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Fusion of Informatics and Cultural Horizons

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ABSTRACT

This chapter explores the extent to which selected writings of French philosopher Michel Serres and a health care model created by Brian Hodges in the UK can augment and inform the development of social informatics. The volume of Serres' output contrasts markedly with work devoted to Hodges' Health Career - Care Domains – Model. Since the concept of health is universal culturally, and informatics disciplines are emerging fields of practice characterised by indistinct boundaries in terms of theory, policy and practice, various ethnographic and cultural associations will be made. Placing Hodges' model and Serres' work together is not intended to suggest direct equivalence, other than the common themes this author intends to bring to the attention of the social informatics community. Central to the above, is the notion of *holistic bandwidth*, utilising Hodges' model as a tool to develop and disseminate socio-technical perspectives.

Introduction

In 1986 whilst studying community mental health nursing, the author discovered a conceptual framework known as Hodges' Health Career - Care Domains - Model (hereafter referred to as h2cm). Clinical experience, work in health informatics and awareness of contemporary social informatics issues including access; community economic development; social cohesion; development and learning (Clement, et al. 2004) convinces the author of the value and potential utility of h2cm to the extended informatics community. This potential arises by virtue of the model's structure and four knowledge domains. As for any generic framework Hodges' model can be used to address several issues; policy development, health promotion and education, intercultural matters, communication, research, public involvement, service development and evidence based care plus community informatics and e-government. This list is pragmatic, incomplete and not meant to impress. While successful application of any tool ultimately depends on its users, the model's scope and the problems of the 21st century make the potential h2cm user base and beneficiaries immense.

Demographics are the dynamic that shapes health and social policy as well as population pyramids. Globalization, migration, ongoing humanitarian crises highlighted by Rieff (2003), superbugs, terrorism and environmental degradation bring home the lesson of just how interconnected, interdependent and vulnerable humanity has become. Commentators report on the digital divide, the increase in social and political exclusion and the policy imperative to engage citizens in the political process. Citizens in turn are deluged with wave after wave of messages. While the majority are contentedly fully immersed and cannot be distracted, others play the part King Canute and try to stop the tide. Where is the wisdom in the exponential growth in the volume of information produced, to sell it as knowledge, as intelligence, transactions completed in nanoseconds? Amid frequent calls for new tools, what might a framework like h2cm provide?

As social informatics emerges as a distinct discipline it needs to define its boundaries and differentiate its content from other informatics disciplines to produce the social informatics curriculum. Social informatics is not unique in this regard, sharing this issue with other informatics practitioners. The author (Jones, 2004a) coined the term *holistic bandwidth;* an as yet loosely defined concept this may nonetheless assist informatics curricula developers. Holistic bandwidth refers to the conceptual scope of a discipline. So in use h2cm can help identify those issues and concerns that are truly unique, and those which overlap informatics fields.

Reading Serres' translated texts this author was immediately struck firstly, by the similarity of Serres' concerns to current informatics issues; secondly, the problems that led to h2cm's creation (which will be explained shortly); and finally how well Hodges' model could represent both. This expressive power arises from h2cm's structure; a conceptual space created by diagrammatic representation of four pivotal concepts – *individual*, *group*, *humanistic* and

mechanistic. This construct leads to a conceptual framework with generic and specific, broad and detailed capacities.

This chapter begins with brief introductions to the range and nature of Serres' ideas and Hodges' model. The main text then comprises a fusion of the two linked to informatics, culminating in discussion of why this paper matters. Common themes are epistemology, the relationship of the sciences to the humanities, space and time, noise, information and interdisciplinarity. Researcher's attention to Serres and Hodges can be justified on several levels including: integration of knowledge; the need to equip the civic population with tools to facilitate engagement and critique; to blend and balance analysis-synthesis, the quantitative and qualitative.

