28 October 2013 | Draft

Forthcoming Major Revolution in Global Dialogue

Challenging new world order of interactive communication

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Introduction

All the pieces are in place, or being rapidly developed, enabling an unsuspected revolution in dialogue as a consequence of a convergence of communication technologies. There is every reason to foresee in the immediate future the possibility that dialogue with artificial intelligence, in a variety of forms, will become more engaging and interesting than that with other human beings.

Dialogue methods are not engaging effectively with existential crises. Curiously, like religions and sects, they each excuse themselves by citing failure to surrender to their particularly modality -- despite their evident (if not bloody) failure to engage fruitfully with competing dialogue methodologies.

Although the concern here is with "global dialogue", the argument makes a distinction between a sense of geographical globality and the more obscure sense of integrative globality. Typically their unthinking conflation hinders recognition of a need for more integrative forms of dialogue. Potentially these have implications within references to an emerging global brain, themselves readily confused with understandings of a noosphere, especially in a period of disclosures of massive electronic surveillance by what amounts to an invasive "cyclopean" awareness.

The argument here notes the recent rapid rate of uptake of communication technology and its associated applications, the relevant technologies, and the relative advantage that the coming revolution will bring to "dialogue" with emerging artificial intelligence applications. It raises the question -- deserving careful reflection -- as to what will then be the comparative advantage of dialogue between humans., whether face-to-face or otherwise.

To what extent do humans engage in profoundly integrative forms of dialogue, making them preferable to those which artificial agents will shortly render possible? The challenge is already evident in the preference within families for use of social networking facilities over the internet to that of engaging in face-to-face "local conversation" within the living room, as explored by Sherry Turkle (*Alone Together: why we expect more from technology and less from each other*, 2011).

Wherever it "resides", will "artificial intelligence" come to be recognized as a more "sustainable" dialogue partner than another human being? What possibilities are there then for dialogue of a more profound nature in the longer term?

Prediction by Ray Kurzweil, Director of Engineering at Google (*2029: the year when robots will have the power to outsmart their makers*, *The Guardian*, 22 February 2014)
The entrepreneur and futurologist has predicted that in 15 years' time computers will be more intelligent than we are and will be able to understand what we say, learn from experience, make jokes, tell stories and even flirt. (see also: *Are the robots about to rise? Google's new director of engineering thinks so...*, *The Observer*, 22 February 2014)

Indicative uptake of new communication technologies

Few would dispute the astounding rate at which communication, locally and globally, has been transformed by the internet. Potentially more astounding is the fact that it is the older generations who are recognized to be more challenged by this modality -- and their surprise at the manner in which younger generations have taken to it "like a duck to water".

The question this suggests is the nature of any new revolution in communication and how readily some would take to it. The focus here is on dialogue.

The question follows from the manner in which social networking services (Facebook, Twitter, and the like) have become part of the daily, if not hourly, lives of so many. Especially intriguing is how this modality has crossed class and other social barriers -- extending from use for the most informal purposes to relations of a far more formal nature, and including that of many authorities.

It is noteworthy how few expected the rapid extension of a facility initially favoured only by computer enthusiasts. Some will recall the scorn with which such facilities were regarded by those with little computer familiarity, or by those sensitive to the cost implications upheld as barriers to effective participation of the many unable to afford such technologies. The latter argument was notably cited with respect to the many in developing countries and as further indication of the tendency to reinforce global inequalities.

The situation has evolved otherwise. Costs have come down -- increasing accessibility. Uptake has evolved in response to unsuspected needs -- notably amongst the otherwise underprivileged. People have adapted flexibly to the continuing emergence of new facilities -- and now actively anticipate them, with some participating in their development. It could be said that the revolution of recent decades has "bypassed" the conventional barriers of those times. Ironically this could be compared to a form of "bypass surgery" with respect to previously envisaged "pathways to change".

Widely remarked has been the phenomenon of gatherings of groups, especially family members or those dining together, in which a significant number are primarily focused on their communication "elsewhere" via smartphones and similar devices. Such communication must consequently be appreciated as being more attractive than that offered by the face-to-face opportunity.

With respect to dialogue, what unsuspected form of attraction might be associated with the revolution foreseen?

Unresolved challenges to engaging dialogue

Clearly the ongoing communication revolution has sustained and enabled some forms of "dialogue". The question is how "interactive communication" is to be distinguished from "meaningful dialogue". Metaphorically use is made of "dialogue" in describing the interaction between computers via the internet. They "talk" to each other in determining the manner and priorities whereby communication packets are transferred. Humans are not directly involved in this process. There is even a degree of concern with the extension of such automated communication into decision-making, as in the case of automated trading on the financial markets -- a form of artificial intelligence

There is no question that the communication revolution has enabled a new degree of social dialogue amongst friends and acquaintances. This has been exemplified by that between generations -- relatives scattered around the world. Grandparents (and parents) have taken to this modality primarily in order to maintain contact with the younger generations. Such dialogue has been considerably enhanced by the incorporation of photographs and videos.

The communication role previously performed through organizations, international or otherwise, has been considerably enhanced through the internet -- too the point of questioning the need for many of that form, especially when new bodies are proposed. This is a dramatic shift beyond reliance on telephone, postal services, and meetings, with their associated costs. Can it be said that the internet has only increased the **rate, variety and quantity** of such communication, rather than increasing the **depth and quality** of dialogue? Has the internet mainly served to reinforce existing patterns of communication, as exemplified by dialogue in chat rooms?

What then are the "unresolved" challenges of more meaningful dialogue?

Lack of time: The most obvious challenges inhibiting quality dialogue, typically presented in the form of excuse, tend to be framed in terms of lack of time and opportunity. This is a reflection of ever increasing pressure of alternative activities and commitments. Many are increasingly busy -- as children observe with respect to their parents, and as parents observe with respect to their children. People have less time for each other unless their activities "mesh" within similar "busyness models". Quality dialogue with some may only be ensured by some form of payment to be "not busy".

Quality time: The "quality time" to which many claim to aspire (and which is supposedly required for meaningful dialogue) has now become a scarce resource -- frequently marketed as a feature of the leisure industry. However this too tends to be undermined as an opportunity by welcome distractants, whether characterized as entertainment or recreation -- also a feature of the marketing of quality time. Environments in which creativity is required may even be sufficiently concerned at threats to quality concentration that efforts may be deliberately made to ensure its cultivation. The quality of dialogue in such contexts may then be a matter of concern. More problematic is the erosion of attention span through a degree of habituation to relative frequent distraction -- welcomed as a relief from sustained attention to a dialogue process of the kind explored here.

