



laetus in praesens

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30 April 2003 | Draft

Imaginal education

Game playing, science fiction, language, art and world-making

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Part 1 of [Renaissance Zones: experimenting with the intentional significance of the Damanhur community](#)

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Eliciting imagination

Imagination is more important than knowledge.
Knowledge is limited. Imagination encircles the world
Albert Einstein

The first challenge is to educate the imagination beyond the constraints of mainstream mindsets. There are many traces of such explorations in reaction to space-based thinking. Stephen Hawking argues that: "If you combine Einstein's general theory of relativity with quantum mechanics, [time travel] does begin to seem a possibility" (Foreword to Lawrence Krauss. *The Physics of Star Trek*, 1995). According to Hawking, "building a genuine time machine will not be as easy as sitting in a chair and twirling a few knobs. Modern proposals for such a machine face one severe problem: the energy supply." But he also asserts that "it doesn't involve much money -- what it needs is an openness of mind to consider possibilities that might appear fantastic".

The following approaches can be used, whether separately or in combination:

Game playing: There is a long tradition of educative game playing, now strongly enhanced through interactive and internet-linked computers. Many classical games can also have their symbolic dimensions, allowing them to be played either superficially or as exercises in symbolic interaction offering insights into a configuration or map of possibilities.

In exploring ways beyond linearity, one of the most conveniently comprehensible forms is that of a map explicitly giving space to the existence of other modes (as indicated in an [earlier paper](#), using that of Myers-Briggs, in exploring alternative forms of dialogue). It is therefore worth speculating on the possibilities of representing the variety of opportunities for dialogue on a surface resembling the classical board game common to many cultures. Clues to the organization of such a mapping might be:

- board games like chess and draughts suggest ways of seeing relationships between "opposing" dialogue partners. The games constrain the ability of each to move in relation to the other. The "developmental" value of "levels" is still present, with notions of lines and angles of advance and retreat, advantage and disadvantage, challenge and threat, that are experienced in dialogue. Particular pieces or positions may be "lost" or "taken".
- such board games have been extensively used in Buddhist and related traditions as a complement to religious education. Players move over the board between conditions ("heavens", "hells", etc) in a manner somewhat similar to "snakes and ladders" (Harish Johari. *Leela: the game of self-knowledge*, 1980). Here each position is uniquely identified, possibly by illustration, as are the inscribed pieces in a game such as mahjong or the areas of a mandala. The *Transformation Game* developed at the Findhorn Foundation is a modern innovation with related intentions.
- qualities of space occupation and encirclement are admirably represented in games such as go. The transformation and interpenetration of spaces is elegantly represented by some of the morphing drawings of M C Escher -- a technique now highly developed on computers.
- one traditional presentation of the 64 different conditions identified by the *Book of Changes* is a square 8x8 pattern. It is worth recalling the number of studies that have explored the use of its binary coding pattern [\[more\]](#), notably in relation to the genetic code and the specificity of certain key amino acids (Martin Schonberger. *I Ching and the Genetic Code*, 1992). Seemingly unrelated is the remarkable identification by Buddhists of the network of 64 possible philosophical viewpoints (Bhikku Bodhi (Tr). *The Discourse on the All-Embracing Net of Views; the Brahmajala Sutta and its commentarial exegesis*, 1978) [\[more; more\]](#)

- the computer-based *Game of Life* (first developed by John Conway) has proved to be a very thought provoking illustration of how patterns emerge, grow, move, evolve and decay over a surface similar to that of the board games described above (Manfred Eigen and Ruthild Winkler. *Laws of the Game; how the principles of nature govern chance*, 1981). This has been valuable in the study of chaotic systems. Versions in 3D are now accessible over the web. [[more](#); [more](#)]

Recent years have seen the rapid development of home computer games that simulate the management of cities, countries, worlds and galactic empires. These were preceded by the development of more specialized games for management education and, most notably, for military strategy. The continuing development of the latter is now basic to the development and training for modern warfare, as was the case for the war against Iraq. Strategic dependence on them is highlighted by the fact that the Americans were confronted with a surprising degree of resistance, and subsequent looting, that they complained had not been previously "wargamed" to guide their response.

Within international agencies, however, the closest equivalent tends to be the use of world modelling, specifically economic modelling -- which tends to exclude any qualitative and non-quantifiable dimensions. Such models are used to develop and compare future scenarios. These in no way provide for the access or involvement of the wider population whose futures it is intended to manage through their guidance. The games also tend to be incomprehensible and irrelevant to policy makers -- whose children are enthusiastically engaged in managing cities and worlds through computer games. Unfortunately, the most popular home computer games tend to be those which educate the mind to destroy opponents -- and as such provide an ideal training facility for the modern military. There is no significant market for computer games that evoke thinking appropriate to fruitful dialogue with those holding radically opposed views.

