteries of Christianity, Buddhist sanghas (monasteries), Hindu ashrams, or Muslim communities. Utopian communities, and the more recent alternative lifestyle communities, have sought to implement less conventional variants of this ideal. In various ways any such intentional community seeks to sustain the psycho-social life of the individual within the whole -- notably through the dynamics of interaction with the diversity of those living within such a framework. Some non-intentional Christian communities in the looser sense (as in the case of the Mormons) focus very heavily on cultivating a pattern of interaction and support within their communities.

Any community of this kind can be seen as a reflection of the psychic life of the individual and a carrier for its dynamics. Each member can effectively carry a 'sub-personality' of any other member. In this sense even a non-intentional community can be perceived by any member as having a higher degree of coherence than others might choose to acknowledge. Part of the success of TV soap operas derives from their ability to provide community and engagement on a continuing basis to individual viewers.

The challenge is to understand how significance gets engendered, moved and held within any such community -- perhaps in the light of Eastern understandings of *ch'i* and notably Japanese understandings of community harmony.

- **Group**: A modern variant on the ideal notion of community is associated with the term 'group'. At its simplest and most fulfilling level coherence may be supplied by intimate networks of friends ('mates', 'cops', etc). These may well take the form of gangs. Aside from the many 'invisible professional networks', there are some striking examples that have acquired renown, overlapping with the sense of community above: the Bauhaus Group, the Monte Verita community (Ascona), the Bloomsbury Group, or secret societies such as the Hermetic Order of the Golden Dawn.

The extensive exploration over recent decades of sensitivity groups, and various forms of group dynamics, taking such extremes as meditation groups and dialogue groups, offer other variants on the sense of coherence possible. As with 'community', but possibly more closely defined, the set of members may provide an array of psychic mirrors for each other as carriers of each others sub-personalities and their dynamics.

- **Team**: A team may be a prime social referent, especially in the case of: particular team sports; crews of complex vehicles; production teams; design teams; military units (especially in combat); management teams; or as the cast for a dramatic performance. Extensive studies have been made of the psycho-dynamics of team participation in an effort to enhance team performance.

The concern here is the extent to which a team and its dynamics can be seen by an individual as consciously embodying a pattern of psycho-social dynamics in such a ways as to provide a framework and carrier for a higher order of coherence. As war veterans have asserted, military units are often appreciated for the heightened sense of reality and belonging that they offer. Other team experiences may be diffuse in comparison.

- **Family (extended)**: The family is a prime focus of coherence -- although to different degrees in different cultures, with strong family bonds in Asian and southern European cultures, and weaker bonds in Anglo-American cultures. Much social dysfunctionality is attributed to loss of such coherence as a result of modernization. On the other hand, the absolute loyalties within extended Mafia 'families' have been seen as highly problematic.

Whether in western depth psychology or Taoist philosophy, the family has been used as a structural template for dimensions of individual psychic experience. This is perhaps most extensively articulated in the *I Ching* codification.

**World Wide Web**: Internet enthusiasts reject any reservations about its positive implications, as voiced by Talbott (1995), and Roszak (1994). For some, it is the exemplification of global consciousness. Ken Wilber responds to this view as follows:

"The Net is simply the exterior social structure...But what goes through the Net -- well, that involves interior consciousness and morals and values, and none of that is even vaguely addressed by those who simply maintain the Net is global consciousness....What computer technology (and the Information Age) means is that the techno-base can support a worldcentric perspectivism, a global consciousness, but does not in any way guarantee it. As we have seen, cognitive advances are necessary but not sufficient for moral advances, and the cognitive means usually run way ahead of the willingness to climb that ladder of expanding awareness...You focus on the exterior grid and ignore the interiors that are running through that grid. The flatland idea
is that the Internet is global, so the consciousness using it must be global. Not even close. And so once again, the flatland paradigm can't even spot the problem, let alone cure it....Neither a global holistic map, nor a global Internet, will in itself foster interior transformation, and often just the opposite, contributing to arrest or even regression. When worldcentric means are presented to less-than-worldcentric individuals, those means are simply used (and abused) to further the agenda of the less-than-worldcentric individual. The Nazis would have loved the Net.” (Wilber, 1996, pp. 309-310)

In separate papers, it is argued that -- to the extent that it is patterned -- the web can be understood as articulating the 'songlines of the noosphere' as patterned coherence (Judge, 1996, 1996), whose hyperlink geometry could lend itself to sacralization (Judge, 1997). Recent moves towards a 'semantic web' and the possibility of a 'global brain' offer other ways of exploring this metaphor of coherence (Judge, 2001)

**Cell: Living cell / Conception / Ontogenesis

C. Gemstones as an accessible metaphoric exemplar of the dynamics of coherence

Cut gemstones, in the form of jewels, provide a symbolic focus for a number of dimensions highlighted in the disparate examples above. Here they are explored as a somewhat comprehensible way of holding understanding of the nature of the dynamics of coherence. Where appropriate, in italics, comments are offered on what the properties of jewels may suggest as metaphors of psych-social coherence.

Focus of attention: Gems have always been a powerful focus of attention, but for quite different though related reasons:

- **Common value**
  - for their monetary value, due in part to the rarity of the most striking
  - for their beauty (often contrasting most markedly with the ugliness of the suffering and criminality associated with their acquisition [more])
  - for their symbolic value in relation to bonds (legal, marriage of couples, or 'betrothal' to some social or higher order)
  - for the status conferred by the above, especially in ritual and customary ceremonies marking such a distinction (eg kissing a ring)

- **Imputed value**
  - for their therapeutic value according to some traditions
  - as mementos of lost integrative consciousness, or unactualized (notably in the crowns and tiaras of nobility)
  - as templates for focussing consciousness

These all interweave in various ways, with some much more prominent than others in particular circumstances. Whilst the first four are well-recognized, the other three are only meaningful within certain frameworks. The various archetypes noted earlier tend to be associated with a therapeutic dimension -- a process of making whole and healing. The more mythical and allusive suggest a pattern of 'golden age' awareness that has now been lost -- but just might be recovered. Some traditions (as noted below) with a form of practice or discipline use gemstones, especially diamond, to suggest qualities and patterns of focussing insight.

As the essence of material value -- possibly even the ultimate material attractor -- they are a form of currency used to back international loans, pay debts, pay bribes, and buy arms. In many cases they are better than money. Building on the long traditional association of diamonds with love and emotion has become central to their marketing -- prompting American, European, Japanese, and, increasingly, Chinese women to expect the "traditional" gift of a diamond engagement ring as a matter of right. In Indian mythology gems are considered to have a cosmic power in and of themselves is not surprising that jewels have deep religious significance in India where they have deep religious significance. Astrologers advise clients on which gems to wear in order to alter their destinies, and diamonds. It is believed that they have powerful effects on love, procreation, and, by extension, immortality. Both with respect to their imputed value and their common value, much associated with gemstones is illusory -- as exemplified by the monopolistic marketing practices of diamonds to sustain their value. Given their central role has carriers of common value, they therefore provide an appropriate metaphor through which to explore carriers of the coherence of imputed, non-mundane values.

Collection and refraction of light: Light entering a gem will always bend toward the normal. Light exiting a gem will always bend away from the normal. For a given angle of incidence, a gem with a higher refractive index will bend light more strongly than a gem with a lower refractive index.

- **brilliance** in gemstones results primarily from how light exits the gem. Light leaving a gemstone either escapes and is refracted away from the normal or is completely reflected back into the stone. The most brilliant gemstones are those whose pavilion facets (at the bottom of the stone) act like mirrors, reflecting light back up through the table and crown (top of stone) to the eye. Those gemstones whose pavilion facets behave as windows, passing light out the bottom of the stone, therefore look dull and less brilliant. Whether light leaving a gemstone is internally reflected or passed through a facet is determined by the angle at which it strikes the facet and the refractive index of the gemstone. As a metaphor 'light' is widely associated with awareness -- epitomized by enlightenment, whether individual or collective; how might light as insight be understood to be 'bent' by an integrative context, and reflected around within it to emerge in a focused and more coherent form?

- **cones of acceptance**: all light rays in the gem striking the facet at angles within a cone will therefore escape out the facet, and all light rays striking the facet outside the cone will be reflected off the facet and stay within the gemstone. Those gemstones with a higher refractive index have smaller cones of acceptance, and thus can internally reflect greater amounts of light than gems with lower refractive indices (larger cones of acceptance). This is the reason why gemstones of higher refractive index are more brilliant than those with lower, all other factors being equal. Because gemstones gather light from all angles, there will always be lots of light that will pass through the stone without being internally reflected. ?????
Optical properties of gems: These include:

- **luminescence or fluorescence**: Luminescence is the effect in some substances of giving out visible light when they are rubbed or scratched (triboluminescence) or when they are irradiated with invisible electro-magnetic radiations (fluorescence, phosphorescence and thermoluminescence). Also known as photoluminescence, the property some gemstones (especially some diamonds) have that makes them glow a certain color (usually blue) when exposed to specific ultraviolet wavelengths, cathode rays, X-rays or radium emanations. It is an unusual quality that can enhance the appearance of a diamond in certain lighting conditions. But when the effect is very strong, however, the diamond may have an oily appearance that detracts from its beauty and value. If the effect is continued after the removal of the exciting radiation it is then termed phosphorescence.