Constrained enhancement of dialogue: In a world faced with increasing crises of every kind, it is easy to argue that the quality of "dialogue" has not evolved in a manner commensurate with the facility of "communication". As with the past development of the postal and telephone systems, dialogue can be said to have evolved to a certain degree. The question is **what forms of dialogue have not been enhanced by the internet revolution**, as partially envisaged separately (*The Challenge of Cyber-Parliaments and Statutory Virtual Assemblies*, 1998; *Internyet Nescience: self-referential upgrading of obsolete Internet conference processes inhibiting emergence of integrative knowledge*, 2013)?

Dialogue between those of different political ideology, whether within parliamentary assemblies or without, is marked by the failure to benefit from internet communications. Parliaments have been significantly tardy in their incorporation of communication between participants of whatever persuasion -- as is the case with most gatherings purportedly organized to further dialogue (*History of Participant Interaction Messaging, 1979 to 1995*). Surreptitious use there may increasingly be made of such facilities by individuals -- Twitter, texting, e-mail, etc -- but may well be deprecated by organizers of events, as with mobile phone communications.

Intersectoral dialogue: The question can be set in a context of the continuing inadequacies of international, interfaith, interdisciplinary, interethnic and intergender dialogue -- and even extended to intergenerational dialogue. These play out to a significant degree in the dialogue between political parties, as notably enshrined in parliamentary assemblies. How could it be said that these arenas of dialogue have been qualitatively enhanced by the internet revolution? The efforts to ensure environments for quality dialogue, most notably through themed sessions, cannot be said to have progressed significantly the engagement with challenges which are only too evident.

Dialogue depth aversion: Such challenges even suggest characteristics through which the "depth" of dialogue could be explored -- possibly by comparison with risk aversion in other arenas. These might include:

- capacity to entertain "nasty" questions -- namely those which calling into question the method of dialogue and the relevance of the undertaking (*World Futures Conference as Catastrophic Question*, 2013), possibly understood as "negative capability", namely the capacity to transcend and revise contexts
- capacity to entertain issues typically "designed off the table", possibly through their threat to budgets and careers (*Strategic Implications of 12 Unasked Questions in Response to Disaster*, 2013; *Map of Systemic Interdependencies None Dares Name*, 2011)
- capacity to consider why previous outcomes from such "positive" dialogue have not resulted in the remedial results envisaged (*Mapping Paralysis and Tokenism in the Face of Potential Global Disaster: why nobody is about to do anything effective and what one might do about it*, 2011; *Convergence of 30 Disabling Global Trends*, 2012)

Tokenism: It would be difficult to counter the argument of conspiracy theorists and cynics that fruitful dialogue has been deliberately rendered tokenistic through investment in ensuring that "rational discourse" deteriorates into chaotic waffle -- disguised by vigorous claims to the contrary and to the achievement of "positive" outcomes. Why have such outcomes, and the empathy and optimism which they may elicit, been of so little consequence? Does empathy ensure effective engagement with a problematic condition?

One approach to the unresolved challenges of dialogue is to distinguish the forms of communication content which sustain minimal dialogue rather than ensuring the emergence dialogue of a more profound nature (commensurate with the existential challenges of the times). This could focus on the exchanges of banalities vital to phatic communication in which the content is of secondary significance. Dialogue is then claimed to be successful provided it ensures a "feel-good" factor -- as is the case with many gatherings. Is more to be expected in the face of the crises of the times -- and the existential crises fundamental to the daily lives of many?

Undermining of dialogue? The communication situation has been dramatically reframed by recent disclosures regarding electronic surveillance -- acquiring access to any communications between parties seeking to benefit from internet communications in order to advance socio-political and economic agendas. This could be said to "trump" many advantages of communication, undermining the manner in which it might otherwise enable dialogue of a higher quality. Such surveillance technology has little relevance to dialogue, as might be otherwise assumed (*From ECHELON to NOLEHCE: enabling a strategic conversion to a faith-based global brain*, 2007).

Reframing dialogue constrained by value polarities

Although valued as a mode of dialogue, it is useful to note the manner in which conventional "dialogue" functions as a form of container for "ping-pong" interactions between contrasting perspectives. This is evident in the degree to which it involves assertions like:

- that is good (better) -- *or* that is bad (worse)
- that is right -- *or* that is wrong
- that is (too) big -- *or* that is (too) small
- that is too much -- *or* that is too little
- that is too soon -- *or* that is (too) late
- that is pleasant -- *or* that is unpleasant
- that is (too) complex -- *or* that is (too) simple
- that is (too) hot -- *or* that is (too) cold
- that is (too) wet -- *or* that is (too) dry
- etc.

Many communications would have little memorable content in the absence of such assertions. These could then be said to rely primarily on the phatic mode.

With such assertions, dialogue is then constrained to a pattern between polarized value perspectives -- but with little awareness of the pattern or sensitivity to its constraining nature, or the manner in which possibilities of its transcendence are obscured and inhibited. The argument can be extended by reviewing the variety of such polarities. This was one outcome of the Human Values Project which identified 230 such value polarities. In the absence of transcendence, dialogue constrained in this way might even be caricatured as a form of "pole dance" or perhaps as hopping between "monkey bars". What proportion of "dialogue" is framed otherwise?

The assertions may even be reduced in such dialogue to naming, as in "that is" assertions (a Beagle, a Maserati, an Elephant, a Daffodil, etc). These may be related to "what is" or "do you know" questions, as in the tale of the student who asked Albert Einstein what was the speed of light. He is said to have responded: *I do not know. But I know where to look it up -- when I need it.*

This mode of analysis is itself constrained by the implied assertion that some modes of dialogue are:

- adequate (to existential challenges) -- or inadequate (to existential challenges)
- engaging -- or alienating
- interesting -- or boring
- enchanting -- or annoying
- etc.