As with the *Transformation Game* of the Findhorn Foundation, Damanhur has developed its own *Game of Life* (with a computer- based variant known as Super Risk, or *Risiko*)

Role playing: These games range from those based on an extension of board games (such as *Dungeons and Dragons*) to the many interactive computer-based games in virtual reality (such as *EverQuest*). These allow participants to develop characters (avatars) and collaborate with each other, possibly in attacking opponents. From one perspective role playing is an extension of techniques used in psychodrama in order to improve group relationships. *Dungeons and Dragons* has been remarkable for its efforts to document (in an extensive series of manuals) a wide range of mythical and symbolical figures -- and to encourage participants to absorb and use that otherwise abstruse knowledge imaginatively.

At Damanhur, if only through adoption of the names of endangered species, members engage in a form of role playing within the community conceived as an ecosystem. This echoes the practice of tribes in which individuals associate themselves with particular totemic animals. At Damanhur, the adoption of such a name is subject to the acceptance of the community as a whole which will fail to respond to an inappropriately chosen name. Extensive use is made of ritual in which role playing is a major factor. Aspects of such roles are active in the general organization of Damanhur. However it is also possible to view the whole community process at Damanhur as a continually renewed psychodrama -- for the benefit of all participants, and especially as stimulated by the Game of Life.

Science fiction: This form of fiction is well-recognized for its role in educating the imagination of many generations. Of special interest here are those forms which have explored alternative languages (discussed [below](#)) and the use of special games. Both these devices encourage readers to reflect on the dynamics and coherence of alternative frameworks. The most renowned game is that allusively portrayed by Hermann Hesse (*Magister Ludi* or the *Glass Bead Game*, 1943) as being practiced in the realm of Castalia -- an exemplar for communities such as Damanhur. Hesse received the Nobel Prize for the work in 1946. The game remains of extensive interest on the web and indeed is seen as having similarities to the web [[more](#)]. It "lays the foundations for an artistic/conceptual game, which integrates all fields of human and cosmic knowledge through forms of organic universal symbolism, expressed by its players with the dynamic fluidity of music" [[more](#)]. The game so allusively described is a celebration of culture and symbolism and its mathematical associations.

"Castalia is a symbolic realm where all spiritual values are kept alive and present, specifically through the practices of the Glass Bead Game. " (May 1969, Theodore Ziolkowski)

"I suddenly realized that in the language, or at any rate in the spirit of the Glass Bead Game, everything actually was all-meaningful, that every symbol and combination of symbol led not hither and yon, not to single examples, experiments, and proofs, but into the center, the mystery and innermost heart of the world, into primal knowledge. Every transition from major to minor in a sonata, every transformation of a myth or a religious cult, every classical or artistic formulation was, I realized in that flashing moment, if seen with truly a meditative mind, nothing but a direct route into the interior of the cosmic mystery, where in the alternation between inhaling and exhaling, between heaven and earth, between Yin and Yang holiness is forever being created." (*Glass Bead Game*)

Of special relevance to this reflection is [M. A. Foster's](#) far less known *Gameplayers of Zan* (1977) which appeared in the same year as the foundation of Damanhur. The Zan players Game is explained as follows:

...the Game is a game, true enough. but it is rather intricate and multiplex, and capable of truly bottomless subtleties. Therefore each who enters it comes to see different things in it. Some see music, others language. Still others life processes; and others chemistry and the like. (p. 171)

It seems to be tied up deeply in the popular religion, a kind of movable morality play...factions, rivalries, the whole thing. (p. 264)

The following thematic elements are interesting as being in some ways common to both Zan and Damanhur:

- the separation of a group of human mutants into a reservation. Although the genetic mutation was minor in the novel, it echoes the

way in which those exploring alternatives to modern mainstream thinking may also sense that they are different and may be so experienced and labelled (travellers, hippies, etc) -- they could perhaps be better understood as "memetic" mutants (see also [Authentic Grokking: emergence of Homo conjugens](#), 2003). The logic of such "reservations" echoes those in which indigenous populations have been encouraged to live -- as well as the widespread appeal of a "back to nature" lifestyle. Curiously the logic is now operating in reverse with the formation of "gated communities" to protect the elites of mainstream thinking from those who do not achieve such privileges (in this respect the *nomenklatura* of intergovernmental institutions echoes those of the USSR).