- **brilliance**: This is the amount of light from the diamond that reaches the eye as a result of total internal reflections from the interior of the diamond and from reflections from the external surfaces of the table and all the other facets back to the viewer. The amount of light reflecting from the stone's surface, with the smoothest surfaces resulting in the highest brilliance, also associated with high light refractivity as in gems of the highest refractive indices: diamond, zircon, and rutile; one of the properties associated with the ability of a diamond to "sparkle" in response to the introduction of light. The purpose of faceting is to bring out the brilliance of a gem.

- **lustre**: The quantity and quality of light reflecting from the surfaces, namely the brilliancy of a stone by reflected light, determined by the amount of incident light reflected from its surface. Forms of lustre are: (1) adamantine, as in diamond and some zircons, having a high refractive index; (2) vitreous, glass-like as in quartz and most gemstones (quartz, ruby, sapphire); (3) resinous, as in amber and certain garnets; (4) waxy, as in turquoise; (5) pearly, as in moonstone; (6) silky, as in tiger's eye quartz and satin-spar; and (7) metallic, as in pyrite and gold. Degrees or intensity of lustre that are distinguished are: splendid, the surface reflects light as in a mirror; shining, objects are reflected indistinctly; glistening or glimmering, denotes a still more feeble lustre; dull, little or no lustre.

- **refraction**: reflection within the stone of the greater part of the light ray, which bends as it enters the denser medium of the gem to a degree dependent upon refractive index. Total reflection is the phenomenon occurring when a ray of light travelling through a denser medium to a rarer medium at an angle greater than the critical angle suffers complete reflection back through the denser medium.

- **birefringence or double refraction**: splitting of the entering light into two rays traveling through the stone at different speeds and in different directions. The amount being measured by the difference between the maximum and minimum refractive indices in an anisotropic mineral. Notably seen in zircon, rutile, and sphene and in a variety of calcite. Anisotropic a term for crystals which exhibit double refraction.

- **dispersion or 'fire'** (also called refraction); the separation of light into its separate colours with the highest dispersion rates associated with with the highest light refraction (rutile, sphene, diamond, zircon). Dispersion is the amount of rainbow colors (multi-coloured flashes) returned to the eye from within the diamond. White light entering a stone is separated into the many colors of the rainbow just like a prism. Colour dispersion can be enhanced by appropriate cutting. Good fire can only be achieved with very good to excellent proportions. Along with life, scintillation, refraction and dispersion, a word used to describe the ability of a diamond to "sparkle" in response to the introduction of light. Also called "refraction" or most often "dispersion" in the trade. Brilliance should not be confused with fire, which is the multicolored flashes you see coming out of diamonds and some other gems.

- **scintillation or sparkle** is the combination of luster, brilliance, and dispersion (fire) when there is movement by the wearer or light source. The amount of light that reflects out of a diamond as it moves.

- **pleochroism**: Colour changes evident from different angles in gemstones (iolite, alexandrite, andalusite), provided it is cut appropriately to show off the different colours. Ruby has two-colour changes: yellow-red and purplish-red. When light passes through a doubly refractive gemstone, the light is split into two rays which are polarized at right angles to each other and travel at differing velocities through the gemstone. When this occurs, the rays are said to have experienced differential selective absorption, namely variations in the absorption of certain wavelengths dependent on direction.

- **circular polarization**: a peculiar property of quartz, among gemstones, of rotating the plane of polarization of a ray of light passing parallel to the optic axis, and showing an interference figure in convergent Polaris light, in which the arms do not meet at the centre, the four arms stopping at the innermost ring.

- **asterism** (also diasterism and episterism): a reflection from fibres or fibrous cavities in a stone, cut en-cabochon with its base parallel to the basal plane of the crystal, in a similar manner to chatoyant stones but having three sets of fibres crossing at angles of 60 (hence a six-rayed star), or at 90 (a four-rayed star). Asterias stones exhibiting a four, six or twelve-rayed star of light when cut en-cabochon in the correct crystallographic direction. Generally seen in corundums (star rubies and star sapphires with either six or twelve rays) and with rose quartz (generally six rays). Some garnets may also show the effect usually with four rays but if cut in certain directions may show six rays. Star corundums are made synthetically. The 'cat's-eye effect' (chatoyancy) is due to the reflection of light from fine fibres or fibrous cavities within the stone. The wavy band of light seen across the stone being at right angles to the direction of the fibres. To show this best stones must be cut en-cabochon.
- **clarity**: the degree to which a diamond is free from inclusions (graded on a scale from flawless to heavily imperfect), namely the presence or absence of inclusions within the diamond and blemishes on its surfaces. Most diamonds contain such tiny marks, which make each stone unique. Inclusions do not necessarily weaken the stone and if they do not interfere with the passage of light they do not affect its beauty, however the fewer and smaller the inclusions, the more valuable a diamond will be. Truly flawless diamonds are extremely rare and very valuable.

- **transparency (or diaphaneity)**: the amount of light transmitted through a substance. Degrees of transparency are classed according to the amount of light which penetrates the substance

**Glossary of Defect Terminology**

**Cut / Make**: How well a diamond is cut determines its brilliance. The skill of the cutter unlocks the natural beauty of a diamond, revealing all of its hidden fire and brilliance. Some 70 percent of the world's gem-quality diamonds are shaped using the full 58 facets [see diagram] of the Round Brilliant Cut. It is important that these are cut to precise angles. In higher quality diamonds the girdle is frequently faceted, but these facets are not counted in the total. A diamond that is cut well will reflect light from one facet to another and then back out through the top of the diamond. Only a well-cut diamond will really sparkle. A diamond cutter's challenge is to balance beauty against retaining the weight from the rough diamond crystal. In the best-case scenario, approximately 50% of the weight is lost from the original crystal in the cutting process. Cutters often sacrifice diamond beauty in order to save weight, and maximize the size of the finished diamond.

The Round Brilliant Cut originated in an early form by Vincent Peruzzi in 17th century Venice. In 1919 Marcel Tolkowsky published a doctoral dissertation presenting a theory about the exact cutting angles which would create the most proportionate balance of brilliance and dispersion in a gem-quality diamond. [more]

A backlash against these standards of the Ideal Cut in the 1950s was based on the argument that the proportions of his Ideal Cut created an inherent over-abundance of dispersion, or "fire," which distracted from the diamond's brilliance. Those who swear by the Tolkowsky or Ideal Cut say the table should be 53% as wide as the overall width of the stone at its widest point. Others favor a table somewhere between 57% and 65%. As proof that the Ideal Cut was not an absolute embodiment of perfection, reference was made to Eastern cultures, which actually considered larger tables more beautiful than the smaller ones which typified an Ideal Cut. It was also recognized to be impractical to cut diamonds to his specific set of parameters so the definition was modified by expanding the acceptable table size from Tolkowsky's original 53% up to nearly 58%. [more]

A long-awaited analysis of diamond cutting by the Gemological Institute of America (GIA) confirmed in 1998 the long-held belief that there is no one Ideal cut - at least where brilliance is concerned. The study is claimed to confirm scientifically what good jewelers and diamond cutters had always known: a diamond does not have to be cut to a few rigid parameters to achieve superior brilliance [more]. A very slight departure from precise standards does not enable any loss of brilliance to be detectable even by a specialist. It is therefore normal practice not to apply exclusively one value, but to extend this value upwards and downwards within narrow tolerances. Only when a "brilliant cut" varies beyond these limits of tolerance can it no longer be graded "excellent" but only either very good, good, fair or poor [more]. The GIA has subsequently undertaken further theoretical studies that stress the importance of an analysis in three dimensions [more; more] and computer modelling of virtual diamonds for purpose of ray tracing [more]

The Princess Cut Diamond is a brilliant style shape with sharp, uncut corners. It is typically cut square rather as a rectangle. Brilliant style refers to vertical direction crown and pavilion facets instead of step style horizontal facets. It generally has 76 facets, giving it more brilliance and fire than the round brilliant. The Radiant Cut Diamond is a straight-edged rectangular or square stone with cut corners. It has 62-70 facets.