Despite the philosophical and metaphorical emphasis in this chapter the text is of significance to social informatics practitioners for the following reasons:

- Health is a key determinant in quality of life outcomes
- Demographic trends continue to highlight the health burden on communities, locally and globally (Lopez, et al., 2006).
- There is an acute lack of political engagement and malaise in many electorates.
- Public health professionals seek to assess and disseminate positive health and wellness messages in opposition to mass-media and contradictory government policies.
- Tools to engage people individually and in groups are needed with exposure early in an individual's educational career.
- While technology is frequently associated with the new; community development is about sustainable growth and regeneration.
- Tools to assist policy makers and bridge the humanistic-mechanistic divide are also needed to achieve socio-technical synergy (Mumford, 1996).
- The advent of the semantic web provides a coming of age for conceptual frameworks with the requirement for research into tools such as h2cm.

Michel Serres

Born in 1930, Serres' formative years, study and writing was influenced by conflict and the holocaust, leading him to his life's work. With more than twenty books published Serres' output is subject to ongoing debate (Abbas, 2005; Assad, 1999). Science as a tool is not neutral, but was compromised in Hiroshima and Nagasaki. The values within applied science remain stark today in bioterrorism, the state of the biosphere and how we can achieve sustainable societies. Serres believes it will take a fusion of knowledge from disparate disciplines for us to grasp what is at stake (Abbas, 2005, p.3). This means

travelling through passages, exploration of relationships with each other, science and technology, God, nature and time. Passage can also be afforded by time, a dynamical time.

Appointed to the Académie Française in 1990, Serres' position as one of France's most prominent intellectuals is assured. Tenure at Stanford University has brought Serres to the attention of the English-speaking world, with approximately half of his books translated to English. Viewed by some of his peers as a maverick, Serres is nonetheless unique, a provocative and unorthodox thinker. His encyclopaedic approach combines and connects seemingly disparate events, objects and themes, from what are usually distinct disciplines. The resulting philosophy is kaleidoscopic, drawing upon the object-subject language debate, local versus global and other antagonistic dichotomies, law and science, and the development of the social and political contract. These latter contracts are now challenged by the need for a *natural contract*. This dynamic mix disorientates the reader who anticipates a standard academic exposition.

Serres' tools and style variously provoke controversy, surprise and admiration. The adopted approach differs markedly from what is accepted academe. This does not sit well with experts in their respective fields, denoted by an agreed (institutionalised) toolset. By reading Serres we see that temporal distance does not matter; all authors should be treated as our contemporaries (Serres, 1995a). Consequently, Serres is accused of being a dabbler, an isolated thinker (Dale and Adamson, 1998-99). His thought can be challenging (personally and academically) when for example cultural similarities are drawn between the space shuttle Challenger accident and human sacrifice within Carthaginian worship of Baal (Serres, 1995b). A highly emotive view, the impact is reinforced by the 2003 Columbia disaster. The West also hates children (Serres, 1995c). Despite such controversy Serres' work is extraordinary in its disciplinary bandwidth. He provides a snapshot in a tantalising and marvellous way of the myriad of discoveries we see when several surfaces are scratched together, paper, stone, earth, fabric, cyberspace and skin; possibilities born of every discipline and others yet to emerge.

Given the potential appeal of his work to the humanities, environmental, interdisciplinary and informatics studies Serres is overlooked. He is a Janus-like figure, but in addition to looking simultaneously to the future and past, Serres stands on the bridge seeking to encourage traffic between the sciences and humanities. No less than to provide a means to unify thought in the sciences and humanities. Rather than looking one way only and commanding "you shall not pass" in a Tolkinesque tumult, Serres wants to alter the perspectives of these two encampments. Using the sciences and humanities - especially history, literature, politics and myth - Serres develops ideas using tropes such as *noise*, the *multiple*, the *parasite, The Emperor of the Moon* and others. The resulting messages ultimately translate into love and evil. For Serres violence at a personal and atomic level is the key message. Myth, literature and history can also inform everyday life and science.

Serres' texts are built around a central theme; although this may not be clear from the outset as the objects and subjects Serres presents include statues, angels, mythological figures, the five senses, Lucretius and modern fluid dynamics (Serres, 1977). His books are highly individualised wanderings, a path that is erratic and appears littered with specious argument untouched by the sharp edge of logic, honed by Occam's razor. This does not mean that Serres output is unstructured, that he fails to explain, fails to achieve his goal. On the contrary critics have identified development in his thought.

