Possibilities for Massive Participative Interaction

including voting, questions, metaphors, images, constructs, melodies, issues, symbols

Background

Voting
Questions
Metaphors
Images
Constructs (architectural)
Constructs (simulation)
Constructs (gaming)
Melodies and songs
Issues
Symbols
Cross-model possibilities

Background

The following sections explore a range of techniques to enable interactive participation by millions of people in support of collective decision-making and strategy articulation. It notably responds to the needs of a range of worldwide initiatives to enable massive participation in some form.

Such possibilities clearly merit consideration in a period when the European Union is striving to give itself greater legitimacy through a new version of a European Constitution -- if necessary by avoiding significant public consultation in the form of referenda.

The exploration is also of relevance given the wide variety of web-based technical innovations that ensure popular interaction by millions on a daily basis across the world. Conventional intergovernmental institutions have accorded little attention to these phenomena -- except as being disruptive of the dynamics of democratic processes that appear increasingly outdated. It could be considered extraordinary, for example, that no consideration is given to the possibility of more representative cyber-parliaments and virtual popular assemblies -- especially given the massive budgets currently allocated to face-to-face intergovernmental meetings where "access" is implicitly controlled by questionable means. The possibilities now exceed by far those envisaged less than a decade ago (cf The Challenge of Cyber-Parliaments and Statutory Virtual Assemblies, 1998).

Voting

This approach has been most discussed. Increasingly the development in interactive computing worldwide is rendering credible some initiative of this kind. Variants, dependent on access in technologically remoter areas, include:

- direct registration of a vote via:
  - a desktop web browser
  - a web browser on a mobile phone
- phone in vote registration (as employed in response to TV phone-in audience voting)
- mediated votes (as employed in voting through national committees in the Europe-wide Eurovision Song Contest)

Main issues include (many discussed in Practicalities of Participatory Democracy with International Institutions: attitudinal, quantitative and qualitative Challenges, 2003):

- ensuring access from areas with lower electronic access facilities
- security issues to avoid abusive or fraudulent voting (including multiple voting by a single person)
- adequate articulation of the issues across languages and cultures (recognizing the use of symbols in some democratic votes where
technical management of the inflow of votes
administrative management and coordination of the whole process
political and conceptual questions about how issues get articulated and selected for presentation to voters
action taken with the product of the vote, and by whom, whether:
  • with the world media
  • in interaction with world leaders
  • as an open access facility for the population at large

Questions
A different form of engagement is elicited and achieved by focusing on questions (variously discussed in papers at Documents relating to Quests, Questions and Answers). It is appropriate to see questions as essential to new thinking, both on the part of individuals reflecting on new strategic options and by their representatives in considering new proposals and the adequacy of their collective decision-making. Several approaches may be taken:

  • articulation and selection by a (self-)selected group of one or more questions which are to be the focus of the interaction by a limited or extended group. This is notably the approach taken annually by the World Question Center (of the Edge Foundation) which each year asks a single question of the eminent
  • free submission of questions accumulated for appreciation by all involved in the process. This is notably the approach taken by Dropping Knowledge which has also used a technique of submitting a pre-selected list of 100 questions to 108 selected people -- and videoing the response of each for subsequent dissemination over the web

Such processes could be enhanced by the exercise of the UIA in generating over one million questions (Generating a Million Questions from UIA Databases: Problems, Strategies, Values, 2006) and seeking to map their interrelationships (Preliminary NetMap Studies of Databases on Questions, World Problems, Global Strategies, and Values, 2006)

Main issues include:

  • acceptance of the validity of how questions get selected for the process (notably in the case of the World Question Center)
  • use of ranking techniques to ensure that questions considered more significant emerge as a result of the interactive process (as is a feature of the Dropping Knowledge approach)
  • processes to interrelate questions, eliminating duplicates
  • administrative management and coordination of the whole process
  • action taken with the product of the process, and by whom, whether:
    • with the world media
    • in interaction with world leaders
    • as an open access facility for the population at large

Metaphors
In order to increase the degree of integrative response to more complex sets of issues on and to enable a more coherent strategic framing of the challenge, the focus may be placed on the identification of insightful metaphors. This assumes a recognition of the role of metaphor in communication and policy-making (Documents relating to Metaphor for Governance). Clearly metaphor is widely used by politicians to articulate their programmes -- and by the media in describing and criticizing them. The ability of metaphors to "travel well" across cultures and within a society is well-recognized. The role of metaphor in formulating strategy is also well-recognized, although less widely discussed.