**D. Summary of gemstone faceting and crystals**

An Annex ([https://www.laetusinpraesens.org/docs/diamondx.php](https://www.laetusinpraesens.org/docs/diamondx.php)) is used to explore typical gemstone cuts and faceting, as well as providing a tabular presentation of the relationship of many common gemstones to crystal systems and classes. The Annex also shows the common association of gemstones with the chakra system (see below).

**E. Current metaphoric applications of gemstones**

Major use is made of the diamond, notably in Buddhist traditions, as a metaphor of a particular emergent order of the mind and the understanding of that order as a 'vehicle', or 'body', for the spirit. This metaphor seems to focus on the individual and not on the ordering of society. The terms 'diamond mind' and 'diamond body' are therefore widely used and are notably a focus for the Diamond Way school of Buddhism. Curiously, however, this ultimate development of human consciousness is preceded in such traditions by intermediary stages of lesser complexity associated to some degree with the Indian system of chakras shared by Buddhism and Hinduism. The diamond is notably associated with the seventh chakra, and other gemstones are associated with other chakras -- but not explicitly with any associated forms of awareness, except with respect to healing. There is no emerald or sapphire consciousness, for example, although such gemstones are associated with particular chakras.


<table>
<thead>
<tr>
<th>No.</th>
<th>English</th>
<th>Greek</th>
<th>Latin</th>
<th>Function</th>
<th>Chakra</th>
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<tr>
<td>1</td>
<td>Crown</td>
<td>Koruphe</td>
<td>Vertex</td>
<td>Illumination</td>
<td>Sahasrara</td>
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<td>2</td>
<td>Brain</td>
<td>Enkephalos</td>
<td>Cerebrum</td>
<td>Intellection</td>
<td>Ajna</td>
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Gemstone therapy: There is a highly developed tradition of healing associated with gemstones -- both in the West [more; more] and the East [more].

Diamond chakra: This is a name commonly given to the third, or solar plexus, chakra (manipura). It is viewed as the centre through which sentiments and emotions are transmuted into soulful passion for life -- such as fear into love, anger into action, sadness into surrender and bliss. The depth of emotions is experienced and transmuted into passion and devotion to help activate the soul's relationship with the emotions and body. As the glorification of life - the chakra is therefore the diamond chakra.

In those traditions that associate healing with certain gemstones, diamond is also believed to cleanse and stimulate the seventh, or crown, chakra. They are believed to bring the intensity and universal focus of energy -- uniting of all centers with universal light on a daily. In the Reiki tradition, an ethic diamond is believed to be placed in the crown chakra -- so that all the Reiki energy flowing through this chakra takes on the diamond's properties of strength.

Diamond mind: This is a common theme in some Buddhist traditions of meditation (cf Rob Nairn. Diamond Mind: psychology of meditation, 1998). The metaphorical goal is to order the mind as though it contained a diamond. For example:

> We must be able to dig and search our own minds for liberation and development of realization. This is called "the discovery of a diamond." To succeed in finding it is not easy at all. We have to exert ourselves, sacrifice and put everything into it just as the Buddha did. The Buddha also dug a whole mountain just for one diamond. We have to follow the same pattern, to train our minds with diligence in all postures - eating, walking, sitting and lying down. The main purpose is to observe our mind until it becomes one-pointed. (A diamond in one's mind [more])

The metaphor of 'polishing the mind' is also common as a reflection of the Diamond Sutra, one of the most beloved and profound scriptures in East Asian Buddhism, believed to contain the heart of the Buddha's teachings (cf Polishing the Diamond: enlightening the mind. Reflections of a Korean Buddhist Master Jae Woong Kim)

Advantages are clearly recognized in the parallel between a diamond as a device for processing light -- if appropriately prepared -- and an appropriate ordering of the mind to process awareness in a more enlightened manner. It would be encouraging to believe that the traditional role of of the bejewelled crowns of royalty pointed to a form of enlightened governance in which the crowning some way facilitated a diamond mind in the integration of disparate insights and the engendering of coherence in society.

Diamond vehicle or body: Within Vajrayana Buddhism, common in the Himalayan regions, the focus is on achieving, within one lifetime, the initiation of fire in the form of the highest yoga tantra known as Vajrayana -- the "indestructible body", or the "diamond vehicle". It is known as Vajrayana, notably because of the ritual use of the vajra, a symbol of imperishable diamond, of thunder and lightning. "Vajra" refers to the "indestructible diamond mind" of the wisdom accruing from the direct realization of emptiness. "Yana" means "vehicle" and points to the inseparability of method and wisdom, means and ends, that is so fundamental to the Tibetan form of contemplation. This calls for a posturing of individual awareness to realize the light body. The focus of meditation is the world itself, understood as a 'world wheel' or mandala which holds the circulating energies within that framework as a way of finding the balanced center of our being. Consistent with western traditions as explored by Jung and others, they are organized in terms of four energies: earth, water, fire, and air -- surrounding the central sanctuary of spirit.

As these abilities are perfected, they are believed to automatically transmute their sentiments and emotions into soulful passion for life -- heaven and hell. [more; more; more]

This process involves an identification with the bonding of light and void -- moving beyond the opposing poles of fundamental dualities such as nirvana and samsara -- heaven and hell. [more; more]

Tibetan Buddhist techniques to awaken this ability are based on Indian chakra systems. These focus on generating seed syllables from the crown, throat, heart and navel chakras which aim to bring balance to the flow of energy in the chakras. Corresponding colors and shapes are visualized to support the experience.

This tradition has inspired the world wide Diamond Way movement led by the Karmapa (or Black Hat) Lama as the spiritual leader of Karma Kagyu (one of the four major schools of Tibetan Buddhism) -- ranking only behind the Dalai Lama and Panchen Lama in the Tibetan spiritual hierarchy [more; more]. It has also inspired various efforts to articulate some of its insights in association with other traditions [more] including those of western magic [more]. Both cases raise issues of comprehension that would seem to be a denial of the insights that they espouse. The Karma Kagyu school has suffered in 2001 from a politico-religious dispute between rival claimants to its leadership [more] and is reputed to be focused on complex secretive rituals. In the second case, the appropriation of these insights by western traditions is subject to all the strengths and weaknesses of appreciation of New Age approaches.

**Geshe Kelsang Essence of Vajrayana The Highest Yoga Tantra Practice of Heruka Body Mandala 1997**

**Jewels of wisdom:** This expression is commonly used to distinguish patterns of focal insight, whether by Buddhists [more], Christians, Muslims, or the Theosophists sapta-ratnani or "seven jewels" [more].

**Ring kissing:** Rings, bearing gemstones, have long been a symbol of secular or spiritual authority -- notably in western secret societies,
including the Mafia. They were used to sign contracts.

Besides bishops, many other ecclesiastics are privileged to wear rings emblematic of their authority conferred as "an emblem of the pontifical dignity or of the sealing of secrets". The pope as the first of bishops, wears a signet ring distinctive of the papacy known as "the Ring of the Fisherman". Around it is the name of the reigning pope. It is given to him when he is elected and is destroyed when he dies. In modern times popes tend to wear a copy instead. From 633, it may be assumed that the ring was strictly speaking an episcopal ornament conferred in the rite of consecration, and that it was commonly regarded as emblematic of the betrothal of the bishop to his Church as indicated by the form: "Receive the ring, that is to say the seal of faith, whereby thou, being thyself adorned with spotless faith, may keep unshrunk the troth which thou hast pledged to the spouse of God, His holy Church." These two ideas -- namely of the seal, indicative of discretion, and of conjugal fidelity -- dominate the symbolism attaching to the ring in nearly all its liturgical uses.

Custom prescribes that a layman or a cleric of inferior grade on being presented to a bishop should kiss the episcopal ring [more]. By kissing it, his spiritual authority over the supplicant is acknowledged. This is customary during an audience with the Pope. It grew out of the feudal practice of kissing a lord's ring as an indication of feodation. It purportedly remains a practice within secret societies such as the Mafia -- kissing the ring of a capo -- capo di tutti.

The covenant, entitled "Agreement of Principles Between the Palestine Liberation Organization and the Holy See," was, for example, marked by Yasser Arafat kissing the Pope's ring. It calls for "a peaceful solution to the Palestinian-Israeli dispute to be achieved through negotiation and agreement to establish the national, legitimate, and inalienable rights and the legitimate aspirations of the Palestinian people to ensure peace and security for all peoples of the region on the basis of international law and UN resolutions, including the relevant Security Council resolutions, on the basis of justice and equality."

F. Enlightening dialogue dynamics

The various themes explored above are used here to highlight the possibility of new ways in which dialogue within communities can be enhanced to new levels. However any such 'enlightenment' of dialogue between people and perspectives in society is seen as complementary to an enlightenment of internal dialogue within an individual, each reinforcing and sustaining the other.