- the emergence of a complex socio-cultural structure and dynamic (quite distinct from that of the wider world living unimaginative lives in grid-like arrays of high-rise dwellings). This is evident in Damanhur in many respects, if only in the family structure and the rapidly shifting patterns of relationships.
- the division into 7 extended families ("braids") with quite distinct functions, including game playing. At Damanhur people choose membership of one of seven "ways" or spiritual paths (work/planning; art and technology; knights/security; monks/ritual; oracle/sacred dance; word/instruction/outreach; esoteric couples/children).
- the use of a game as a central process to the development of thinking appropriate to the organization and management of community life. In the case of the Findhorn community, the [Transformation Game](#) is used at many levels, whether informally in small groups, in more formal groups, or involving the 250 members of the community together -- and incorporating a degree of role playing. At Damanhur both the [Game of Life](#) and [Risiko](#) are used.
- the focus on the secret excavation of a vast underground complex in a location only detectable as a magnetic anomaly. Damanhur has been deliberately located in a strata of rare rock ([mylonite](#)) at a geological junction between the European and African tectonic plates. The excavations were secret over the period 1978-1992 and only became public knowledge through the disaffection of one member. The complex at Damanhur retains a degree of secrecy through the use of secret chambers and doors. It is considered that only 10 percent of the planned development has been completed.
- the emphasis on travel in space-time through the use of an underground complex. Within the Damanhur complex this is evident in the development of "time machines" and their use of "selfic" technology
- the challenge of explaining the nature of the enterprise in which they were collectively engaged, amongst themselves, but especially to others. In the novel, there is much concern to protect the "inner game". At Damanhur, eight levels of interpretation are recognized. The [Risiko](#) game may be understood as the inner variant of Damanhur's [Game of Life](#).

The Zan game provided a context in the novel for a degree of aggression not present elsewhere in the community. "And by no means does it reach all the people. In fact, on the whole, the people are rather uninterested in it. Less than half even bother with it in any degree and the number of real fans is probably less than ten percent, counting the Players themselves." (p. 265). At Damanhur a core group of 12 engage in the [Risiko](#) game regularly (4 hours a day, 5 days a week) in intense concentration: scenario building, planning and strategy [see [below](#)].

Language: The development of artificial languages, whether as imagined in science fiction (as in the case of the Klingon language) or as undertaken in practice, has an important role in enabling people to think otherwise. This is discussed [below](#).

World-making: Nelson Goodman reviewed the ways in which worlds could be created through the arts ([Ways of Worldmaking](#), 1978). Another environment in which the imagination can be challenged and exercised is in the creation of virtual worlds which others are invited to visit, and where they may be invited to interact. The most accessible of these is known as [Active Worlds](#). It is a community of hundreds of thousands of users that have built over 1,000 3D virtual reality environments in millions of square kilometers of virtual territory -- within which they can engage in informative chat sessions. The environment is much used by teachers around the world; from architecture departments to science labs to ThinkQuest projects, Active Worlds has been adding new dimensions to learning for over four years [[more](#)]. Such world-making also allows people to experiment with alternative physical laws and social structures.

Similar environments focus on creation of [virtual ecosystems](#), with artificial lifeforms of every imaginable kind [[more](#)]. The set of perspectives sustained via the website of the [Complexity and Artificial Life Research Concept for Self-Organizing Systems](#) is especially suggestive [[papers](#); [more](#)]

Damanhur announced in March 2003 that a "Virtual Damanhur" was coming soon "in a computer near you!". It remains to be seen whether this will enable a simple tour of the Temple complex or whether it will also offer other facilities reflecting their understanding of the coherence of higher degrees of order.

Art: The relation between science, art and design has been of interest ever since the seminal work of Gyorgy Kepes ([Structure in Art and in Science](#), 1965) at the [Center for Advanced Visual Studies](#) (CAVS) established in 1967 at MIT [[more](#)]. Another thread is the concern with overcoming techno-logic as articulated by Panos Kouros [[more](#)]. Art is specifically used to help provide support to cognitive reflection in science, although in a wider sense art and cognition are intimately associated (see proceedings of [Art and Cognition](#) conference, 2002-3).

The [Society for Art of Imagination](#) offers another thread, stating:

A work of imagination originates when artists express their awareness of some significant relationship with larger forces or realities using realism in an effort to reveal their secrets. It may be called by many names - Fantastic Realism, Surrealism, Magic Realism, Visionary Art, Inspirational Art - but the Society has chosen 'Art of Imagination' because it is the least restrictive and yet most unifying title.