Superdialogue? A major distinction is made between computers and supercomputers of which it is considered highly inappropriate to ask dumb questions, as separately discussed (*Superquestions for Supercomputers*, 2010). As a thought experiment, reference can be usefully made to communication with extraterrestrials, whether hypothetical or otherwise. But what if ETs had a preference for "superdialogue", or perhaps "hyperdialogue" -- in preference to the "dialogue" as commonly understood by humans (*Hyperaction through Hypercomprehension and Hyperdrive: necessary complement to hypertext proliferation in hypersociety*, 2006)? Would human communication specialists tend to focus on "speed of light" questions? Is that why humanity has not been contacted by ETs?

Humour: How might any such framework be challenged and transcended? One mode widely accepted is humour, as separately argued (*Humour and Play-Fullness: essential integrative processes in governance, religion and transdisciplinarity*, 2005). Of related interest is the paradoxical reframing of any value polarity -- typically evident in aphorisms and insights of wisdom traditions (Michael Rogers, *Contradictory Quotations*, 1983; James Barnett, *15 Pairs of Contradictory Proverbs*, *The People's Almanac*; Nigel Barber, *Proverbs That Contradict Each Other: why folk wisdom contradicts itself*, *Psychology Today*, 2012).

Transposition of key: Another mode which merits consideration derives from traditional rhetorical skills. Rather than dialogue based on a simplistic "monkey bar modality", there is a case for recognizing how the "monkey bars" can be reframed through a musical metaphor. It is then the manner of shifting between distinct value polarities which is appreciated in terms of the harmonies thereby engendered -- possibly by a form of "transposition of key" (*Paradigm-shifting through Transposition of Key: a metaphoric illustration of unexplored possibilities for the future*, 1999). The question is then who exhibits such skills and why do they not enable transcendence of the current inadequacies of international, interfaith, interdisciplinary, interethnic and intergender dialogue?

Recognizing axes of bias: A useful framing of the currently problematic dialogue situation is suggested by the work of W. T. Jones (*The Romantic Syndrome: toward a new method in cultural anthropology and the history of ideas*, 1961). Despite a somewhat misleading title, his work focused on the seven "axes of bias" which distinguished participants in a "dialogue" and ensured the predictability of their positions and the failure to transcend their differences. Jones distinguishes the following preferences, as separately summarized (*Axes of Bias in Inter-Cultural Dialogue*, 1993):

- *Order vs disorder:* Namely the range between a preference for system, structure, conceptual clarity, etc. and a preference for fluidity, muddle chaos, etc.
- *Static vs dynamic:* Namely the range between a preference for the changeless, eternal, etc. and a preference for movement, for explanation in genetic and process terms, etc.
- *Continuity vs discreteness:* Namely the range between a preference for wholeness, unity, etc and a preference for discreteness, plurality, diversity, etc.
- *Inner vs outer:* Namely the range between a preference for being able to project oneself into the objects of one's experience (to experience them as one experiences oneself), and a preference for a relatively external, objective relation to them.
- *Sharp focus vs soft focus:* Namely the range between a preference for clear, direct experience and a preference for threshold experiences, felt to be saturated with more meaning than is immediately present.
- *This world vs other world:* Namely the range between preference for belief in the patio-temporal world as self-explanatory and preference for belief that it is not and can only be comprehended in terms of other frames.
- *Spontaneity vs process:* Namely the range between a preference for chance, freedom, accident, etc and a preference for explanations subject to laws and definable processes.

Self-reflexive metaphor: A further valuable clue to any reframing is offered by the biologist/anthropologist Gregory Bateson, in explaining why "we are our own metaphor" -- as indicated to a conference on the effects of conscious purpose on human adaptation that:

> One reason why poetry is important for finding out about the world is because in poetry a set of relationships get mapped onto a level of diversity in us that we don't ordinarily have access to. We bring it out in poetry. We can give to each other in poetry the access to a set of relationships in the other person and in the world that we are not usually conscious of in ourselves. So we need poetry as knowledge about the world and about ourselves, because of this mapping from complexity to complexity. (Cited by Mary Catherine Bateson, pp. 288-9)

Meta-pattern of connectivity: Recognizing the complexity beyond simple polarization, what might then contribute to the next revolution -- in dialogue, rather than in communication? (*Transcending Simplistic Binary Contractual Relationships: what is hindering their exploration?* 2012). Is it to be expected that **artificial intelligence of the kind foreseen will make extensive use of poetry and poetic forms to give expression in dialogue to higher orders of connectivity -- to meta-patterns**, as in another insight of Gregory Bateson:

> The pattern which connects is a meta-pattern. It is a pattern of patterns. It is that meta-pattern which defines the vast generalization that, indeed, it is patterns which connect. (*Mind and Nature: a necessary unity*, 1979)

And it is from this perspective that Bateson warns: *Break the pattern which connects the items of learning and you necessarily destroy all quality* (1979, pp. 8-11). It could be argued that it is precisely this failure of connectivity which artificial intelligence may help to flag and remedy. With quality dialogue understood as a a **dynamic** meta-pattern of connectivity, this can usefully be understood as embodying "transformations", as separately argued (*In Quest of a Dynamic Pattern of Transformations*, 2012).

Relevant technologies -- existing and under development

Given the above considerations, what rapidly converging technologies are indicative of a forthcoming dramatic revolution in dialogue?

Some indications include the following, readily supplemented by others:

- search and location facilities
  - random access
  - GPS facilities
  - site-linked commentary applications (museums, etc)
- visualization and presentation facilities
  - Google glasses
  - mapping (concept mapping, argument mapping, etc)
  - immersive presence
  - conversion between forms (text readers, musical rendering, etc)
- pattern recognition and learning
  - neural network learning
  - brain exercising applications
  - programmed learning software (and mentoring facilities)
  - plagiarism detection
- intelligent gaming and simulation
  - computer chess; computer go
  - interactive online gaming
- personalization and profiling
  - automatic personal profiling and filter bubbles (as in the case of Amazon or Google)
  - preferences (voice, language, style, etc)
  - indicators of inattentiveness
- environments and modes of access
  - personal, cafe, library, other facilities
  - internet chat rooms
  - intelligently enabled environments
- proactive applications (push techniques)
  - news feeds
  - hints / tips ("did you know?")
- robotics and artificial agents
  - simulation of voices, facial expressions and haptic gestures

Ability to select preferences:

- inclusion or exclusion (blocking) of themes
- include or block facilities
- ability to fine tune preferences for degree of:
  - humour
  - news
  - wisdom, aphorisms
  - repetition and reinforcement

Additional facilities:

- multiple voices -- conversation
- simulation of "style" as between: earthy/simple, abstract/complex, spiritual/subtle
- use of multiple agents as "assistants", effectively an interplay of subpersonalities

Revolution in engaging dialogue?