Models: Recent decades have made much of conceptual 'models' in academic discourse, but especially in the ordered applications of insight by consultants to every variety of human and environmental activity, including dialogue processes. Indeed many such models are now proprietary, and carefully protected as intellectual property. For enthusiasts of Pythagoras (based in ancient Croton), there is a delightful multiple irony to the fact that Herman Kahn, an early futurist exemplifying such applications, had his base in Croton-on-Hudson -- then also the HQ of the World Modeling Association (that continues to make Model of the Year awards to beauties of the fashion business).

Typically conceptual models are based on a 2 x 2 matrix, through which four disparate dimensions are held in relationship -- echoing strangely the traditional integrative challenge expressed metaphorically in terms of earth, water, air and fire. Such models may have an inherent bias positioning one cell as exemplifying a totally unsatisfactory situation, two others as less unsatisfactory efforts at correcting the condition in contrasting ways, and a fourth that is indicative of the satisfactory goal. It is much rarer to find models (such as those for Jungian personality types) that suggest that each of the four cells has associated strengths and weaknesses and that the satisfactory condition emerges from balancing all of them [more].

The cells may be seen as facets of a discourse -- facets that may well be reflected in facet-based document classification systems as originated by S R Ranganathan [more; more; more] and offering retrieval of information from facet spaces [more]. To the extent that dialogue can be usefully associated with discourse that moves from the perspectives of one cell to that of another, bouncing backwards and forwards between them, the model therefore serves to reflect insight back within its framework. However, there are clearly constraints on where it can ultimately 'go' -- especially if there is no preferred cell (as in the children's game of hopscotch). If the matrix of cells represents contrasting views on a relatively restricted domain, the incommensurabilities between them may be relatively low -- as contrasted metaphorically with the fundamental differences between earth, air, fire and water. For a restricted domain, the dialogue would then be relatively dull and boring.

Such a 2 x 2 matrix can be folded up to form the most basic three-dimensional structure, namely a tetrahedron. A gemstone cut in this way, perhaps as a kind of prism, does not have the same light enhancing ability as more complex cuts. It might be said that such a simple structure is a dull model for processing light -- or insight.

Of course there are much more complex models, often articulated in more complex matrices (3 x 4, 6 x 7, etc). Again it is possible to treat these models as maps of three-dimensional structures that can be formed by folding them. The reverse procedure of taking a three-dimensional polyhedron and unfolding it gives rise to what is referred to as a 'polyhedral net' map characteristic of that structure [more; more].

Curiously however the variety of such nets, or of their 3D-forms, is much greater than that used to hold the great variety of conceptual models. It would appear that the conceptual models for much of human behavioural management tend only to be associated with relatively simplistic structures, compared to the richer range that might be used. What is especially intriguing is that many polyhedral nets appear asymmetrical and irregular in two-dimensions -- until they are folded up into their 3D form as in the case of the regular (Platonic) and semi-regular (Archimedean) forms. However it is interesting that some of these nets seem to resemble structures associated with integrative religious symbols -- for example, the truncated cube unfolds to form a structure like the Christian cross, whose particular elements have symbolic associations like the cells in the matrix representation of a conceptual model.

Is it possible that academic model building has unconsciously restricted itself to a range of conceptual models that are ill-adapted to some of the integrative tasks for which configurations of insights are required? Does this result from a predisposition to simple symmetries in two dimensions (notably tabular forms for ease of printing or inclusion in web pages) -- when important asymmetries need to be
Challenging conceptual models by this potential variety, and its greater integrative possibilities, calls for interesting explorations of the metaphorical significance of:

- the transformation from 2D to 3D
- the morphing of the square surfaces of model cells necessary for successful 2D-to-3D transformation
- the cells, unforeseen in 2D, that may emerge as necessary to a more integrative 3D representation
- possible transformations between 3D structures, and the significance for the integrative power of the resulting configuration

**Implications of diamond faceting:** There are considerable published resources (notably on the web) on polyhedral nets and polyhedra in general, and these are indeed an inspiration to certain kinds of exploration of the human condition (cf the work of R Buckminster Fuller). What appears to be lacking is any way of embodying the potential of such integrative ordering so as to offer coherence to human behaviour, whether collective or individual. The difficulty is in part conceptual in that the 3D structures are complex and it is difficult to associate significance with their individual facets. This contrasts with the facility of 2D model builders who can adapt their tabular formats to web menus and the like. It is also the case that people are reluctant to deal with arrays of topics where the integrative configuration is subtle. It is easier to treat one's immediate environment as flat, rather than to understand it as part of the surface of a globe whose curvature one cannot detect.

It is for such reasons that the faceting of gemstones, and especially of a diamond, provides such a rich and accessible metaphor for some of the conceptual issues of enlightening dialogue and ensuring its coherence. A cut diamond is a polyhedron, as discussed in relation to conceptual models (above). It is cut to ensure that incident light is reflected around within it so as to maximize the brilliance of the outcome. This appears to offer many accessible learnings concerning the movement and enhancement of insight within a model -- especially since there is a degree of commonality to the terminology:

- 'facets' of a topic, notably according to certain document classification systems
- taking a 'cut' through a topic
- concern with maximizing the 'brillance' of a keynote speech, a dialogue, a panel, a conference, an agreement, or a thesis
- concern with the design of the 'table' for any complex discussion (whether a dinner table, a negotiating table, or a summit)

Many of the descriptors of gemstones (see above) can be applied to a dialogue or its participants. Potentially they may also be applicable to the features of an enhanced internal dialogue of any individual in responding to the world. It is intriguing that research at the Gemological Institute of America includes attention to computer techniques in the visualization of information.

The fact that diamonds cut to maximize brilliancy have 58 facets appears to result not from theory but from centuries of experiment, subsequently confirmed by theoretical studies and simulations (see above and [more]). Using this praxis as a point of departure, it is useful to ask questions about:

- how does the 'table' of a diamond function with respect to light, as contrasted with how a 'roundtable' (especially the Camelot archetype) might function with respect to insight; indeed how could a table of the wise be best designed to enhance that wisdom?

- the functioning of the 'table' of a diamond is dependent on the facets surrounding it, just as a 'roundtable' is dependent on its participants; but much is made of the precision of cut to reflect the light appropriately within a diamond, whereas little is acknowledged or understood about how participants might usefully (and in a disciplined manner) reflect insights amongst themselves

- the facets defining the 'table' of a diamond [see diagram; diagram] are the 8 triangular 'star facets' which might be said to be matched in a 'roundtable' by the 'stars' or personalities on any panel respecting the plus-or-minus seven size constraint rule (including the G7, or G8, summits); interestingly, the 'star facets' are matched by 8 4-sided 'kite facets' ('coin de table' in French) of which only one apex meets the table -- that might again be said to correspond to the degree of involvement of any direct support personal in any dialogue 'roundtable'

- the star and kite facets are backed by an outer ring of 16 'upper girdle facets' which might be considered to correspond to supporting experts at any high level summit roundtable, namely two per participant

- under the 'girdle', and invisible from above the 'table' of the diamond, are the 16 'lower girdle facets', associated with a further 8 'pavillion facets'; the 'lower girdle facets' might be considered to the back-room support team in any summit dialogue, or those otherwise 'below the salt'. A feminist would probably argue that in a masculine world, the 8 spouses (the 'women behind the men') correspond to the 8 'pavillion facets'. It is from these that the light is reflected back through the table. More symbolically the facets below the girdle might be considered to correspond to the unconscious, or even the 'negative' counterpart to the 'positive' above the girdle.

- the 'culet' (from the French cul) as the very small flat face at the base of a gem, cut parallel to the table to prevent splintering (and deriving from personal armour plating designed to protect the 'bum'), again invites, in the case of a 'roundtable', various realistic comparisons (of which the least pejoratively euphemistic might be 'spin doctor').

The structure of a Round Brilliant Cut diamond of 58 facets may also be reviewed in the light of the chakra system in which each chakra is associated with a circular mandala. Thus the part above 'the girdle' of the diamond is known as the 'crown', just as the seventh chakra
is known as the 'crown chakra' -- and traditionally it would be those of royal or noble attribute that would wear a bejewelled 'crown'. The 'culet' might well be seen as corresponding to the first chakra, at the base of the spine. In fact taking horizontal slices through the diamond effectively gives a series of mandala shapes whose component parts are strikingly equivalent to those traditionally associated with each of the other chakras. For example, one source gives the number of 'petals' to the sequence of chakras is given as: 4, 6, 10, 16, 96, 972.

Similar correspondences of potential significance may emerge from consideration of the Radiant Cut with 62-70 facets or of the Princess Cut of 76 facets. A simpler cut, such as the Eight Cut (or Single Cut) only has eight four-sided facets on the crown, eight on the pavilion, plus the table and culet, making 18 in total. The Swiss Cut is halfway between a brilliant and an Eight Cut, with 34 facets in total. There is an intriguing relationship to the 64 hexagrams of the I Ching, notably with respect to the 8 star facets that delineate the table of the Round Brilliant, recalling the 8-house scheme of the Chinese system.