Communication and the more complex aspects of information theory inform the earliest works, in which Serres employs *Hermes* – the messenger of Zeus; and *angels* from the Greek word for messenger. *Hermes* is also an ideal trope to explore Hodges' model and informatics, being the *philosopher of plural spaces*. Hermes is equipped to navigate the passages between disciplines, between distinct epistemologies as explained by Assad (1999, p.9). While h2cm is generic, the plurality of conceptual spaces represented in Hodges' framework can lead us to other models within the health care sector germane to informatics. Zubin and Spring's (1977) stress-vulnerability model explains illness and wellness with reference to an individual's social skills, coping skills, information and information processing strategies. While the 'World Health Organisation' extols '*health for all*'; information overload is a problem for all – mentally, physically and digitally.

Les Cinq Sens published in 1985 explores language, signs and the senses. Language is a screen; it acts as both a barrier to passage and facilitates passage. In health care language is also a screen. People generally and health professionals in particular may use language to avoid difficult subjects and issues. Individuals are not only *screened* within disciplines, each with its own vocabulary and terms, but *to be screened* is to seek passage through gate-keeping services in order to access services. H2cm can ease this passage physically, emotionally and cognitively? The book *Le Contract Natural* (1995) argues for a natural contract with the Earth, to bring order as the Social contract has brought order in how people relate to each other. *Le Contract Natural* deals with *the* issue of the 21st century: global environmental change. The text builds on previous work even if this is not referred to directly. If people fail to co-operate, accept discipline and act as a team on board ship they are imperilled. The planet Earth is our ship and we are all crew members.

Hodges' Model: A Cognitive Periplus for Life-Long Learning

Developed in the UK during the early 1980s, Hodges' model is a conceptual framework that is person-centred and situation based. In structure it combines two axes to create four care (knowledge) domains (as per figures 1 and 2). Academics and practitioners in many fields create models that help support theory and practice (Wilber, 2000). Models act as a memory jogger and guide. Whereas in health education theoretical frameworks are discipline related with specific and generic uses, community informatics emerged from university, corporate and governmental environments without a model (Clement, et al.,

2004). In health care generic models can encourage holistic practice directing the user to consider the patient as a whole person and not merely as a diagnosis derived from physical investigations. Exposure of h2cm is limited to a small (yet growing) cadre of practitioners; several published articles (Hinchcliffe, 1989; Adams, 1987; Jones 2004a, b). In addition to a website (Jones, 1998) there is a blog and an audio presentation both first published in 2006.

The best way to explain h2cm is to review the questions Hodges originally posed. To begin, who are the recipients of care? Well, first and foremost individuals of all ages, races and creed, but also groups of people, families, communities and populations. Then Hodges asked: what types of activities - tasks, duties, and treatments - do nurses carry out? They must always act professionally, but frequently according to strict rules and policies, their actions often dictated by specific treatments including drugs, investigations, and minor surgery. Nurses do many things by routine according to precise procedures; as per the stereotypical matron with machine-like efficiency. If these are classed as mechanistic, they contrast with times when healthcare workers give of themselves to reassure, comfort, develop rapport and engage therapeutically. This is opposite to mechanistic tasks and is described as humanistic; what the public usually think of as the *caring* nurse. In use this framework prompts the user to consider four major subject headings or care domains of knowledge. Namely, what knowledge is needed to care for individuals - groups and undertake humanistic - mechanistic activities? Through these questions Hodges' derived the model depicted in figures 1 and 2.
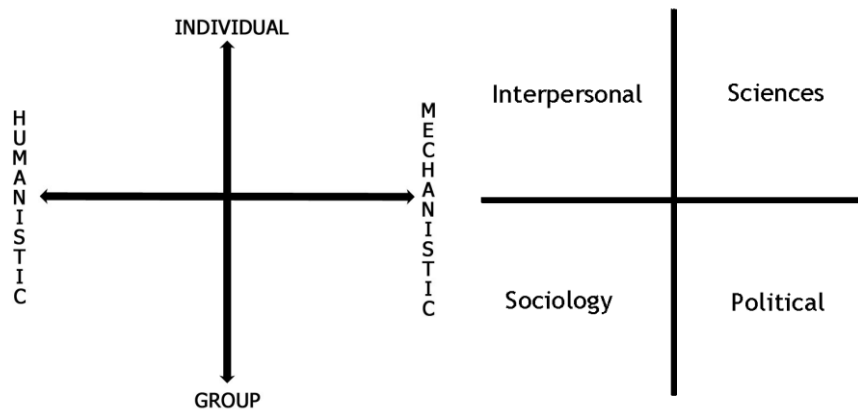

Figure 1.   Figure 2.