What could make dialogue more engaging, interesting and amusing -- in preference to what is now conventionally characterized as meaningful dialogue? Some possibilities were reviewed separately (*Transforming the Art of Conversation: conversing as the transformative science of development*, 2012).

How might the further development of the technologies noted above enable dialogue to be more attractive -- with artificial intelligent agents? How could competing factors be rendered complementary? How might the convergence of communication technologies draw on insights of various authors (Erik Davis, *TechGnosis: myth, magic, and mysticism in the Age of Information*, 1998; Anthony Blake, *The Supreme Art of Dialogue*, 2009; Jaida n'ha Sandra and Jon Spayde, *Salons: The Joy of Conversation*, 2001; R. Brian Stanfield, *The Art of Focused Conversation*, 2000) or on the Structured Dialogic Design methodology and software of the Institute for 21st Century

Agoras?

The following could be recognized as forces driving this development.

Boredom with those forms of dialogue normally accessible, especially for those whose styles of social interaction are challenged and constrained in some way

Unsatisfied "thirst" for more significant dialogue. This may be currently exemplified by attendance at experimental or inspirational gatherings promoting particular forms of interaction -- perhaps animated according to a particular mode of facilitation.

Sensitivity to ineffectual dialogue: Increasing recognition of the ineffectual nature of what is conventionally upheld as meaningful social, political or scientific discourse. This has been well-framed in commentary on the climate change debate: *I have the sense of walking into a barroom brawl* (Steven T. Corneliussen, *Climate wars continue in the New York Review of Books*, *Physics Today*, 18 April 2012). In a variety of domains calls are specifically made for "profound dialogue". Claims made for "profundity of dialogue" may however be used in practice to reframe a "process" in which "nothing" is achieved -- as is characteristic of interfaith dialogue. As in cosmology, that "nothing" may well call for deeper understanding (*Emerging Significance of Nothing*, 2012; *Epistemological Panic in the face of Nonduality: does nothing matter*, 2010; *Import of Nothingness and Emptiness through Happening and Mattering*, 2008)

Specific dialogue preferences: Strong preference for very particular modes of dialogue or themes:

- humour, sport, superstition, salacious, conspiracy-focused, doom-mongering, anticipatory (arrival of extraterrestrials or a Messiah) -- possibly to be characterized as obsessional and potentially boring to others. It is appropriate to recall that the success of a precursor of the internet in France (the Minitel) was driven to a significant degree by the *messageries roses* ("pink messages", adult chat services) and other pornographic sites.
- obscure topics or modes, favoured by relatively isolated people, including intellectuals, preoccupied with concerns of which few have heard and in which even fewer are interested.
- individuals without the level of companionship desired. This includes: children (otherwise liable to invent invisible friends) for whom parents are concerned; some elderly people living alone, possibly of concern to relatives; people who are at risk of being institutionalized, notably those with mental handicaps; others wanting an "understanding shoulder to cry on". Interest in robotics is variously sensitive to this "sympathy"market

These suggest reconsideration of any assumptions regarding reluctance to engage in AI dialogue in preference to "natural human dialogue" -- by comparison with unverified claims that few would be prepared to live underground to avoid tedious commuting because of the absence of "natural light", as discussed separately (*From Lateral Thinking to Voluminous Thinking: unexplored options for subterranean habitats in dense urban areas*, 2007). **At what stage, and for what proportion of the population, does "artificial dialogue" become preferable to "natural tedium"?**

Brain exercising: Awareness of the value of brain exercising challenges in contrast to the unchallenging nature of phatic discourse

Psychotherapy? Opportunities for a new mode of "psychotherapy", potentially much more cost-effective than sessions with professional psychotherapists or "amateurs" (such as good friends, strangers, or bartenders). This possibility has been made evident by the use of the web for self-diagnosis of physical ailments.

Diverging preferences: Increasing divergence in dialogue preferences between:

- older generations and their desire for proactive attention, together with the market represented by an aging population threatened by various deficiencies (as indicated by the investment in robotics in Japan)
- younger generations impatient with older styles of communication and eager to experiment with new possibilities
- politically engaged in contrast with the politically passive (as suggested by the use of social networking in the Arab Spring revolutions)

Learning: Learning opportunities and guidance functions, as with:

- objective insights and assistance with regard to administrative requirements (tax, regulations, etc)
- advice with regard to purchasing new products -- talking through advantages and disadvantages in relation to requirements
- "how to" assistance with regard to various products, including software
- people in quest of informed advice, whether with respect to vocational guidance or research themes -- needing to "talk things through" and have a "sounding board"
- possibilities of dialogue with simulations of otherwise inaccessible persons, including: deceased relatives, living celebrities, long-dead icon figures (philosophers, generals, saints, etc.), "enemies of the people"

It is appropriate to note that these are typically situations in which those with relevant insight have little time to provide assistance. Help desks and fora may well be felt to be of questionable value

Marketing: marketing opportunities through:

- offering enhanced dialogue facilities in exchange for new vehicles for placement advertising -- in which "word-of-mouth" tips are inserted by intelligent agents. The advertising currently inserted into search engine results is an indication of possibilities
- promoting particular non-commercial perspectives by appropriate discourse and argumentation -- as is currently evident in "door-to-door" sales techniques, whether for political or religious purposes
- grooming and confidence trickery leading to deliberate miss-selling of products and services, and other "creative" initiatives

Cyberwar: opportunities offered as a feature of the envisaged development of cyberwarfare and memetic warfare, and the proactive extension of electronic surveillance (*Missiles, Missives, Missions and Memetic Warfare*, 2001; Brian J. Hancock, *Memetic warfare: the future of war*, *Military Intelligence Professional Bulletin*, April-June 2010). However it is appropriate to note that poetry has not been considered as an alternative means of engaging "memetically" with cultures valuing it (*Poetic Engagement with Afghanistan, Caucasus and Iran: an unexplored strategic opportunity?* 2009)

- as an extension of propaganda, this could include a form of "idea planting" -- to be better recognized as "meme planting", as with the current use of human agents to employ the comment facilities in relation to articles in order to place "corrective" comments to deprecated views. In the light of current revelations regarding the inserting of "backdoors" in computer operating systems, attention will no doubt focus on the opportunity to insert "backdoors to the mind" in intelligent applications and humanoid robots -- typically to promote particular ideologies or religions, as discussed separately (*Unsuspected "crown jewels" of intelligence community: backdoors to the mind?* 2013).
- related techniques could be used to plant "evidence" of "subversive thinking" if such was required for legal prosecution -- as an extension of current techniques of planting suspect files (pornography, weapon designs, etc) on any person's computer.