A seminal bridging figure in the application of such imaginative aesthetic insights was Marsilio Ficino, the tutor of Leonardo da Vinci, founder of the Florentine Academy in 1462, and the primary focus of Platonic influence during the Renaissance [[more](#)]. It has been said that Ficino was the formulator of the central idea of the western Renaissance.

Ficino was concerned with practical techniques ("natural magic") for ensuring that speculative insights connect with the realities of daily living -- a psychological daily life. Thomas Moore (of the [Institute for the Study of Imagination](#)) notes that he elaborated "a remarkable amalgam of music, magic, medicine, astrology, art, and ritual -- all directed toward a release from materialistic shortsightedness and the establishment of a soul-focused lifestyle" (*The Planets Within*, p. 30). Ficino was notably known for his skills in musical therapy. The Florentine Academy under Ficino was concerned with the cultivation of "virtù", namely the individual's total development beyond all limits and the shaping of one's life into a work of art (p. 32). This calls for recognition of a timing factor, namely a recognition and appreciation between the artist and the audience (especially within the same person) of the significance of the moment [see [Composing the Present Moment: celebrating the insights of Marsilio Ficino](#), 2001].

Ficino made unique use of the metaphorical [theory of correspondences](#) in addressing the enigmatic challenge of interrelating the external (material) and internal (psychological) worlds. The former serves in the process of mapping the latter in ways that are vital to the coherence of inner experience in the moment. Imbued with such psychological integrity, all objects and processes in the external world take on significance for the coherence of the inner world. Moore argues that Ficino may well have been influenced by Nicholas de Cusa who placed high value on what he termed "enigmatic metaphors". In any case this bridge between the inner and outer world is achieved by image-making -- a curious irony to a contemporary civilization dominated by image building and spin doctors (cf Naomi Klein, *No Logo*, 1999).

Ficino's approach calls for a cultivation of the external environment as a source of imagery for an ecology of the soul (a point made by Ernst Cassirer). Moore notes Ficino's emphasis on the psychological values inherent in the material world -- reminiscent of the points recently made with respect to indigenous cultures by Darrell Posey (*Cultural and Spiritual Values of Biodiversity*, 1999).

Art is omnipresent at Damanhur. The instigator and mentor, Oberto Airaudi (known as Falco), is himself a painter whose prolific production is designed to evoke insight into the principles that the community seeks to advance. Notably as a result of his weekly seminars, he has produced over 300 books -- as was the pattern with Bhagwan Rajneesh.

To the three pillars of sustainability (economy, environment, and equity) Damanhur has added a fourth, aesthetics, as most notably manifested in its Temple architecture. Some have called the Temple of Humankind, which is recognized by the Italian Heritage Ministry and the regional beaux-arts authority, the eighth wonder of the world due to the sublime beauty of its murals and glasswork. It is recognized by the *Guinness Book of Records* as the largest underground temple in the world. While working on these collective artistic expressions, Damanhur's society has grown and created a base for its culture and traditions. As in the Renaissance, the construction of the temples in Damanhur has given birth to new artistic and economic activities.

As an exercise in imagination, the art of Damanhur can be usefully compared and contrasted with that of [Christo](#) as an "environmental and conceptual artist." His large-scale projects have involved wrapping bridges and buildings, and surrounding islands with pink floating plastic. Transience is an essential aspect of his art; after a few weeks he dismantles and recycles everything.

Architecture: There is a long tradition worldwide of using architecture, and especially sacred architecture (cf [Lindsay Jones](#), 2003), to stimulate the imagination in new ways and to support new ways of understanding. A notable emphasis is on the symbolic complementarity between temple and human (see R A Schwaller de Lubicz. *The Temple in Man: sacred architecture and the perfect man*, 1949). A particular feature is the use of sacred geometry (cf Robert Lawlor, 1983). These emphases have been the focus of the *Temenos Review* of which Kathleen Raine has been the editor; she subsequently co-founded the [Temenos Academy](#) with the Prince of Wales. The Damanhur Temple of Mankind is of course an exercise in sacred architecture.