Initial study of h2cm on the website has related Hodges' model to the multicontextual nature of health, informatics, consilience (Wilson, 1998), interdisciplinarity, and visualization. H2cm says nothing about the study of knowledge, but a great deal about the nature of knowledge is implied in figures 1 and 2. This prompted two web pages devoted to the structural and theoretical assumptions of h2cm (Jones, 2000a, b.). Although the axes of h2cm are dichotomous, they also represent continua. This duality is important as an individual's mental health status is situated on a continuum spanning *excellent* to *extremely unwell*. There are various states in-between affected by an

individual's beliefs, response to stress, coping strategies, epigenetic and other influences. H2cm was created to meet four educational objectives:

1. To produce a curriculum development tool.
2. Help ensure holistic assessment and evaluation.
3. To support reflective practice.
4. To reduce the theory-practice gap.

Since h2cm's formulation these objectives have grown in relevance. The 1980s may seem remote, but these problems are far from archaic as expansion of points 1-4 reveals. Student life is preparation for life-long learning. Curricula are under constant pressure. Despite decades of policy declarations, truly holistic care (combining physical, mental and pastoral care) remains elusive. The concept and practice of reflection swings like a metronome, one second seemingly de rigour, the next moment the subject of web based polls. H2cm can be used in interviews, outlining discussion and actions to pursue, an agenda - agreed and shared at the end of a session. The model is equally at home on paper, blackboard, flipchart and interactive whiteboard. Finally, technology is often seen as a way to make knowledge available to all practitioners; the means to bridge theory-practice gap through activities such as e-learning, governance and knowledge management.

The axes within h2cm create a cognitive space; a third axis projecting through the page can represent history; be that an educational, health or other 'career'. It is ironic, that an act of partition can simultaneously represent reductionism and holism. Reductionism has a pivotal role to play, which h2cm acknowledges in the sciences domain. What h2cm can do is prompt the expert (single domain) practitioner that there are three other pages to reflect and write upon.

Serres and Hodges: Informatics Interlopers or Integrators?

If social informatics is to make a difference it must eschew the silo mentality that develops in many disciplines, limiting vision, reach and action. Schools of informatics such as health, genomics, social, community, medical, bioinformatics, and e-government must cohere in order to amount to more than the sum of their socio-technical parts. What this means for many infant or pubescent informatics disciplines and curricula is another debate. Where is the (cultural) centre of informatics? Is informatics built around the individual, the community, devices; or all combined? By opening our minds to possibilities this chapter is a call for coherence. Wherever and however conceived the various communities of practice using the label 'informatics' must ensure they amplify each other. If not, they run the risk that they will interfere and cancel each other out; becoming yet another source of environmental and cultural noise. With the introduction completed, as you navigate what follows consider it an exploration: searching for the locus of informatics.

MODEL AND ATLAS – FUSED:
Cultures, Communities, Crossroads and Ancient
Mariners

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      E │ E
  S E R │ R E S
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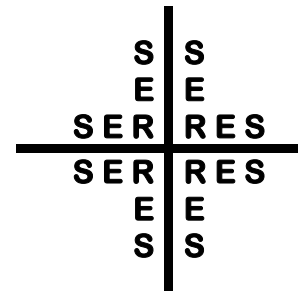
The Serres-cruciform motif is of course a fortunate co-incidence of syntax, semantics, nomenclature and form. When you look at Hodges' model what do you see; a crossroads, junction, or collision? Is there a gap between care domains, or do concepts gradually fuse with their neighbours in adjacent domains? It is always easier to ask questions, but several must be raised at this juncture. What exactly is a nurse, patient, carer, or citizen doing when they complete the h2cm matrix? Why do they place concepts into one domain rather than another? What consistency is there between users and are there any objective metrics to assist? Is there a way here, a crossroads, a way to represent, present and share differing yet equally legitimate perspectives on the problems and issues that bind? How do we balance objective (mechanistic) and subjective (humanistic) health care? Are there only four domains? Who determines the number? Whatever our beliefs about the meaning of life, death, faith and why we are all here, the pastoral - spiritual 5th domain is missing. It is there - all four domains combined plus one word. The biggest question of all: humanity - the plaintiff asks - why?