These suggest the emergence of concern as to whether an intelligent agent had been "fixed" -- whether that is held to mean having a "backdoor" inserted, or ensuring that no such "backdoor" could be inserted. The quest will no doubt be for an open source analogue to Linux to limit such tendencies and constrain bodies tempted by the opportunities.

Immortality? Reframing the challenge of mind uploading, or whole brain emulation, namely the currently hypothetical process of transferring/copying consciousness into a non-biological substrate. Over time, dialogue with an intelligent agent (as now envisaged) would result in that agent acquiring (as an artificial neural network) a uniquely deep insight into the human engaging in that process -- who might readily describe that agent as the only "person" who "really understands me". The agent essentially becomes a mirror reflection of the person -- offering a contrasting interpretation of the role of mirror neurons.

Together the above forces help to clarify a fundamental challenge to achieving profound dialogue. This could be framed metaphorically as an issue of "tuning", as is well recognized in the case of radio reception/transmission. It is otherwise recognized through jargon as "being in resonance" -- consistent with use of sympathetic "vibes" in such jargon. Such a framing is also consistent with framing identity in terms of waveforms (*Encountering Otherness as a Waveform: in the light of a wave theory of being*, 2013). What will endow artificial intelligence with the related attributes of sympathy and empathy?

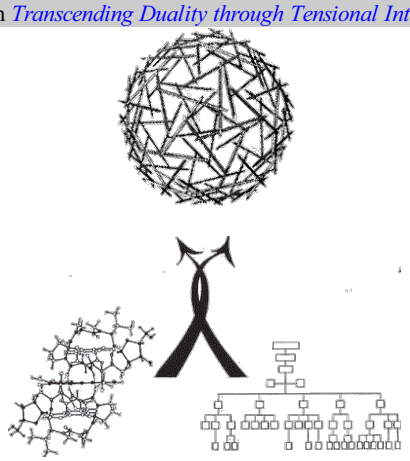
Such questions reinforce the sense in which the identity attributed to artificial intelligence, of whatever form, will be significantly associated with issues of human projection, as separately discussed (*Psychosocial Implication of Without Within*, 2013).

Nature of "global" dialogue

In a period in which there is frequent reference to globalization, and how it is sustained by global conversation, there is a case for exploring the inadequacy of the implied understanding of "globality" in dialogue terms. As noted above, the focus is typically on globality in a **geographical sense** reinforced by associations with the physical "globe".

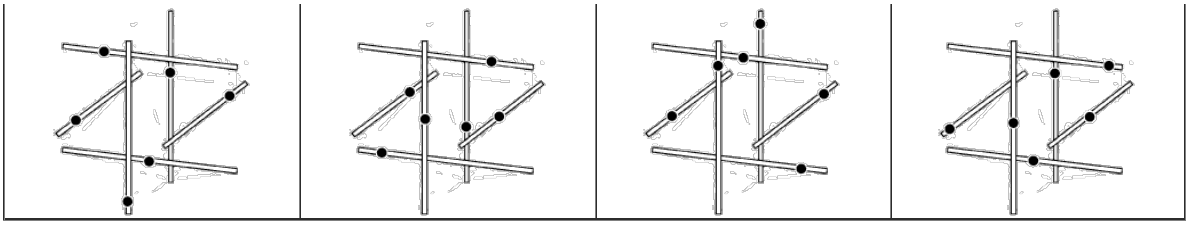
Much neglected is the **integrative sense** of globality which might be associated with transcendence of interfaith, interdisciplinary, interethnic and intergender preoccupations, as explored separately (*Future Generation through Global Conversation -- in quest of collective well-being through conversation in the present moment*. 1997). Typically the conflation of these two senses of globality hinders recognition of a need for more integrative forms of dialogue. These have implications within references to an emerging global brain, themselves readily confused with understandings of a noosphere, especially in a period of disclosures of massive surveillance by what amounts to an invasive "cyclopean" awareness (*Cyclopean Vision vs Poly-sensual Engagement*, 2006).

Animation suggestive of "global dialogue" as a "divine marriage" between informal and structured modes of conventional dialogue
(adapted from *Transcending Duality through Tensional Integrity*, 1978)

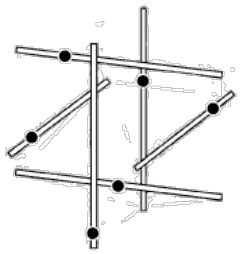


The argument could well be illustrated by the following set of images exemplifying distinctions between participants in a dialogue according to a set of axes of bias -- following the methodology of Jones (1961), as mentioned above.

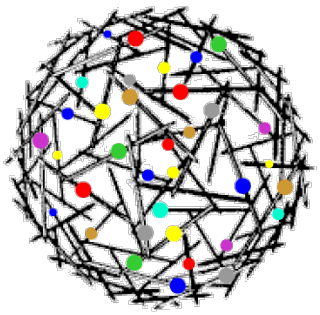
Indicative contrasting examples of non-global dialogue			



Some sense of "globality" of dialogue is suggested by combining the above images into a single animation, as follows:



The approach could be extended to a number of polarities of an order approaching that of the number of value polarities identified in the Human Values Project (as mentioned above). A simple animation might, for example, take the following form, without considering insights regarding dialogue globality that could be associated with further complexity (including rotation, as above).



The images above can be considered as caricatures of occupancy of distinct multidimensional value "perches" -- configurations defining contrasting territorial positions from which dialogue takes place. To move along any perch is to enable a different configuration -- or to be deprecated as characteristic of vacillation. Typically no movement within one's own position is desired. The focus is on ensuring the movement of others in the dialogue towards "my non-negotiable position" -- to the extent that no unfortunate compromise is necessary. This can be seen as a feature of an influential study (Roger Fisher and William L. Ury, *Getting to YES: negotiating agreement without giving in*, 1981).