Each such polyhedral combination could be unfolded, as for the conceptual models (discussed earlier), into a characteristic 2D polyhedral net. These could be explored as potentially ideal options for the design of a dialogue or negotiating table. Note that in contrast to those of the matrix models, the polyhedral nets associated with these cuts are each centred on a 'table' which they effectively serve. They are centro-symmetric. Note also the distinction from the topological net of the diamond as a crystal lattice structure [more; more]

Providing a container for the dynamics of coherence: Whilst using a particular diamond cut may provide an interesting metaphor for the configuration of participants in a dialogue, the challenge is to find ways to use it to explore the dynamics of dialogue that the configuration makes possible. Two examples increase the credibility of such an investigation:

- **Interactive human motion acquisition from video sequences:** Human motion modelling for animation and virtual reality has reached a level of capturing live motion data from people using various visual and non-visual sensors [more]. The 'movement of the ball between players' in football games can now be converted for dynamic analysis, notably to improve game strategy. The question is when the 'movement of a point between participants' in a dialogue will be graphically recorded, as a complement to minute writing, to enhance the quality of the dialogue. E-mail dialogues lends themselves readily to such analysis and to redesign of communication of protocols in the light of conclusions [more] [more] [more] [more] [more]; [more] [more] [more].

- **Tracking user movement within websites:** This is an important aspect of finding ways to ensure that a website retain users attention -- maximizing 'stickiness'. Software tracking devices offer one systematic approach. Another is provided by fitting test subjects with gear that follows eyeballs from webpage to webpage. The equipment is strapped to users' foreheads and tracks shifting gazes and measures pupils as they expand and contract. Using information gained through this high-tech monitoring, this identifies impediments to navigation and ease of use, and provide online companies with straightforward recommendations on how to improve their sites [more]. The multi-site (or cross-sectoral) variant of this issue is to be seen in the organization of 'web rings' through which users are passed from site to site within a particular (and currently disorganized) configuration of sites [more; more; more]

- **Computer mediated discourse:** Computer-mediated discourse is the communication produced when human beings interact with one another by transmitting messages via networked computers. The study of computer-mediated discourse (henceforth CMD) is a specialization within the broader interdisciplinary study of computer-mediated communication (CMC), distinguished by its focus on language and language use in computer networked environments, and by its use of methods of discourse analysis to address that focus. [more]. An associated focus is the management of persistent discourse [more], text visualization [more], and comparisons of discourse and picture processing [more].

These examples suggest a degree of equivalence between tracking the movement of light through a diamond and the movement of a point within a discourse. Whether there is a relationship between movement in the case of a diamond cut for maximum brilliancy (and 'fire') and the movement of a point in a 'brilliant' ('fiery') discourse remains to be explored. The case of user movement through a 'brilliant' website of suitably configured pages perhaps offers an accessible intermediary experimental environment -- notably to contrast movements in simply-faceted sites (namely few internal links) with those in many-faceted sites (namely many links). Each web page on the site can then be seen as a facet of the site as a whole. How they are configured together on the site should be one of the determinants of the 'brilliancy' of the site (in contrast to design analogues to the other optical properties, discussed above, such as 'lustre') -- perhaps even leading to the notion of a site of 'diamond quality'. Of course single-page sites might be usefully understood in the light of the cabochon cut, which depends for its attractiveness on dynamic graphical effects that recall the optical properties of asterism and chatoyancy (see above). Consider the football, website and dialogue cases make clear that, although light may indeed move to enhance brilliancy in the diamond for an observer, there is also a participative dimension to the appreciation of brilliancy in each of them from which an external observer is necessarily excluded. Whether the experiential identification is with the player (football, dialogue), the ball (football, website, dialogue), or the interaction as a whole, the sense of brilliancy is then effectively internal to each environment. The equivalent in the case of the diamond would be associated with the integrity of the pattern of light rays within the diamond and how it effectively constituted a 'light body' recalling the Buddhist preoccupations of the Diamond Way (see above) -- as they might apply to the enhancement and integrity of an internal dialogue.

It is somewhat extraordinary that diamond, as perhaps the most valuable material commodity in society, only embodies that value through enhancing light in an elegant way -- and in marked contrast to the more powerful capacity of an optical system or laser to do so. Again the question might be asked as to whether the most valuable non-material attribute of human civilization might not similarly be associated with enhancing insight in an elegant way.
Enlightening dialogue: How then does the diamond metaphor help to understand the experience of 'brilliant' dialogue -- and the integrative experiences associated with the archetypal metaphors in the first section of this paper (Eden, Glass Bead Game, Realms of the Gods, Camelot, etc)? What makes for a diamond quality dialogue?

Issues that might be considered include:

- significance of subjective evaluations that there is 'lots of energy around' or 'good vibrations'
- how the nature, direction and quality of the sources of insight feeding into the dialogue through its facets may be understood in terms of light incident on a diamond
- how insights reflected from one facet of the topic to another may be understood in terms of light reflected between facets in a diamond
- how insights incident on one facet in a particular way may simply pass out of the dialogue environment, just as light may pass through a diamond without being enhanced
- how insights are enhanced through refraction, drawing them together, just as light enhancement results from light being subject to non-linear refraction towards the normal within a diamond -- to a greater degree than within other substances (because of its high refractive index)
- how experience of dialogue dynamics as 'seductive' may be understood in terms of the seductive qualities of a diamond
- how insights incident on the group through the array of participants 'at the table', bounced around by the 'back room' support teams ('smoke filled rooms'), then emerging enhanced through the table may be usefully compared to the movement of light incident on the crown facets and reflected back from the pavillion facets through the table
- the conditions under which greater complexity in the organization of the facets of a dialogue may lead to its greater enhancement and 'brilliance' in contrast with simpler organization -- as suggested by differences in enhancement of light in diamonds of simpler or more complex cuts
- how might a community of the wise understand its process of 'holding the light' when such light, unlike proprietary insights, is denatured by being grasped and held; is the 'holding' a process of reflecting it back amongst the participants -- somewhat akin to the movement of a frisbee (and as opposed to tennis)? Does such 'holding' depend on sustaining a pattern of movement as in any ecosystem? Is this intuitively associated with traditional exchanges that 'keep the gift moving'?
- is there a way in which 'loss of face' in any dialogue can be understood as failure to reflect insights back in an integrative manner?
- does the need for complementarity of precisely angled cuts to enhance brilliance in a diamond suggest the need for a higher order of discipline in the selection and configuration of participants in any collective dialogue aspiring to enlighten? Are relevant insights associated with such descriptions of dialogue as 'playing the angles', 'angling for support', and 'approaching a topic from another angle'? 
- does the significance of geometric 'duals' [more; more] in the functioning of 'jewels' point beyond their phonetic equivalence to intriguing possibilities of transcending sets of dualities and dualisms through the kind of movement associated with light?
- what can be learnt from diamond faceting about how disparate insights are taken in though facets, oriented to contrasting inputs, and then given a degree of coherence as they are emitted back through the crown -- presumably as a feature of 'diamond mind' functioning?
- what can be learnt from diamond regarding the alternating function of facets as brilliant emitters and dark absorbers, according to their orientation to any source -- and how might this relate to the I Ching dynamic patterning of opposites such as light and dark?

Would exploration of such questions improve the quality of global summits and their final communiqués? Given the expenditure of US$100 million per participant for the Okinawa G7 Summit in July 2000 -- far exceeding the investment in many of the programs agreed there -- surely there is an opportunity for enhancing its insight-processing performance? Could the pattern of interactions between viewpoints and themes at such an event be usefully traced out (as described above) to form a structure that might resemble a diamond? Would such a structure be a symbol and a measure of the integrity of the meeting? Would the final outcome, in the form of a communiqué (and a virtual hyper-construct), then be enhanced like the light emerging from a gem? How would this contrast with a faceted structure of mirrored surfaces, that glittered in reflecting back much-hyped external insights, but in no way performed any other insight enhancing function?

G. Behind brilliant lies

Despite their unique material value, gems are intimately associated with a fundamental lie. This is partly signalled by the fact that genuine gems can often only be distinguished from fakes by experts with special equipment. What does this imply for any metaphoric equivalent -- or for the achievement of any form of diamond mind or body?