Serres endeavours to provide a comprehensive map, which he calls an atlas. This atlas is not aimed at a specific audience, such as an atlas of the heavens, but incorporates all disciplines. The purpose of the atlas is not recognisable at first. The key is not presented to us. Serres' work assaults the conventional academic senses. Like an explorer on a rope bridge, Serres runs the full length of the h2cm's axes, back and forth reaching into the knowledge domains. Getting to grips with Serres' thought means appreciating the uncertainty principle. We may know either the discipline where Serres currently resides, but not the instant of arrival or departure. As Serres wanders - quick, quick, slow; quantum leap – slow; such frenzied activity gives the impression of somebody lost, rather than following a predetermined agenda. The symbols and objects presented are instantly recognisable, but their juxtaposition makes them strangely alien. To be fully understood the familiar needs to be reappraised.

Gibson explores Serres' crossroads (Abbas, 2005, pp.84-98). Are crossroads merely a linear bisection? Or do travellers create a chiasmatic junction, moving like impulses flowing East-West and West-East to the optical centre, a nexus of communities and cultures? According to Cunliffe's (2001) book about the voyages of the ancient Greek explorer Pytheas, early mariners navigated using a text called a periplus. Providing some of the earliest recorded observational views of the world, the periplus described coastlines by landmarks, winds and topography. Within care education h2cm acts as a

periplus for learners, an aide memoir and reflective tool, a space to record those initial sightings and learning encounters. The model provides placeholders for knowledge, the exact position, content and process of revision are not fixed. Hodges' model provides the coastline in template form; the context defines the topography – the landmarks.

In one sentence Serres (1997, p.20) conjoins the travels of mariners with their reliance on knots to modern graph theory and the need to explain complexity. Following the lessons of history and legend to solve a problem you might cut a knot. To fully understand it, you must untie it. This means entering the weft and weave of knowledge, back and fore in time, using hands and eyes: brain. Increasingly the disciplines are tied together, because our problems are such that new knots are sought to repair and maintain the rigging. Conner notes Serres' observation that *"where topography is visual, topology is tactile"* (Abbas, 2005, p.158). Hodges' model helps us to see what is significant. Rigged together the four vistas from the house of ideas have become our sail. In contact with individuals, communities and cultures h2cm can help us to recognise and address bias, prejudice and the taunts of personal and ethnic histories. Only then with memories and pain shared and understood can we feel our way. In order to travel with someone you must both pass through the same crossroads and meet at the same port-al.

Art and Science: A-cross the Great Divide

Whatever the situation interfaces abound. All inevitably have data, information and knowledge in common. These concepts represent our age as no longer just real and imagined, but virtual as implemented in the World Wide Web. People interface using their senses. For Serres, touch is *the* interface. A computer *senses* through its interfaces about which Serres (1995b, p.70) observes:

Have you noticed the popularity among scientists of the word interface – which supposes that the junction between two sciences or two concepts is perfectly under control? On the contrary, I believe that these spaces between are more complicated than one thinks. This is why I have compared them to the Northwest Passage ... with shores, islands, and fractal ice floes. Between the hard sciences and the so-called human sciences the passage resembles a jagged shore, sprinkled with ice, and variable ... It's more fractal than simple. Less a juncture under control than an adventure to be had.

Hermes' travels are curtailed if creativity is stymied. If h2cm is to be a universal tool what does this mean in terms of *interface*? Information and communication technologies are not pure mechanism, developers of all tools must constantly acknowledge cultural and language differences. Does h2cm provide a template for an international interface combining left-right and right-left reading? From another perspective the human-computer interface literature asked readers how they would label four quadrants: as a *mathematician*, a *clock-watcher*, or a *book-reading clock-watcher* (McCabe, 1992)?