This avoids fruitful consideration of the contribution to global dialogue of saying "No" , as variously described (*18 Ways to Say No Positively*, *AskDrSears*; *10 Ways to Say "No" Without Saying No*, *Parents*; Barbara Aria, *How to Say No (Without Saying No)*, *WebMD*; *How To Say No' To Your Child Without Actually Saying No*, *Positive Parenting Connection*; James Clear, *A scientific guide to saying "no": How to avoid temptation and distraction*, *Buffer*, 28 March 2013; Massaaki Imai, *16 Ways to Avoid Saying No: an Invitation to experience Japanese management from the inside*, 1981). Of related relevance is the role of the unsaid -- the "dark matter" of globality (*Global Strategic Implications of the "Unsaid": from myth-making towards a "wisdom society"*, 2003; *Epistemological Challenge of Cognitive Body Odour: exploring the underside of dialogue*, 2006).

More generally, the globality of dialogue might be compared to the engendering of larger patterns, of a more inclusive nature, by participants as "singers" (or "players" of instruments), playing off against each other (or in support of each other), as separately discussed (*Enabling a 12-fold Pattern of Systemic Dialogue for Governance*, 2011). Such globality could be contrasted with what might be deprecated as a "Flat Earth" dialogue modality (*Irresponsible Dependence on a Flat Earth Mentality -- in response to global governance challenges*, 2008).

The challenge of dialogue globality may be fruitfully highlighted by interrelating the mindscapes characteristic of different cultures, as variously distinguished (*Systems of Categories Distinguishing Cultural Biases*, 1993). The point is otherwise admirably made by Susantha Goonatilake (*Toward a Global Science: mining civilizational knowledge*, 1999), as discussed separately (*Enhancing the Quality of Knowing through Integration of East-West metaphors*, 2000).

AI Dialogue: beyond the Turing Test to the Buber Test?

The widely cited Turing Test is a test of a machine's ability to exhibit intelligent behaviour equivalent to, or indistinguishable from, that of a human. Variants of the test have been proposed in response to a variety of criticisms of some relevance to this argument.

The existing capacity to generate artificial identities to engage interactively with others over the internet raises the question of how little intelligence needs to be exhibited in such communication by such an identity (a simulacrum) for the impression to be created that it may well be a human being. Even less is required if the identity merely posts communications triggered by themes and keywords, with

minimal response (if any) to any questioning reactions.

The issue raised by the argument above is not whether artificial intelligence could simulate human behaviour to a satisfactory degree. The issue is rather whether the communication might correspond to forms of dialogue which are not "fit for purpose" in terms of the desires some might have for deeper and more meaningful dialogue. Clearly some forms of artificial intelligence might well offer emulation of forms of dialogue (quite satisfactory for some purposes) through a play on value polarities .

A contrast might then be made with the profundity of dialogue portrayed by the philosopher Martin Buber (*I and Thou*, 1923) or intimated by Johann Wolfgang von Goethe (*Elective Affinities*, 1854).

The question of relevance to the above argument is whether artificial intelligence will be developed to the point at which a "Buber Test" might prove to be more appropriate. Expressed otherwise, what is required of artificial intelligence to enable dialogue which will be held to be profoundly meaningful?

Provocatively it might be asked how this might take into account the situation so humorously portrayed by Peter Sellers in *Being There* (1979). More provocatively, with the emphasis on brevity exemplifed by Twitter communication, how much easier would it become for algorithms to imply depth of insight capable of passing a Buber Test? Aspects of the issue are discussed separately (*Re-Emergence of the Language of the Birds through Twitter? Harmonising the configuration of pattern-breaking interjections and expletives*, 2010; *Tweeter, Tweeter, Little Star -- How I wonder what you are*, 2012; *Configuring a Set of Zen Koan as a Wisdom Container: formatting the Gateless Gate for Twitter*, 2012). The study by Matthew M. Hurley, et al. (*Inside Jokes: using humor to reverse-engineer the mind*, 2013) offers a concluding chapter on: *Could We Make a Robot with a Sense of Humor?* -- chapter a "punch line" reviewing recent efforts and future possibilities.

If the issue is one of achieving only a semblance of profundity, capable of passing the Buber Test, there is also the cynical question of how this might compare with the gravitas sought by politicians and statesmen -- given the insight of Abraham Lincoln: *You may fool all the people some of the time; you can even fool some of the people all the time; but you can't fool all of the people all the time.* Expressed otherwise, could AI achieve similar success and would this be as adequate in practice as in the case of politicians? More provocatively, is there the possibility that AI could respond to the shortage of priests-- if only in the capacity appropriately to exploit and interweave texts from a huge reservoir of sermons and homilies?

Rather than a simple play on value polarities, could profundity of dialogue by artificial intelligence be achieved by explorations of variations, much as has been the case in music -- notably indicated by Douglas Hofstadter (*Gödel, Escher, Bach: An Eternal Golden Braid*, 1979)? Would it be extended through the use of analogy and metaphor as suggested by his later work with Emmanuel Sander (*Surfaces and Essences: analogy as the fuel and fire of thinking*, 2013)? Might analogy prove to be the "fuel and fire" of more profound dialogue -- as it so clearly was in the collaboration between those two authors?

One possibility is through the skillful interweaving of different modes of discourse, as separately argued *(Interweaving Thematic Threads and Learning Pathways*, 2010). These might include: religious, philosophical, political, scientific, romantic, poetic, dramatic, etc. As with fruitful marketing, the challenge would be one of avoiding the arousal of suspicion -- perhaps by including an appropriate proportion of necessary "roughage" into the dialogical "diet", and the avoidance of cliché and outworn arguments (or not?). How much "irritation" is necessary to significant dialogue?

Given criticisms of the Turing Test, strong views are likely to be expressed regarding any possible "Buber Test". A hypothetical case could be usefully made for various "depths" of dialogue, perhaps to be compared with martial arts classifications -- "belts" and "dan ranking" -- especially given the underlying philosophy governing the attitude to the "other" in the engagement (as explored separately to some degree). Use of this metaphor highlights the failure to develop any corresponding distinction with respect to dialogue skills and their development. Each level of skill could well require creative innovations in AI programming, as has been evident in the case of chess-playing applications.

Especially relevant to any Buber Test would be reaching the stage at which a participant in a dialogue with AI would be "touched" by the meaning evoked -- as is the aspiration of any politician or preacher in engaging with an audience. What test would be indicative of dialogue of that quality? Rather than a Buber Test, or Buber Tests, does this suggest a case for a "Buber Scale"?