Of particular interest in relation to architecture, including landscape architecture, is its importance with respect to memory -- as exemplified by the traditional interest in memory theatre (cf Frances Yates. *The Art of Memory*, 1966), especially in Italy [[more](#); [more](#); [more](#)]. Citing such sources, Panos Kouros (1998), at the MIT Center for Advanced Visual Studies (CAVS), is very clear on its operation:

The orator visits, in his imagination, one by one, the architectural places in which he has placed the images that refer to the concepts or words of his speech. These places can be used over and over again like a blackboard in order to record new contents. Entire structures, real or imaginary, can be built in this way and preserve the images of things and events that need to be memorized in their space. The architecture of these memory buildings acquires a distinct meaning in the method of the art of memory.... Monumental architecture has been one of the ways of preserving memory. Stele, pyramids, monumental sites ensure the continuity of collective memory. On the other hand, mnemonic architecture refers exclusively to the imagination, through an orderly topology of thought....

Contrary to what happens in the classical theater, it is the spectator who stands in the stage and faces the amphitheater, staring with the eyes of memory at the hermetic panorama of universal knowledge. Where the seats of the amphitheater would be, memory rooms are arranged on rising grades.... The cancellation of spatial and temporal continuity of the gaze and the object suggests the absence of solid meaning. It favors mobility, multiple reverberations and transformation of meanings....

According to this brief interpretation, theatres of memory provide a mechanism of topical ordering of meaning, in order to preserve memory of a universal knowledge. The organization of the gaze in space is never an immediate relation that happens in the present. The gaze does not reach form directly, and this discontinuity multiplies the echo of possible thought-places. [[more](#)]

Kouros refers to the 18th century philosopher Giambattista Vico [[more](#)] who elaborated the idea of "topical knowledge", based on mythical thought and in opposition to Cartesian rationality. Vico uses the word "topos" both as a rhetoric metaphor and an idea of place, as mental and physical character of culture (cf Donald Kunze and Wesley Wei. *The Vanity of Architecture: topical thinking and the practice of discontinuity*, 1986). Kouros' own proposal for a mnemonic architecture is based on the creation of artificial ruins, perhaps to be compared to the Damanhur Temple:

Artificial ruins work in the same way as artificial memory, since the quality of referring to a time other than the present has been given to them from the beginning. I consider artificial ruins mnemonic architectures; conscious efforts to create space, where time is the determining factor....Art of memory can be compared to the art of building ruins. The ease with which one moves in time, projecting corporal signs of his own existence to the intricate, secret and often moving spaces of the art of memory, resemble the simplicity with which one can discern, in places of ruins, an allegory of personal or social adventure throughout time and history. (Ruins are charming precisely because they set the mind in an orbit of detachment from the present). But not only time. The art of memory is an art of tracing an indirect and secret writing, full of allegories and associations among heterogeneous material, which are only connected by an invisible chain of meaning....

Ruin architectures "build" directly in space the resonance of meanings that belong to ruin-events, in their corporeal nature and without the intervention of rational categories or abstract concepts. They propose a topology of meaning or a "thinking through built objects", if we are to paraphrase the mythical thought of C. Levi-Strauss. The development of architecture of topical meaning suggests that space can be written and interpreted like a text, unfolding extended mythical and historical narratives and associations....

In previous texts and works I have considered ruins as architectural events that extend at the same time in space (the built abstraction), person (incarnated ruin), and language (its fragmentary existence). The intertwining of form, person and language creates a luminous ruin horizon, a "living" ruin, at the limits of political or religious authority. [[more](#)]

Imaginal synergies: Psychologists have identified synesthesia as a specific condition that occurs when an individual who receives a stimulus in one sense modality simultaneously experiences a sensation in another. In the last two centuries, the subject has aroused the interest of many artists and scientists [[more](#)]. Aspects of this may emerge, or be vital, to certain forms of creativity -- notably of the kind envisaged in what might be termed computer-enhanced mytho-poetic games.

Efforts have been made to describe the form alluded to in Hesse's *Glass Bead Game*. The (pre-computer graphics) description of the Zan game (pp 265-273) points to unusual elements illustrated by the following:

- its recursive nature, very distantly related to chess, but "inconceivably more complex" (p. 265)
- normally played on a two-dimensional field, "which can be divided at will into one of several tiling arrays: triangles, squares, and hexagons, those being equilateral and regular, and also quite a number of irregular pentagons and hexagons" (p. 265)
- the object appears to be "to attain certain desirable configurations in shape and color and dynamics, while the opposing team tries to manipulate certain parts of the rules and other factors to prevent it" (p. 266)
- "And on the board, immediately appeared a preliminary figure, a mildly complex geometrical figure in five colours. It stayed in place a moment, then winked out. The whole board shimmered, came alive, changed to a hexagonal cellular array, retaining the figure as well as it could be accommodated into the new matrix; a series of indecipherable symbols began flowing across the top of the screen, and the figure began changing rapidly, evolving into different shapes and densities as the initial moves of the Game proceeded" (p. 269)
- "Blue riposted...changing the field to a beautifully weird pentagonal tessellation, the cells irregular polygons, and...back to the square grid...Red finally manipulated the figure somehow into an astonishing and enigmatic shape, one which hung on the display board screen for a long time, emitting coherent sparks and particles that fled to the edges and vanished." (p. 271)