Although written at a time when the (first) Internet bubble was still inflating, Join-Lambert et al. (1997) throw light on the possible future directions of study and knowledge:

Intelligence is not about knowing axiomatically how to reason… The French 16th Century philosopher Montaigne already had dismissed the concept of a 'well-stuffed head'. The advent of the printing press made the memorization of Ulysses' travels and of folk tales - the support of knowledge at that time - redundant. Montaigne saw no longer use in memorizing a library that was potentially infinite. But does not the Internet ask for a 'well-endowed head'? Won't the best surfer be a 'Jack of all trades'? The fastest surfer is not going to be your typical Ivy-league super-titled philosopher: That guy's head will be simply too loaded to sort it out on the Net. So, there will be fresh opportunities for those who were viewed by society as laggards. It is a clean start with equal opportunities for all. [Online]

Serres' vision is not all conquering. Concern continues as to the quality of knowledge on the web, especially health information, and the realisation of benefits from e-learning. Social exclusion, access to care services and education remain key political issues. Groups have mobilised to reduce the digital divide through digital communities furthering political, democratic and environmental awareness using information technology under the aegis of social and community informatics. Access to information and communication technologies (ICT), education and training provides early warning of obstacles; alternate passages through the system(s) become visible, whether for individuals, community groups or global communities.

In addition to the gaps suggested by the interfaces above, the void between theory and practice is a subject of ongoing debate within health care (Cody, 2003) and without (Northouse, 2003; Temperton, 2004). There is another - the mind gap. This refers to the 'distance' an individual must traverse to access education (Join-Lambert & Klein, 1997). For many people this proves a complex negotiation, as well recognised in medical sociology. Parsons' (1951) seminal work on the sick-role, explaining the sequence individuals pass through when a personal health problem reaches the point when expert help must be sought (however defined culturally). The formal step of going to the doctor must be sanctioned and initiated socially. Individuals, especially juniors, must frequently rely on the financial or emotional support of a family member if they are to pursue serious study; or their peers to engage in a community development programme. People need permission to be sick or clever(er).

Serres, Hodges and others raise the question of whether there is a point midway between the sciences and humanities. Serres steps over the disciplinary boundaries; or rather he dismisses them as with an astronaut's view of Earth. He grasps the bottles stuffed with their messages [see forward of Genesis, 1995c] and smashes the bottleneck. Whatever the answer to the above question, informatics can help overcome the barriers of time, distance, and social

prejudices. The 'home' - the second seat of learning becomes a campus: but this is not a given.

The Frenchman finds *residence, belonging* and claims for the *homeland* disturbing. In the book *Rome,* Serres (1981) explains how the foundation of civilization and culture is based on violence. When people become a mob they raise the buildings to the ground exposing the foundations. Serres is telling us to look again at the mosaics buried beneath our feet – wherever we are. Introducing anthropology Eriksen (2002) describes the need to simultaneously allow for *emic* and *etic* accounts. Individuals and communities (patients and carers) must describe themselves in their own terms (*emic*), but this affects the way an encounter or situation is analysed (*etic*). Cultural relativism complicates our efforts to explain, and yet where there is contrast there is difference and an opportunity to learn.

It is no coincidence that the words *community* and *communication* are so similar. Brown (1999) explains how Serres repeatedly focuses on etymology, for example complex from *plexus* that which is woven, but also from *plicare*, a fold. Physicists warp 2D space, to explain hypothetical faster than light travel. In the mind of the user, h2cm warps a 2x2 matrix plus time, making concepts and disciplines neighbours; an act of folding surely? Serres also utilises the French language, *le temps* with its dual meaning for time and weather. Global communities are becoming a homogenised temporal conurbation. Globalisation challenges not only our notions of subjective time, but unique cultural perspectives such as that of the Aymara people who apparently have a concept of time opposite to all the world's studied cultures -- the past is ahead of them and the future behind (Spinney, 2005). Hermes lays a taut golden thread. The tension is created by the need to communicate universally, without diluting cultural and community identities.