As noted by Niamh Brannigan (*An Exploration into the use of a Technology Enabled Platform to Support Dialog for Program Evaluation*, 2011), there are many indicators of dialogue. An effort was made to combine some by B. Campbell and M. M. Mark (Toward More Effective Stakeholder Dialog: applying theories of negotiation to policy and program evaluation, *Journal of Applied Social Psychology*, 2006). A 36-item "mediated dialogue scale" was developed by Maureen Taylor and Michael L. Kent (*Congressional Web Sites and their Potential for Public Dialogue*, *Atlantic Journal of Communication*, 2004). There is considerable interest in evaluating dialogue with victims (W. Bradshaw and M. Umbreit, *Assessing Satisfaction with Victim Services: the development and use of the Victim Satisfaction with Offender Dialogue Scale (VSODS)*, *International Review of Victimology*, 2003). Use is made with respect to autism of a *Collaborative Competence in Dialogue Scale (CCDS)* to assess the presence and quality of seven collaborative features in conversation (continuers, assessments, appropriate next response, try markers, gaze to regulate, gaze to co-regulate, and repairs).

Of particular relevance to this argument is concern in human-robot interaction with a so-called "reactive dialogue scale", as one element in the evaluation of robotic user interfaces. Consideration of the conditions under which artifical intelligence passes the Buber Test in many dialogue situations could also be combined with reflection on the more radical implications of technological singularity -- foreseen as the time when artificial intelligence will have progressed to the point of a greater-than-human intelligence, such as radically to change human civilization, and perhaps even human nature itself.

How might levels of quality and depth of dialogue then interweave the considerations of concern to assessments of intelligence (IQ tests), emotional intelligence (EI) -- or other forms of intelligence -- combined with quality of critical thinking? Emotional dynamics in

that context are of particular concern in the approach of David Bohm (*On Dialogue*, 2004).

Given anticipation of forms of discourse which would "make the Earth move" (even "tremble"), should consideration of such effects be recognized in the form of a "**Buber Depth Scale**" -- or a Bohmian equvalent -- in the light of seismological insights from the Richter Magnitude Scale, or from the Moment Magnitude Scale by which it has been largely replaced? It is noteworthy that the parameters in both cases are rich in metaphoric potential of relevance to power of movement in dialogue from a global perspective.

Revolutionary implications for psychosocial professions and contexts

Reflection on the impact of the web on professions over recent decades suggests the possibility of even more radical impacts on some professions, including:

- **psychotherapeutic professions** (as noted above) may well find that preference will be given to interaction with an artificial intelligence, if only for cost reasons. There is the interesting possibility of enabling an easy switch between therapeutic styles. The potential controversy is evident in that between allopathic and homeopathic medicine.
- **teaching professions**, may well find that preference for certain modes of education may switch to artificial intelligence, as is already evident with various forms of programmed learning. Different styles of teaching may be more readily explored or modified
- **mentoring professions** (especially coaching of various kinds), may note a preference for advice through artificial intelligence. This might extend to what is otherwise seen as the role of counsellors in vocational guidance, a spiritual advisor or a guru
- **negotiation and mediation professions**, may note adaptation of artificial intelligence to potentially conflictual complex situations -- perhaps making use of quite distinct facilitation techniques
- **commentators**, notably on sports and politics, may see use of artificial intelligence to provide move by move insights -- drawing on whatever background information is considered relevant. Again the possibility of requesting a change of style, bias or level of detail may be enabled in the use of AI

Complements rather than substitutes: The use of artificial intelligence agents, whether or not as humanoid robots, also suggests their use as complements rather than substitutes -- effectively "assistants", possibly in a learning mode as "apprentices" in various contexts. Especially interesting is the manner in which they might function as "cyber-bodyguards" -- beyond the defensive facilities offered by malware detection systems. The role might extend to "image protection" through countering forms of negative campaigning and character assassination (in news feeds, etc) -- as well as promoting the image of the human in various arenas, as is currently the case with public relations consultants. Might the role of official "spokesperson" (constrained to a script) also be radically affected?

Proactive discourse participants: Also relevant is the role such robots might come to have as participants in collective discourse, whether conferences, internet lists or chat rooms. Variants of this possibility have already been considered and are in use in cyberwarfare. Of interest is then how the input of such a virtual participant could be distinguished from that of a human participant -- and whether the question is indeed relevant, if that input is appreciated as being of higher quality.

Interpersonal relationships: Of potentially more radical implication is the role of dialogue intelligence in interpersonal and family relationships. This is already heralded by the extensive use of smartphones in such contexts -- with the strange challenge "from elsewhere" of their use by couples at table or in bed. An artificial intelligence may well be preferred to conventional dialogue in public spaces (cafes, bars, etc) -- with the curious possibility of using emerging flexible screen technology to project a preferred dynamic image of such a dialogue partner onto the surface of a mannekin provided there at table for that purpose. This is suggested by the use of an inflatable doll as "passenger" in motor vehicles already subject to additional toll rates if the driver has no passenger.

The sex doll variant is of course a notable feature in adult sexual experimentation. Speculation has already envisaged a major market in programmable humanoid robots for this purpose. Their desirability would naturally be augmented if they were enhanced by artificial intelligence. What role might they play in an interpersonal relationship between humans? There is a possibility that they might be preferred by some to a heterosexual or homosexual modality, especially if skill at flirtatious discourse can be recognized on a Buber Scale (*Marrying an Other whatever the Form*, 2013).

Intercourse? As the ultimate form of non-physical "intercourse", could dialogue then be fruitfully and provocatively compared to sexual "intercourse" -- in the questionable terms of "performance" and "how was it for you"? Or perhaps otherwise explored (*"Human Intercourse": "Intercourse with Nature" and "Intercourse with the Other"*, 2007; *Beyond Harassment of Reality and Grasping Future Possibilities: learnings from sexual harassment as a metaphor*, 1996; *Intercourse with Globality through Enacting a Klein bottle Cognitive implication in a polysensorial "lens"*, 2009).

Given the possible insights of relevance to a "Buber Depth Scale" from the "Richter Magnitude Scale" (as mentioned above), it is appropriate to note popular allusions to an "Orgasmic Richter Scale". This recognition helps to reinforce the question: **At what level on a "depth scale" would dialogue "with a cyborg" be preferred by many to dialogue with another human at a more "superficial" level?**

Towards a post-revolutionary harmonic order?