Perfect lies: Furthermore the sparkle of diamond is essentially lieless -- although metaphorically a distinction can be made between dead perfection and the 'cold fire' that may disguise compassion. For a jewel to work its magic it has to be associated with a person whom it enhances, or who enhances it. This may well also be true in the case of any metaphoric equivalent. More fundamentally however, the brilliant glitter of a gem distracts from a more subtle brilliance of quite another order and characteristic of the texture of reality itself -- Gregory Bateson's 'pattern that connects'. This contrast is emphasized in warnings about superficial beauty in the legend of the Grail Cup, for those who seek to grasp and acquire proprietary rights over it. This is reinforced by the ugliness of stories associated with many of the most beautiful gems and the manner of their acquisition [more]. The nature of such sublety is more obvious in the manner in which Japanese aesthetics values any expression of the harmony of imperfections, notably in the irregularity of form of raku pottery. The false assumption that one can adhere to light without dark (all things bright and beautiful) that is so widespread in a certain society today and which gives rise to a very dangerous dissociation of the shadow. Many folk tales also turn on the recognition of the beauty underlying ugliness -- highlighting the false assumption that one can adhere to light without dark ('all things bright and beautiful') that is so widespread in a certain society today and which gives rise to a very dangerous dissociation of the shadow (in Jungian terms).
'Withdrawing into the stones': The highlight values the value of reflecting on the occasional legend, notably amongst the Celts, of earlier 'ancestral' races that have 'withdrawn into the stones' -- or of those that may have been trapped therein, like Merlin and the proverbial genii in the bottle. This has ironic resonances to the construction of memorial cairns -- which may well be a pale echo of the original functionality of stone circles like Stonehenge and other memory devices like memory theaters, as notably reviewed by Frances Yates in The Art of Memory (1966) [more; more; more; more; more]. It is also worth recalling that gems, like diamonds, are known as 'stones' to those in the profession. At a time when there is much investment into the possible use of crystal lattice structures as the next generation of data storage and computer memory, and as a basis for future artificial intelligence, the possibility of people being able to 'download' or 'upload' there personal memory is less far-fetched than a decade ago. People may indeed have an opportunity to 'withdraw into stones' in one form or another, although the conceptual 'detachment' suggested by this paper is quite different from the kind of withdrawal currently foreseen by technology enthusiasts.

It is useful at this point to return to the attraction exerted by the kinds of archetypal patterns presented at the beginning of this paper.

For example, would such 'withdrawal' be a possibility for a group that collectively achieved a 'diamond body' that freed them to move at other energy levels through a 'bonding of light and void' (see above) -- as intuited in New Age references to 'light travellers' and in many science fiction stories inspired by recent speculation of physicists on the multi-dimensional nature of reality? Or is it more a case of 'withdrawing into the geometry' of the conceptual spaces for which gemstones provide an analogue? Ron Atkin's work ((Multidimensional Man: can man live in 3-dimensional space?, 1981: review) provides a mathematical basis for understanding the conceptual issues.

'Extraterrestrials': This withdrawal might offer a line of investigation for SETI research -- especially in the light of widespread rumour on the web concerning the imminent return of extraterrestrials from a planet on a highly eccentric orbit [more; more]. There are also references to their underground counterparts on Earth (the 'grey people') [more] -- in a morass of speculations about UFOs and alien abductions. In some ways these echo testimonies of many rural folk in Ireland who distinguish between the 'sidhe' who are seen walking on the ground after sunset, and the 'Skuagh Sidhe', the fairy host who travel through the air at night, and are known to 'take' mortals with them on their journeys. It is curious that the underground extraterrestrials are identified as 'grey' in colour -- namely those who are 'between' light and dark (as with the sidhe visible in the gloaming, the dawning or dusk periods that traditionally facilitate switching from one dimension of reality to another). Ironically it is also the colour of choice of the 'suits' of the business world favouring globalization (in contrast to the multi-coloured dress of those who oppose them). It is also curious that two groups of 'greys' (or 'zetas') are distinguished, namely the 'zeta-for-self' and the 'zeta-for-others'. This pattern of 4-fold distinction, between those on 'high' and those 'below', is reminiscent of the traditional distinction amongst the sidhe with their 'high' and 'low' courts, whether 'unseely' (selfish and wrathful) or 'seely' (unselfish and peaceful).

Also worth careful consideration in this connection is the nature of the withdrawal of the ever-present ('Dreamtime') ancestors of the aboriginal peoples of Australia 'into the landscape'. The Dreamtime is not simply a period of the past. It is an ancient way of seeing the world as it continues to transform itself in the present. Aboriginal people believe that the entire world, including the seas, continent, living things, and human beings, originates in the deeds of Ancestral Spirits. These Spirit Ancestors were active in the past, in the time often referred to as 'the Dreamtime', but are also present in the landscape today. They continue to influence all aspects of the natural and social worlds. The rules governing human life are grounded in the deeds and continuing presence of these Ancestors and may govern perception in special ways [more; more]. For example, Robert Lawlor (1991, pp. 236-7) states that:

"An Aboriginal friend told me that in one of his most profound initiations, in a state of deep trance, a tribal elder transmitted to him the experience of his body extending into space so that it encompassed the entirety of his tribal land. The songlines that crisscross the landscape flowed as his own veins and arteries, the swamplands were his glands, the grass his hair. During the trance, the elder painted his body with the symbols and locations of the water holes, the sacred sites, the centres of spiritual increase, and all the distinctive features of the Dreamtime landscape. This experience . was not symbolism but part of a deep sense of identity."

Mytho-poetic understanding: Previously widely held amongst Celtic peoples, the belief survives of an invisible realm to which an other-worldly ancestral race, the Daoine Sidhe, has withdrawn -- after living in Scotland and Ireland (that they called the 'jewel in the Western seas') as the highly cultured Tuatha De Danaan 'in the age before this one' [see extensive web references]. Originally an aristocratic, warrior race of heroic proportion, they dwindled in size after retreating underground, to become the Daoine Sidhe (theea shee) or diminutive faeries of Irish folklore. The description of them as 'gods and not gods' and 'something in between' is consistent with a form of transcendence of duality reinforced by attribution to them of magical powers -- akin to those associated by Buddhists with achievements on the Diamond Way. Their withdrawal 'below the surface', or 'underground', into an 'invisible realm', 'beyond the veil', could well be understood as their unusual relationship to space-time and to the conventional objective world whose surface they live 'behind' -- 'fading into the hills' and into the fabric of reality. This same 'in-betweenness' is evident in their creation myth describing them as born of the union between the great Creatrix (Dana) and the stars themselves -- again reminiscent of the Vajrayana goal of identification with the bonding of 'light and void' (above).

For the Daoine Sidhe, in one account: '...the energies of magic and immanence (connection to Deity) are inseparable forces that run through every living thing. What is unique in the Sidhe worldview is just what constitutes "living". Everything in the Sidhe cosmology is a living thing, even rocks and handmade objects are believed to retain living essences of the things they once were. Thus, magic inhabits everything from the majestic redwoods and the magnificent big cats of Africa to the sand along the beach and the chair in your dining room' [more]. Many stress the importance of distinguishing more essential direct insight from magic understood in psychic terms -- siddhis [more] by which one may be distracted and enthralled as a result of certain forms of training.
Traces of this mytho-poetic understanding remain in many indigenous cultures (see Darrell Posey (Ed.): Cultural and Spiritual Values of Biodiversity, 2000) and amongst those people described as 'fey' -- notably amongst Celtic peoples imbued by the remnants of the cultural influence of the Tuatha De Danaan. William Mott provides a worldwide review of Subsurface Inhabitants in Folklore, Myth, and Literature [more]. Celtic peoples, for example, might be understood as inheriting a disposition to being able to live to some degree in that other reality -- or to embody it in some way, the 'behind' as 'within'. Perhaps the Tuatha De Danaan effectively ' withdrew' into the genetic structure of humans -- especially in the light of current representations of DNA like stones on a string -- or into a memetic equivalent that remains to be understood. In this sense, they are never far from their living descendants some of whom claim to be able to 'slip sideways' into the other world and dance there awhile. Is this romantic fantasy or love that keeps a countryside singing and dancing with it's people -- as emphasized by indigenous traditions of singing to the land?

For anthropologist Diana James, referring to Australian Aboriginal understanding:

Aboriginal Dreaming ancestors continually shape shifted form, moving easily from animal to human, to rock or plant, from the earth to the stars in the sky. A rock with striking circular patterns may be an ancestral giant lizard, whose spirit manifests in the animal sunning itself on the rock, and in the human descendant, chest painted in coloured dots, who sings and dances it's creation journey across the land. People move into the other world through song, dance and meditation on the ancestral being, they become one with it and can move comfortably on other planes of existence.

For Mott: Each group of faeries and goblins can be viewed, of course, as the dethroned, exiled gods of an earlier, defeated human culture. The question is, what were these "gods," which still exist in the popular imagination today? Were they symbolic pantheons or archetypes, or living beings which predated man on this planet? Or are 'pixies', 'gnomes', 'fauns', 'elves', 'dwarfs', 'trolls', 'horns', 'goblins', and the like, in some way projections of subpersonalities associated with individual chakras, possibly in positive and negative modes?