Language to Care

When engaging with others we can remain safe never venturing, never taking a risk for new experiences, new knowledge; Serres likens this to swimming a river and reaching halfway, a decision must be made, to continue or turn back Serres (1997). In the middle choices become stark, a challenge, a rite of passage, when a venture becomes an ad-venture. Suddenly, inner resources must come to the fore, dare we rely on them, so many characteristics and attributes: handedness, gender, learning styles. Does a change of knowledge (care) domain or even a shift towards another domain signify change of contexts? Passing from one care domain to another is akin to reaching mid-river. An opportunity to reflect and (re-)appraise this twist of the thread.

In conversation with Latour, Serres (1995a) questions the ascendancy of concepts above prepositions. Psychology and cognitive science have produced a wealth of research (Rosch, 1981) built using concepts as the fundamental unit. To bridge the disciplinary divide, to understand the role of noise Serres argues that prepositions also have importance. Prepositions locate us in time and

space: *with*, *before, after, until, during, on, later, across*. In caring and informatics prepositions assume humanistic prominence, giving quality and meaning to goals, priorities. This is not just a question of whether concepts alone are sufficient for dialogue between the sciences and humanities. In community development and care programmes the language used is critical to reaching out and fully engaging people, to overcome apathy, low self-esteem, alienation and as Serres argues a lack of 'travel'.

Our whole experience is grounded in time, hence the mythic status of timelessness. In h2cm 'career' refers to life chances defined by Hughes (1958, p.63):

... the moving perspective in which the person sees his life as a whole and interprets the meanings of his various attitudes, actions, and the things which happen to him.

The concept of *career* is future oriented, the idea of life chances having a direct correspondence to Serres' description of life and choice – freedom. As we get older there is less scope for our path to meander. Choices become fewer, windows of opportunity pass and may be grieved for such is the sense of loss that accompanies them. Time is of course embedded in each of the h2cm's domains: *interpersonally* in the subjective passage of time and healing of the psyche; in the *sciences* in chronological age versus pathological age, and physical healing processes: life and death.

The primary objective of science is often described as *casting light on the dark, the unknown*. It is ironic that in casting light it is our communities that shine brightly, dimming the stars that first made us wonder. In our wanderings we placed our myths in the night sky. Now our cities shine to such an extent that the significance of our situation is lost in the glare. In the popular 1980s TV series *Cosmos,* Carl Sagan linked us intimately with the stars. Serres (1997, p.10) notes that "under the cranial vault constellations twinkle." The human train continues: this miraculous combination of humanistic and mechanistic dance partners. Now the coupling falters the music inaudible. The dance is unidirectional - physically and temporally: "to the right!" The mechanistic march has set the bridge swaying. Who will break step and afford safe passage?

What step are informatics practitioners marching to? By definition, being *community* or *social* centred, this cohort are either leading or following the crowd. A sense of home, place, territory is involved. Beyond the professional codes of practice (British Computer Society, 2001) of information technology professionals and Kling et al. (2005, p.93) who observe that ICT is not value neutral, what values does social informatics hold?

In *Five Senses*, Serres does not overtly discuss mortality, loss, depletion and omission (Connor, 1999). Management consultants advise that to succeed 'think outside the box', but the population pyramid announces an ageing population and *the* box is frequently found full and yet empty? Plaques disconnect, disable the memory; the critical biological box no longer registers

and connects. The noise that counts, the background bioelectrical hum is disrupted or absent. Memories once ready to roll downhill, surfing the wave of potential are inaccessible, if marshalled at all. Wither the neural crossroads; the *informatique* mote in Hermes' eye?

Our older people, those not yet ephemeral have become peripheral, their personal space an adjunct to furniture. New quantities in life, beg questions of quality, especially quality of care and what it means to care. The concept of self, person-hood is a prime distinguishing factor in terms of describing the attitudes of cultures and communities to older adults and memory loss. In the developed nations the debate continues: is this the price of a long life, or a way of life? In our search for the locus: the sign on the door reads *deep informatics*. Listen carefully, as inside the seniors are cared for at home (touched) remotely courtesy of telecare solutions. The values here of course extend from inappropriate use of informatics to lack of access to such services (Barlow et al., 2006).