Epistemological challenges

Traditional knowledge: It is only too easily forgotten that there are other ways of knowing from those that dominate western culture. In the case of indigenous peoples these ways of knowing are also too easily disparaged from western frames of reference as quaint demonstrations of ignorance -- or even symptomatic of a degree of unenlightenment that warrants any exercise in remedial education by missionary groups. The case against such ignorance on the part of outsiders has notably been made in a collection of papers edited by Darrell Posey (*Cultural and Spiritual Values of Biodiversity*, 1999). Of particular interest in relation to any understanding of time travel is the manner in which western concepts of "past-present-future", anchored in languages, may be challenged by other understandings -- such as those of the Hopi or of Australian Aborigines.

An equally neglected perspective is offered by the ways of knowing of the sophisticated and ancient cultures of Asia (cf *Enhancing the Quality of Knowing through Integration of East-West metaphors*, 2000], notably as articulated by Susantha Goonatilake (*Toward a Global Science: mining civilizational knowledge*, 1999). Where the ways of knowing are radically different, the interface with western frameworks may pose severe challenges.

The action against terrorism, and notably the war against Iraq, has highlighted the challenges of western comprehension of Islamic culture -- which may be relevant to any understanding of the nature of the "self" that may engage in Damanhurian time travel. In the words of one critic (Jonathan Raban. *The Greatest Gulf*):

The single most important thing that Wolfowitz might have learned is that in Arabia, word like "self", "community", "brotherhood" and "nation" do not mean what he believes them to mean. When the deputy secretary of defence thinks of his own self, he -- like me, and probably, like you -- envisages an interiorised, secret entity whose true workings are hidden from public view...The post-Enlightenment, post-Romantic self with its autonomous subjective world, is a western construct, and quite different from the self as it is conceived in Islam. Muslims put an overwhelming stress on the idea of the individual as a social being. The self exists as the sum of its interactions with others. Rosen (*The Culture of Islam*) puts it like this: "The configuration of one's bonds of obligation define who a person is...the self is not an artefact of interior construction but an unavoidably public

In the case of Damanhur, many non-western and traditional ways of knowing are explored and given expression in a deliberate process of syncretism -- whilst developing a viable interface with mainstream western thinking.

Embedding: Of striking significance in the case of indigenous peoples is the manner in which their way of knowing is embedded in their natural environment. Again, in the case of Australian Aborigines, their land is integral to their way of knowing and to their cultural history -- it continues to carry their cultural memory and sense of reality to a degree unimagined in "modern" cultures. This explains their commitment to caring for the land through song -- "singing the land" [more]. Echoes of this understanding are to be found in some contemporary schools of cognitive research responding to insights from Eastern, and especially Buddhist, thinking. The emphasis here is on the embodiment of the mind and process of enactive cognition as captured by Francisco Varela's use of the phrase "laying down a path in walking" (1987).

Such insights raise the questions of how can a way of knowing be embodied:

- by a person
- by a community
- by a planetwide community

Damanhur offers an example of embodiment in a community. Ervin Laszlo vigorously promotes the idea of planetary consciousness (*Planetary Consciousness: our next evolutionary step*, 1997) through the [Club of Budapest](#), its distinguished artists and musicians, and its Planetary Consciousness Network. But it would appear that those at Damanhur have greater collective understanding of the vital process of collective embodiment.

Mnemonic encoding: A vital key to sustaining the embodiment of a way of knowing is through a mutually reinforcing pattern of mnemonic keys -- a memetic ecosystem of associations. At its simplest, and possibly richest, this may be a set of songs. Such patterns may be reinforced through any of the arts, in isolation or in combination. Aspects of such techniques are exploited in marketing campaigns, notably in political or religious propaganda. Much less known are the mnemonic techniques, notably associated with mnemonic architecture (as described above).