**Psycho-physics**: Access to such realms, in the light of the diamond metaphor, may be associated with analogues within the psyche [more] to light effects such as opalescence (a common descriptor of the Sidhe) and polarization -- 'turning a corner and disappearing', partly recalled by such wiccan terms as 'going widdershins'. Science fiction, through Star Trek's 'beaming up', has familiarized many with phenomena such as 'pixelation' -- a term reminiscent of the 'pixies' of Celtic myth. In this connection the relationship between polarization of light and the nature of duals in geometry is worth exploring with respect to such fundamental paradigm shifts.

In considering the function of the numerous Sidhe 'mounds' in Ireland, it is worth reflecting on how an elevator would be understood by someone who had never entered one -- it does not necessarily 'go down'. The dramatic changes which may be imagined for the future -- with many effectively withdrawing into virtual worlds that are completely invisible and meaningless to major sectors of the population -- are illustrated by the shift, over the past decades, in the psychic locus of identification [more] for many in the emergent web-oriented communication society. This could be seen as paralleling the withdrawal of the Tuatha De Danaan.

Analogues to such phenomena as resonance in light suggest other transformations of conventional reality in the possible multiverse of modern physics [more; more]. This is especially striking in the case of sound through overtone chanting [more; more]. This is a central feature of Tibetan Buddhism, and of its associations with shamanism, found also in Tibetan Bon. It is used for a religious "flight" to the world beyond, which is induced by means of music: drumming and singing, notably overtone chanting.

Another modality calling for reflection is the process reality contrasted with that of reified objects. The identities sustained by the dynamics within process reality are then effectively 'aliens' -- unrecognizable from a static perspective to which they are not 'linked'. It might then usefully be asked whether people could be distinguished on a continuum depending on the extent to which their identity is associated with how they 'move', as opposed to how they are -- their 'status'. At the process extreme, in folk traditions those of the 'flow world' might then be readily recognized as spirits and the like -- hidden fairies contributing coherence to the forest. The religiously inclined might refer to them as angels or demons. In part, they would only live through the dynamics between the static identities. The 'demons' would be of special concern as malevolent riders of those dynamics -- 'dark riders'. What identities live through processes of overpopulation, starvation, disease, injustice, pollution and violence -- or globalization itself? [more] In an era of "spin doctors" and multimedia morphing, are there more fruitful ways of understanding the conceptual implications of shapeshifting? [more]

In Australian Aboriginal understanding the landscape is not a flat plain, rocks and trees not merely objects of any gaze. Reality is not a flat plane, that is the illusion. The picture frame does not describe or help understand the contents of the picture. Paint is multilayered, the artist applied it in many hues and thickness to capture and reflect light differently. If the gaze is allowed to be unframed, it can move behind the layers. People can enter the painting and experience the shifting light and dark, the chiaroscuro of life. They enter the landscape, their bodies being painted, becoming the creators, the rock, the lizard, the dancer in the tree, the earth, the wind, the water and finally the light itself. No longer needing to gaze outside themselves to find beauty in precisely cut diamonds, but inside themselves to the magnificent fragmented and patterned light of uncut gems embedded in the clay of their beings.

As in the case of the Grail legend, the condition into which the Celtic sidhe withdraw is associated with immortality -- the Tir Na Nog or the 'land of the forever young', outside the passage of time. Irish tradition identifies many specific places, such as Lough Gur (Limerick) and Brugh na Boinne (Newgrange) that are gateways to this multidimensional world -- the magical vision of sustainability and coherence in a re-enchanted Earth -- from which they can emerge into the here-and-now as appropriate. It is such a world that remains an inspiration to writers such as J R Tolkein (Lord of the Rings) and their millions of readers.

It is not significantly 'fun-dead' 'sustainable development' that captures young peoples imagination -- despite the best efforts of spin doctors. On the other hand, to the great surprise of adults, this has been achieved by games replete with complex symbol systems, such as Dungeons and Dragons -- recalling Hesse's Glass Bead Game. Despite the need for advanced players to study manuals of extensive pantheons (and to the dismay of some religious groups), these have attracted many young people whose moves within the game are
H. Personal relationships: reframing escapism

Previous sections pointed to archetypal patterns with which many resonate and then explored the metaphoric role of diamond in framing the dynamics that sustains them -- pointing to the use of this metaphor in certain highly disciplined practices of Buddhism. The last section returned to the archetypal dimension, drawing attention to its potential relationship to beliefs and multidimensional speculations that exert a powerful attraction on quite different constituencies.

But these perspectives effectively distance people from alternative ways of framing their realities -- framings that are most accessible in their moment-by-moment relationship to one another. Indeed, as attractors, the apparent temporal distance of the 'golden age' archetypal templates, the futuristic science fiction variants, the many years of disciplined practice of Diamond Way of Buddhism, or the romanticized belief in the indigenous cultures of others, all constitute a form of escapism. They all offer means of creating distance from the lived realities and challenges of the present moment.

The question is whether daily relationships effectively have the possibility of being lived, by many, in ways that are quite different to those framed by conventional, mainstream perspectives. This calls for new ways of reframing the kind of 'distance' associated with escapism -- perhaps involving the kind of 'detachment' of which much is made in certain spiritual practices (including a quality of detachment from the escapist detachment trap). A number of useful metaphoric examples of relationships with this quality may be clustered as follows:

- **Martial arts:** The philosophy guiding the more advanced levels of expertise in Eastern martial arts (such as aikido) places great emphasis on the attitude towards the other. This attitude is reframed so that the nature of the relationship has more degrees of freedom accompanied by both a greater intimacy and a greater vigilance. The other is sensed in other ways and the opposition is positioned in ways that may allow any conflict to be transformed and avoided. According to Yagyu Munenori for example: 'The goal of training in the martial arts is to overcome six kinds of disease: the desire for victory, the desire to rely on technical cunning, the desire to show off, the desire to psychologically overwhelm the opponent, the desire to remain passive in order to wait for an opening, and the desire to become free of these diseases.'

It is appropriate to note the manner in which Japanese management language is currently influenced by such classical texts as *The Book of Five Rings* (Miyamoto Musashi, 1982 tr) which is a treatise on swordsmanship expressed in poetic metaphor. It may be argued that whereas Japanese strategy is also articulated through military and sporting metaphors, these are more subtle and less mechanic than those of the West -- leading to subtler and more sophisticated strategies in which the principles of flower arrangement (ikebana) and warfare are mutually reinforcing.

- **Dance:** A dancing couple can develop forms of mutual anticipation and bonding allowing either to initiate or accede in response to the other. The momentum of any initiative by either can be transformed by the other -- in many respects recalling some of the moves in martial arts.

- **Gardening:** Passionate gardeners develop an intimate relationship with the plants they select and cultivate in the spaces available. This relationship of care extends beyond that with individual plants to ranges of species and their cycles through the seasons.

- **Shopping:** Enthusiastic shoppers develop a style of interaction with the objects they covet or simply delight in inspecting. Variants are seen in book browsing, visiting art galleries, etc. People may enjoy the process, the temptation and succumbing to it, any bargaining, and the achievement of possession.

- **Tinkering:** Exploring artifacts, how they work, how they can be taken apart, how the broken can be repaired, how disparate parts may be used to create something unforeseen -- an invention. Together these processes may create a unique relationship to the world of objects.

- **Discovering / Exploring:** For some a special relationship is evoked through travel -- even cruising the highway, or surfing the web. This may however only come about in distant and exotic places with their uncertainties and potential dangers.

- **Personal relationships:** Such relationships are perhaps the most fundamentally fascinating to humans, especially between the sexes. They are often recognized as providing the most salutary learnings for those who have unknowingly framed their identities in particular ways that they subsequently discover to have been fruitfully challenged by alternative perspectives. Sexuality, and the metaphors associated with it, suggest ways of framing relationships -- especially of the more violent kinds (rape, etc), notably in military and business strategy-making. Philosophically and existentially they open the way to subtler approaches of relating to the 'other'. Tantric disciplines suggest ways of exploring these possibilities. Common to many of these learnings is the manner in which the 'mechanical' nature of relationships or 'bonds' can be reframed, if only as exemplified by the existential experiences of sexual 'union'.

- **Guarding / Stewarding / Caring:** This relationship between a guardian and what is guarded carries a particular quality, whether it concerns a physically or otherwise challenged person, ensuring personal security (bodyguards, etc), people in institutional settings (schools, prisons, etc), buildings and sites (notably those esteemed sacred), or features of the natural environment (species, sites, wilderness areas, etc).
• *Knower / Known:* This remains a major interest of philosophy and has been explored by many of its schools. In different ways they have studied the question of who is the knower and what is the known, and how the two are related.