There are three records: the care record, the knowledge record now imbued in the Web, and the planet. It is strange, this obsession with risk and records: physically, cognitively, and computationally. Two obsessions, closely related, so hand-in-hand that incessant washing cannot erase evidence of this union. Now, the planet is humanities record. Through remote sensing our senses are extended; they are exosomatic (Medawar, 1984), but seeing more means recording more. Do we really understand more? We are still learning about the entities and attributes of this planetary record, some people argue that being incomplete it cannot be read. When is a record complete? Information already overflows the cup; but whether full of cappuccino or medicine, four (or five?) sugared domains will help wash it down.

Gaia taps our shoulder with increasing insistence. Who will turn around and look her in the eye? The dare increases in magnitude moment by year. Avoidance of Nature's gaze will not serve to protect, because we are already turning to shades of grey. People need to see the stars to see how transient they are, to wonder and respect as once before. Comets were cast in the role of *Hermes*, the harbingers of tomorrow. Today, the appearance of contrails near the horizon is striking, so comet like; especially as they buzz the sun. In addition to finding h2cm there, what other messages are writ large in the sky?

Closing Discussion

Since h2cm has never been fully developed in theory or practice, comparison with Serres (translated) work is limited. Both are encyclopaedic, they share a psycho-historical objective in education, and in both information can act as a unifying concept, but for what reason, why is this significant? Politics and philosophy suffer from a lack of public engagement. Citizenship is crucial in health and the environment and vice-versa. Do we just sit and wait for synchrony to occur? Could the commercial notion of just-in-time processes

apply in this instance, meaning that spontaneous citizen activism is possible? This would be revolutionary no less. Will Serres' *Natural Contract* emerge out of the political and social noise? People fear change because it so often of means rupture. Can informatics prove the catalyst for a third way in terms of evolutionary versus revolutionary change? Governance cannot by definition be unidirectional. There must be political equivalence with cross-party and governmental policy continuity termed 'simultaneous policy' (Bunzl, 2001) on issues that affect us all, such as economics and global warming. Only then can issues be addressed nationally for translation into international objectives.

The scholastic 3Rs alone are no longer sufficient to equip youngsters for current and future challenges. Wither health literacy without digital, information and visual literacy (accessibility issues acknowledged)? Carroll and Rosson (2007) recognise the moral imperative of participative design. If technology has the capacity to change, people must be involved in that change. Are governments granted the electorate they deserve? The ability to appreciate what lies between analysis and synthesis is the 21st century touchstone. In being educated to care for others, self, and the planet there is a need for a generic model that can be taught globally, across curricula, cultures, and ethnic divides. Janus-like we must combine the local and global, achieving *glocal* perspectives (Erikson, 2001, chap.19).

To manage this most complex of times we must repeatedly cross Serres' middle, all knowledge domains must be accessible. Ironically, the ubiquity of information provides the scope to think not only out of the box, but in it as well. Midgley (2003) warns about the seductive properties of big ideas. Brainstorming alone does not a solution make? Although health is multicontextual, there is a danger that having all contexts means having none. We must, however, persevere. Now, health and the environment are like two pearls threaded on a fine cord called quality of life. What price to leave footprints that do not corrupt the mental, physical and spiritual health of others, locally, globally, today and tomorrow?

The philosopher Gadamer wrote of the *fusion of horizons* (Gadamer, 2004); however Gadamer is interpreted, as individuals we see one horizon at a time. Once we leave home the four points of the compass make their presence felt, or at least they used to. Now our journeys prompt mundane speculation on travel times, road works, fuel costs, expenses, and mobile communications. In combination Serres and Hodges provide an architectonic foundation for our knowledge. The act of twisting a single horizon to create a multitude imbues great potential. At a time when *fusion* is (desperately) sought as a solution to our energy needs, the fusion of ideas and action across disciplines, communities and cultures is no less critical as we cross *the* middle and step into tomorrow.

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Figures

Figure 1 Health Career Model Axes

Figure 2 Health Career Model Care Domains

Figure 3 H2CM-SERRES motif

Acknowledgements