The concept of cocooning points to other lessons from its metaphorical roots -- the cocoons spun by silkworms, other insects and spiders. The features juxtaposed to create a psychosocial cocoon, and the resultant web of mnemonic associations, recall the mnemotechnical role of structures such as "memory theatres" (see Frances Yates, *The Art of Memory*, 1966). Such devices compensate for attention-deficiency disorders, erosion of collective memory [Judge, 1980] and the inability to comprehend the longer-term cycles fundamental to sustainability. The traditional mnemonic role of beaded circlets in this respect merits wider recognition with respect to the challenges of sustainability [Judge, 2000].

In effect a way of knowing becomes all-encompassing when the pattern of associations is all-encompassing -- offering particular semantic pathways in every circumstance. Pejoratively, this may be labelled in anti-sect terminology as a dangerous degree of "programming" typical of "brainwashing" -- that urgently calls for remedial "de-programming". Curiously however professional training of any kind is offered through "programmes" -- perhaps implying that any professional qualification is the result of successful programming. Religious education -- to compensate for the errors propagated by sects -- is also offered through "programmes". There is already recognition that the simpler forms of propaganda are evolving through "psychological operations", to "information warfare" into "memetic warfare" -- to be understood as invasive exercises in programming and counter-programming.

Damanhur, as indicated above, has indulged riotously and joyfully in every possible art to carry and sustain a rich and evolving pattern of insights quite distant from the western mainstream. The Temple decor, for those who can read the interwoven iconography and scripts, offers a form of mnemonic or memetic encoding -- a carefully constructed circuitry for the mind and emotions through which knowledge is embedded in the body. This wrap-around mnemonic circuitry is quite in contrast to the widely recognized challenge of responding to information overload. The techniques for doing so, from speed reading to [Total Information Awareness](#) programmes, do not address the ultimate challenge of making sense from large quantities of information, however well-clustered. Clearly, however, the work on strategic "situation rooms", with their multiple displays, is moving towards the kind of "wrap-around" presentation in continuing development at Damanhur. It is the improved elaboration of configurative encoding of significant content within physical volumes that remains the challenge -- as in the time of memory theatres.

Language: Gilles Fauconnier has developed a highly influential mental-spaces framework challenging more conventional perspectives in linguistics. In this light, the mind creates multiple cognitive "spaces" to mediate its understanding of relations and activities in the world, and to engage in creative thought. This approach has since extended the mental-spaces framework to demonstrate its utility in solving deep problems in linguistics and discourse theory investigating the ties between mental constructs. In particular (and in the light of non-English challenges) they explore analogical counterfactuals and the metaphor system for conceptualizing the self. [more]

From the 1980s, cognitive linguists have mapped out the basic elements of thought -- image-schemas, frames, conceptual metaphors and metonymies, prototypes, mental spaces, semantic spaces. This work now provides compelling arguments for the importance of imagination in our conceptual lives (see Mark Turner and Gilles Fauconnier. *The Way We Think: conceptual blending and the mind's hidden complexities*, 2002). They clarify conceptual blending as the mental mechanism that binds together and integrates these elements into complex ideas. (see *Using High-dimensional Semantic Spaces Derived from Large Text Corpora*, 1995).

[Linguistics](#) has had a long-standing interest in artificial languages [more; more]. A major aspect of this has been in imaginative exploration of linguistic questions in some science fiction (see *The Linguistics and Science Fiction Newsletter*) [more]. For example, the novel by Ian Watson (*The Embedding*, 1973) is notable for being one of the first science-fictional explorations of modern linguistic and

anthropological theories [as explained by Pamela Sargent]. Previous science fiction had dealt with the possible problems human beings might have in communicating with aliens. According to Michael Bishop:

One idea exploited in different guises or subtle variations from novel to novel is Watson's strategically held "belief" that consensus reality, or the world of everyday experience, is ripe for transcendence. The means of transcending our human limitations or the prison of the physical universe may differ from one fictional foray to the next, but the fact that there does exist a transcendent mental set or cosmic continuum to which we may or should aspire remains a conspicuous constant. Although Watson usually embeds this idea in a scrupulously rational context (often it is a research project or a scientific mission), a strong element of the primordial or the mystical (from meta-linguistics to Sufism) lends his several restatements of the concept a rich and endlessly ramifying ambiguity

As illustrated by the considerable interest on the web in the invention and construction of an extensive range of languages [more], there is the possibility of supporting the group process through the development and use of a new language that would be designed to bypass the difficulties of interaction between constituencies with radically different value systems. Just as there has been a strong impulse to develop dying natural languages to safeguard the identities associated with them, there is a case for developing one (or more) languages to hold paradoxes across incommensurable frameworks [more; more]. There are even language construction kits. However the fate of some artificial languages raises useful questions about the limitations of this approach as undertaken to date -- in contrast to the widespread success of some jargons, such as those originated by black Americans.