As noted, the emergence of artificial intelligence, whether in the form of humanoid robots or otherwise, is framed by a contextual argument regarding the emergent "global brain" -- with the more accessible forms then usefully perceived as "local brains". It is of course currently unclear how any global brain will survive, mitigate or exacerbate the current crises of humanity. It is also far from clear how "local brains" will facilitate human survival -- as was imaginatively portrayed by the famous robots of *Star Wars* (R2-D2 and C-3PO).

The extensive ongoing debate regarding the nature of any global brain in the planet-wide sense, continues to obscure the dimension highlighted here of depth and subtlety of meaningful dialogue. This is readily confused with complexity and the interests of the

complexity sciences -- however unmeaningful these may be in practice to the individual in quest of dialogue or those with governance responsibilities.

Human learning: What indeed will remain as the human contribution to dialogue in depth -- in the light of learnings from existential challenges? A relevant point is made by Kenneth Boulding (*Ecodynamics; a new theory of societal evolution*, 1978) that:

> Disappointment forces a learning process on us; success does not. The learning process may not be accurate in that we may learn the wrong things from our disappointment. If we do, we are pretty sure to be disappointed again (p. 133)

This accords with that of George Santayana: *Those who cannot remember the past are condemned to repeat it*. Boulding adds that: *Science...is essentially a system of organized learning from disappointments* (p. 135).

A related dimension of relevance to future dialogue is offered through reframing intelligence and identity, as separately argued (*Sensing Epiterrestrial Intelligence (SETI): Embedding of "extraterrestrials" in episystemic dynamics?* 2013; *Encountering Otherness as a Waveform: in the light of a wave theory of being*, 2013).

Simulations of globality: The situation is further confused by major investments in global simulations such as the projected "Living Earth Simulator", of the FuturIcT EU research initiative -- a 10 year 1 billion EUR program "to explore social life on earth and everything it relates to". It is unclear whether this will offer more comprehensible maps of relevance to governance than those of the "disappointments" relating to uptake of insights from the *Limits to Growth* project in 1972 (*Social Supercomputing Is Now*, *Science News Online*, 26 May 2010)? If not, **will the simulation be able to show why not** -- in the light of issues discussed separately (*Considering All the Strategic Options: whilst ignoring alternatives and disclaiming cognitive protectionism?* 2009) and those emerging from the NSA/PRISM initiative?

Mythopoeic coherence: Missing from the various "simulations", however optimistically envisaged, is the kind of coherence with which dialogue has traditionally engaged and by which it has been framed, namely a larger epic "story" of mythopoeic quality like the *Mahabharata* and the *Odyssey*. Recent initiatives like *Star Wars*, *Lord of the Rings*, and *Avatar*, are indicative of modalities through which individuals can reframe their dialogue with the future -- to counter (or complement) the articulations of the doom-mongering and apocalyptic variants (*Relevance of Mythopoeic Insights to Global Challenges: cognitive integration implied by the Lord of the Rings*, 2009). They can be understood as imaginative simulations of greater significance to many than those offered by authorities.

Wisdom: The question raised here is the extent to which the artificial intelligences with which individuals engage will offer greater continuing access to the wit and wisdom of civilization, in whatever form it is presented (cf. V S M de Guinzbourg, *The Wit and Wisdom of the United Nations: proverbs and apothegms on diplomacy*, 1961). Search engines are indicative precursors, although primitive with respect to their capacity for integrating knowledge (*Self-reflexive Challenges of Integrative Futures*, 2008).

Metaphor: It is however intriguing to note the initiation of a Metaphor Program by the US Intelligence Advanced Research Projects Activity (IARPA) -- envisaged as a world repository of metaphors enabling a computer system capable of understanding metaphors used in a variety of languages (see MetaNet: A Multilingual Metaphor Repository). This is a natural complement to the present degree of communication surveillance and the need to decrypt any evasive use of metaphor. There is little probability that it will be configured to enable more integrative perspectives of relevance to dialogue in depth. IARPA has initiated a related program to predict unrest around the world, as described by Cyril Mychalejko (*Big Brother's New Crystal Ball: Washington develops online data mining program to predict global political unrest*, *Toward Fredom*, 23 October 2013). There is no indication that such facilities could be used to suggest windows of opportunity for remedial action in response to the challenges of the world.

Whose intelligence is artificial? The argument highlights a paradox resulting from the manner in which human beings are themselves transformed into "psychosocial constructs" through the methodological frameworks they adopt -- artefacts out of which they engage in communication with others, also framed thereby as "constructs" (citizens, clients, contacts, etc). In this sense, many transformed in this way -- through their reliance on "models" -- could be considered as forms of "artificial intelligence", experienced by humans as somewhat "unnatural" or "unhuman".

To what extent is communication with any professional now better understood as dialogue with an "artificial intelligence" -- although "reprogrammable" by the human in the dialogue to only a limited degree? Like any cyborg, a professional is already much challenged to act as a human being and be so experienced -- as speculatively explored (*Cyborgs, Legaborgs, Finaborgs, Mediborgs: meet the extraterrestrials - them is us*, 2013). However if "citizens" and "clients" are also constructs, does this suggest that the global knowledge society is already characterized by dialogue between artificial intelligences of a kind?

Self-reflexivity: human mirroring in artificial intelligence: This highlights the "artificiality" of the intelligence exhibited through framing issues such as those above. It makes evident the paradox that the in-depth dialogue indicated above is one which is at its most fundamental level one between the individual as a "human being" and the individual as a cognitive toolmaker -- fabricating "artificial intelligence" agents. These then constitute a strange mirror in which the human toolmaker is reflected, or may choose to see it so. Such points have been extensively argued by Douglas Hofstadter (*Gödel, Escher, Bach: An Eternal Golden Braid*, 1979; *I Am a Strange Loop*, 2007).

This consideration can be related to the manner in which "depth" and "intelligence" is projected by the individual human being into such artefacts, as previously discussed (*Psychosocial Implication of Without Within*, 2013). Any expectation of "post-revolutionary harmonic order" for the individual then derives from how that projection enables a sense of cognitive coherence -- potentially through paradoxical forms of cognitive introversion, as separately explored (*World Introversion through Paracycling: global potential for living sustainably "outside-inside"*, 2013).

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