Several approaches may be taken:

  • articulation and selection by a (self-)selected group of one or more metaphors as the focus of the interaction by a limited or extended group. This was the approach taken by Boston University through a symposium of 48 wise people during its sesquicentennial celebrations -- with the objective of selecting a metaphor that best captured the spirit of the times (Lance Morrow, Metaphors of The World, Unite!, Time, 16 Oct. 1989)
  • free submission of metaphors accumulated for appreciation by all involved in the process -- by analogy with the Dropping Knowledge process described with respect to questions (above). Similarly a technique might be used for submitting a pre-selected list of 100 metaphors to 108 selected people -- and videoing the response of each for subsequent dissemination over the web

Main issues include:

  • acceptance of the validity of how metaphors get selected for the process (notably as illustrated by the case of the World Question Center)
  • use of ranking techniques to ensure that metaphors considered more significant emerge as a result of the interactive process (as is a feature of the Dropping Knowledge approach)
  • processes to interrelate metaphors, eliminating duplicates
  • advantage of facilitating the emergence of a complementary set of metaphors, on the assumption that a minimum number is required to hold the complexity of the strategic situation
  • cross-cultural issues of culture-specific metaphors
  • administrative management and coordination of the whole process
  • action taken with the product of the vote, and by whom, whether:
Several approaches could be envisaged:

- virtual environment -- in one (or more) collaborative spaces.

be imagined (with much more intensive work)

Another alternative to a word-focused approach, with much greater emphasis on collective elaboration of an integrative outcome, it can be imagined (with much more intensive work) that a form of collective interactive construction exercise could be devised in a common virtual environment -- in one (or more) collaborative spaces.

Several approaches could be envisaged:

- on the assumption that most key issues are polarized as strategic dilemmas, the range of such polarized issues could be understood as "poles" with which a structure could be collectively built (Configuring Conceptual Polarities in Questing: metaphoric pointers to self-reflexive coherence, 2004). Note that it is commonplace to refer to "stakeholders" in collaborative initiatives, but the challenge is to recognize that, like "poles", "stakes" have two ends in practice. The purpose of the proposed exercise is to integrate all available "stakes" into a single final structure -- effectively a strategic "habitat" or "shelter", as with the earliest form of collective construction. This approach might be understood as the the basis for the Syntegration process [more] developed from the thinking of management cybernetician Stafford Beer (Beyond Dispute: the invention of Team Syntegrity, 1995; Andrew Pickering, The Science of the Unknowable: Stafford Beer's Cybernetic Informatics, 2006) [more]. The approach is inspired by the fact that the collective construction of communal buildings has a long tradition in many cultures -- including "barn raising" in some western traditions. A virtual analogue may therefore be envisaged.

It should be noted that it is a common feature of strategic thinking at the highest level of the European Union (as illustrated below) to focus on the various "pillars" (rather than "stakes") essential to a strategic initiative. It could be argued that simplistic configurations of pillars alone may well be appropriate as an expression of international values in temple-like architecture of Greek and Roman inspiration -- and suitable for institutional logos. They do not however constitute a collective shelter -- and, ironically in the light of their purpose, are no protection from the "elements" -- however adequate they may be considered for a temple of democracy. The additional problem with the following institutional pillars is that they can only, and with the greatest difficulty, be "moved" through participative processes -- hence the widely-remarked level of popular apathy regarding international political processes. The temple cannot easily be reconfigured as a shelter -- or in response to other mundane collective purposes.

### Images

Given the participative success of worldwide sharing of video clips as via Flickr and YouTube, there is clearly the possibility of adapting some such approach as a means of articulating focus on strategic issues -- even of communicating visual metaphors across cultures.

Main issues include:

- acceptance of the validity of how images get selected for the process
- use of ranking techniques to ensure that images considered more significant emerge as a result of the interactive process (as is a feature of the Dropping Knowledge approach)
- processes to interrelate images
  - possibly eliminating duplicates -- or morphing them into a resultant (as often illustrated with many faces of different origin)
  - automatically positioning hotspots on memorable images using pattern recognition techniques to provide links to content data on issues and initiatives -- thus ensuring that the image serves an integrative mnemonic function
- processes of structuring a multiplicity of images into meaningful patterns:
  - hierarchically
  - configurations (possibly benefitting from those of sacred geometry)
  - composites, whether as collages or woven together by analogy to carpet weaving
  - combination of a multiplicity of small images to create an emergent larger image (as is done with some posters)
- use of autostereogram (Magic Eye) techniques whereby a single-image stereogram is designed to trick the human brain into perceiving a three-dimensional scene in a two-dimensional image
  - possibly a combination of small images
  - possibly based on a multiplicity of streaming video images
- administrative management and coordination of the whole process
- action taken with the product of the process, and by whom, whether:
  - with the world media
  - in interaction with world leaders
  - as an open access facility for the population at large

### Constructs (architectural)

Another alternative to a word-focused approach, with much greater emphasis on collective elaboration of an integrative outcome, it can be imagined (with much more intensive work) that a form of collective interactive construction exercise could be devised in a common virtual environment -- in one (or more) collaborative spaces.