Each of these raises the question of the nature of the shift beyond the most restrictive understandings of such relationships. Why is there a tendency to fall back into the most mechanical framings of any such relationship? How are subtler relationships to be explained and given credibility to those who have not been forced -- whether through bitter or peak experiences -- to recognize their value? More intriguing, however, is how such subtler framings can be embodied in any moment-by-moment sense of self (or community) that transcends the common dualisms (eg mind-body, head-heart, theoretical-practical, etc.) by which people tend to be trapped.

I. 'Otherwising'

**Navigating other realities:** One approach to recognizing the possibility of intimate relationship to other realities, is to explore clues to understanding how people move in the 'flow world' of process reality -- namely clues from those who engage in dancing, skateboarding, snowboarding, surfing, hang-gliding and other sports requiring balance, coordination and kinetic intelligence. Have they ever been consulted about issues of governance -- as has been the case with jazz musicians (Kao, 1996)? What is intriguing is that many of these clues can perhaps only be alluded to in aesthetic terms even amongst practitioners. But whilst somewhat meaningful in relation to the material world, it is necessary to look elsewhere for their equivalents in the flow and other worlds.

A particularly interesting possibility is offered, ironically, by the patterns of vices and virtues traditionally articulated by different religions from West and East. Understood slightly differently -- primarily as experiential, rather than as moralistic behavioural, guidelines -- these might well suggest fruitful and less fruitful ways of navigating experientially in the other worlds. The question is how to decode them.

One approach is to use them as templates through which to identify the 'virtues' and 'vices' of particular movements in sports like those named above -- just as there are virtues and vices in driving an automobile or successfully piloting a helicopter. This approach is in fact prefigured by various sports psychology books on acquiring the appropriate attitude essential to better performance (cf the many books on the "Inner Game" of tennis, golf, bowling, soccer, skiing, etc.) [more].

These points raise the question of a (mind) experiment in identifying the generic range of conceptual skills that might be required to navigate alternative reality of any kind. Would decoding virtues and vices provide such a checklist and, given such a list, how could the items on it be organized into a coherent 'streetwise' mode of conceptual behaviours? It is one thing to know what to do when riding a bicycle or piloting a helicopter, it is a completely different matter to do so successfully. The checklists provided in an earlier paper [more] are too general and need to be given much greater focus, inspired to a far greater degree by learnings from those with a high order of kinetic intelligence -- and notably those in the martial arts, or those who are indeed 'streetwise' in the conventional sense. Other sources of insight might include mentors of guided meditations or shamanic explorations.

**Discipline in dialogue:** The diamond metaphor points to a degree of discipline in the movement of light that is echoed in the disciplined practice of attention in Diamond Way Buddhism, itself framed by the Eightfold Way -- namely one of the several Buddhist framings of an appropriate set of virtues to avoid certain 'hindrances'. Such discipline is a significant feature of many contemporary 'inner games' important to sports performance.

There is a significant amount of research on eye-movement in relation to comprehension, notably in support of design improvements -- especially for the web. The 'eye-gaze pattern' [more] in viewing features of the environment is a concern in learning, and in disciplines calling for attention and learning, as well as in virtual environments. In sports, the term often used is 'focus' -- but this is also common in injunctions to individuals or groups to 'get their act together'. Meditation, such as in the Diamond Way, is a process of acquiring control over focus and attention. The concern in this paper however is with the conceptual equivalent of eye movement and the associated patterning -- as a means of 'posturing awareness' (see above).

How does the focus of attention move between 'facets' in internal dialogue? A poem, or an epic work like the Mahabharata, engenders the coherence of its meaning through the pattern of associations it engenders -- thus transcending the parts, as in overtone chanting. The associations reflect or resonate with each other like light bouncing between facets -- with the final meaning emerging as with light through the 'table' of a diamond. The movement of the dialogue is an intimate dance of the nuances of the moment. The challenge is the extent of the failure in such dialogue to rise to the potential of the moment -- namely 'dropping the ball' to use a sporting metaphor.

**Enlightening dialogue:** How attention is enhanced through such dialogue may be usefully compared to the function of a particle accelerator. In that case reflection from facets is avoided by repeatedly accelerating the particle around a ring until it is ejected to perform some task. The need for reflection is avoided by the use of magnets to bend the particle beam continuously -- to avoid 'quenching' by contact with the wall. Circular or not process, this may be compared to the kind of 'psyching-up' that is used in chants within a team before a football game, in bootcamp, or before inter-tribal warfare (last seen in the attacks on the ANC by Zulus in post-independent South Africa). Of much greater interest, is how the individuals in a dialogue each constitute a distinctly oriented facet by which items under discussion are reflected within the group -- as in an ideal form of brainstorm or creativity session -- until there is a significant breakthrough. A key issue is avoidance of premature 'quenching' -- again 'dropping the ball'.

The future will presumably see the use of computers to track and mediate dialogue in special kinds of groups -- appropriately configured to reflect collective attention between facets of the theme in order to enlighten the dialogue. In considering this, it is worth exploring the factoring process through which polyhedra are constructed, and their representation in virtual reality [more]. Faceting can usefully be seen as the way of removing externalities (through appropriate 'cuts') from a core theme in preparation for dialogue, or in the process of dialogue. In one way or another this occurs in the organization of a conference, a book, a curriculum, or a website.

Organized as a polyhedron, like a diamond, the facets are then the headings which are configured together to contain and constrain the movement of attention. As R Buckminster Fuller stated, every such polyhedra is a system -- in this case a system for the movement of insight to enlighten the dialogue, whether internal (in meditation), within a group, or between groups. It is ironic that such movement of
insight is also known by the term 'reflection'. Of particular interest is the exploration of virtual faceting to increase the possible complexity of the polyhedron -- the most valuable (other things being equal) would then be those with the greatest number of facets, namely encompassing the greatest degree of diversity. The challenge will be to distinguish between the useful learnings of those who have traditionally used variants of such configurations (notably in magical rituals [more]) and the illusory distractions and abuses to which they may lend themselves.

Faceting of diamond has resulted in recognition that there are particular configurations of facets that can best enhance brilliance. It is a matter of angles between facets to ensure appropriate reflection. In the conceptual analogue, this faceting recalls the challenges of sacred geometry as embodied in cathedrals and the configuration of participants in the rituals of some secret societies to manage their 'energies'. Indeed some Hermetic Gnostics of early Christianity thought that angels derived from angles -- a perception now echoed in New Age thinking. Indeed there is a certain charm to the understanding that it is an angel that stands as a guardian at the point of reflection of a linear insight back at some new angle -- thus reconciling and holding together the two quite distinct approaches to reality (exemplified by the compass symbol, relating two points, as favoured by freemasons). Where the facets are angled most differently -- effectively a major arc of a circle -- it is understandable that their reconciliation should be associated with an 'arc-angel'. The traditional hierarchy of angels may well be echoed in the geometry of facets through which insight is enhanced.

J. Isomorphism and experience

There is a fundamental difference between exercises in explaining how things might be through alternative framings, and the process of actually experiencing in the light of such framings [more]. It is here that there is merit in following the work of Francisco Varela (see references below) on 'embodied mind'. There is also a case for recognizing a degree of isomorphism between any inner dialogue and any outer dialogue within a group -- each may be considered a kind of reflection or constraint on the other and its development.

Sam Webster provides useful comments on A N Whitehead's approach to process reality (as articulated by H V Guenther) to interpret the Tibetan process of the symbolic re-creation of the world [more] -- that might be considered a culmination of dialogue. He argues that:

> While Whitehead's approach says that transformative experience should occur, no method is given to place the experiencer at the center of the experience. The value of the Tibetan version of this process is that it is imbedded in a technique for experiencing it rather than merely thinking about it, as philosophers are wont to do.

Webster considers that there is a profound similarity between the description of the symbolic re-creation of the world given by Guenther and the flow relationship between an actual entity and its world and that world's larger context. The symbolic re-creation of the world, bskyed-rim, or 'developing phase' is described as an "iterative feedback process between the outer and inner world... [implying] the co-ordination of the conditions for simultaneous differentiations that retain dynamic interconnectedness." (Guenther, 1987). Webster's discussion of lucency in Buddhism merits review in relation to enlightening dialogue. This could be considered as associated with a form of non-egoic perception in which the phenomena of the world, including partners in dialogue, collectively carry an articulated identity through their dynamic.

Perhaps most intriguing is the degree to which movement of attention, for an individual or for a group, shifts rapidly back and forth between bounding facets -- so delineating a form of 'light body' -- that is very faintly reflected in traces of eye movement and the like (see above). Is this pattern of movement the essence of the sense of being alive, of personal or group integrity, and of that which sustains the coherence of reality?

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