Language itself may be understood as an intimate (deep structural) equivalent to such mnemo-technical structures -- a web by which an alternative reality can be sustained [more]. In this light it would be interesting to compare natural languages in terms of their capacity to sustain sustainability. Given the more than 290 artificial (non-computer) languages identified on the web [more], it might even be possible to craft such a language to have significant advantages in this respect -- as a secular "wholly" language for reasons analogous to the need for "holy" languages [more]. Alternatively much might be accomplished by envisaging its characteristics, notably in contrast to one impregnated with military metaphors [more]. Given the call for a compensating feminine influence, it would be intriguing to discover whether explicit use of gender, as in languages such as French, remedied to any degree the tendencies to pseudo-neutrality evident in policy English -- criticized by ecofeminists as "manstream" and based on problematic assumptions relating to environmental ethics and the dialogue between ecofeminism and deep ecology (see Greta Gaard, *Ecofeminism*. 1993) [more].

Damanhur has invented its own language and script, understood to have some 8 levels of meaning, in order to sustain its community development. Its Water Temple has text in 12 sacred languages incorporated into its design.

Present in the moment: Much is made at Damanhur of personal responsibility for choice in the moment to avoid entrapment in habitual responses. This is a theme stressed by Marsilio Ficino, notably in his use of "natural magic" to cultivate appreciation of the moment. It is an emphasis echoed by sages down the ages as in the Buddha's phrase: "Do not dwell in the past, do not dream of the future, concentrate the mind on the present moment." This integrative, time-binding perspective, is strangely captured in the phrase "at once". ***

Curiously mainstream thinking is locked into the past or the future and has given little effective attention to how the quality of life in the present moment may be enhanced [more].

At Damanhur, as in some other intentional communities, considerable emphasis is placed on meditation and notably on meditation on action in the moment -- in contrast with that pejoratively described as "navel gazing". A possible advantage of its syncretic approach is the encouragement of the ability to "buy into" a succession of realities without becoming locked into any one of them. They are then understood more as "stepping stones" on a journey -- in which dependence on any one of them is dangerous. Understood as a set or configuration of alternative realities, their connectivity might be framed in terms of R Buckminster Fuller's concept of "kiss-touch" tensegrity elements in geodesic dome construction [more].

The challenge in relation to time travel is then how to compose experience of the moment -- to allow the moment in time to be read coherently as a whole. Symbolism, as explored at Damanhur, endeavours to integrate a multiplicity of cultural insights. The physicist Wolfgang Pauli, in his correspondence with C G Jung, indicates:

More and more it seems to me that the psychophysical problem is the key for the overall intellectual situation of the time; [we can advance by] finding a new ("neutral") unitary psychophysical language for describing an invisible potential reality that can only be guessed at by its effects, in a symbolic way (Letter to CG Jung, 1952)

Combining quantum and psychological understandings, he envisaged a reality which cannot be directly described but can only be conveyed in an oblique and picturesque way (see discussion in Feyerabend, 1999, pp. 174-6). Such an initiative might be usefully framed and understood as "semantic magic" -- recalling Robert Graves recognition of "poetic reverie" as a mode of research. Of this mode, William F Pinar (*Autobiography and the Quest for... Nothing*) argues:

Poetic reverie seems to take the particular phenomena of existence (and this means phenomena remembered, if perception is understood as time-delayed through memory) and folds them back upon themselves in "elliptic associations." Autobiography-- since we all have lives, no matter how limited the attention our living may receive--must be one of the first motions toward such reverie. Autobiography may attain to a reverie which finds the archetypal past projected into the future as epistrophe: a resembling or re-assembling or dissembling. Or, as Taylor interprets Nietzsche, as eternal return or repetition: "In repetition, the past that is never present is reversed and appears as the future that is always deferred. The guise of this future is death. Death ... is the present absence or absent presence that forms the ever approaching-receding horizon of human experience. The 'beyond'

of death opens with repetition" (1987, p. 96). A folding-back or elliptic association is not merely a repetition, however. It suggests the power to (ap)perceive through attuned memory. The (ap)perceiver must be a self whose centre has been replaced (through a kind of death) by a shifting (and shifty) transparent door: a "nothing." In such "ecstasis"--an exit from stasis--Heidegger infers that "for the most part we are our own having-been" (in Krell, p. 331). The creative core is nowhere and nothing and so everywhere and all.



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