<table>
<thead>
<tr>
<th>&quot;Pillar-ization&quot; -- use of &quot;pillars&quot; in international institutional discourse</th>
<th>(as illustrated by the European Union and criticized in Animating the Representation of Europe, 2004)</th>
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<tr>
<td>- All democracies have <strong>two essential pillars</strong>: some rights and obligations that constitute the Citizens' Statute and some authorities elected freely and democratically which are organised on the basis of the principle of the division of powers.</td>
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<tr>
<td>- In Community parlance people often refer to the <strong>three pillars</strong> of the EU Treaty [more]. The European Union was created through the Maastricht Treaty in 1992 (EU Treaty). This Treaty has since come to symbolise the</td>
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political roof resting on three pillars.

- The first pillar consists of the two remaining European communities, the European Community and the European Atomic Energy Community (Euratom).
- The Common Foreign and Security Policy forms the second pillar, and
- Police and Judicial Co-operation in Criminal Matters the third.

- The EU is also described as consisting of **four pillars**:
  - Economic and Currency Union
  - Common Foreign and Safety Politics
  - Justice and Interior Politics
  - Common Defense Politics

- The Maastricht Treaty was based on **four pillars**:
  - social policy,
  - EMU,
  - justice,
  - common defense policy

- The EU's enlargement policy that has evolved since 1989 is built on **four pillars**:
  - clear political and economic criteria requiring candidate EU accession countries to respect democratic principles and to operate market economies;
  - pre-accession aid programmes to help close the wealth gap between the enlargement candidates;
  - encouraging institutional changes in the accession candidate countries so they can apply and enforce the full range of EU laws;
  - Treaty changes to ensure that, after enlargement, the functioning of the EU's institutions is not handicapped by the accession of a large number of new Member States.

- The EU Social Policy and EQUAL (EU strategy promoting new practices in the fight against discrimination and inequality) operates within 8 themes directly linked to the **four pillars** of the European Employment Strategy (EES) (plus a ninth covers the specific needs of asylum seekers):
  - Employability,
  - Entrepreneurship,
  - Adaptability, and
  - Equal Opportunities

- EU Common Fisheries Policy has **four pillars**
- EU Common Agricultural Policy rests on **four pillars**: a single market with the free circulation of goods; uniform prices; a common preference for European products over imported ones; financial solidarity between Member States as regards expenses incurred in implementing the CAP.

- The European Commission consultation on youth has had **four pillars**:
  - young people,
  - Member States,
  - youth researchers and
  - civil society (called for by Youth Forum)

- The European Court of Auditors (ECA) bases its analyses on **four pillars**, including:
  - an examination of supervisory systems and controls,
  - an analysis of declarations by director generals, and
  - an assessment of the work of other auditors.

- **Four pillars** of the European Security and Defence Identity (ESDI) A Commitment by the European Nations, Organizing for Crisis Management, Defense Resources, A Strong European Defense Industry

- The UN Mission in Kosovo (UNMIK) which brought together **four pillars** under UN leadership:
  - Humanitarian Affairs under the responsibility of the UNHCR,
  - Civil Administration of the UN,
  - Democratisation and Institution-building of the OSCE, and

- The new partnership agreement between the European Union and the ACP countries (Cotonou, 2000) is based on **five pillars**:
  - ongoing political dialogue,
  - involvement of civil society,
  - poverty reduction,
  - new trade framework,
  - reform of financial cooperation

- The Geneva Association (Four Pillars Research Programme), The Club of Rome (European Support Centre), and The Risk Institute (Double Helix Research Programme) joint initiative is based on the concept of **four pillars**:
  - the compulsory, pay-as-you-go, state pension;
  - the supplementary (often funded-based) occupational pension;
  - individual savings (personal pensions, life insurance…);
  - a flexible extension of work-life, mainly on a part-time basis, in order to supplement income from the 3 existing pillars.

- **Six pillars** of development policies (Statement on Development Policy in 2001)
  - Macro-economic support and access to social services
  - Food security and rural development
  - Trade and development
  - Regional Integration
  - Institution building
  - Transport

In effect the proposed approach involves converting an individual's single impulse vote into a continuing pressure to move "stakes", variously "held" by many other participants, into a constructive configuration. The "voting" process is thereby converted into a dynamic collective construction process in a virtual environment. The architectural construct, within
which the "stakes" or "poles" lock together into a pattern respectful of the various "orientations" they represent, might well be inspired by any of the basic shapes of sacred geometry. In the case of the Syntegration process, the preferred form is the icosahedron -- seen as the form for effective knowledge integration. But in contrast with that process, the challenge is to ensure such construction by massive participation in virtual space -- possibly with the option of using other structural forms into which the "stakes" can "lock" (as with the construction of geodesic domes and the integrity they achieve).

![Syntegrity Icosahedron](image)

The virtual movement of "stakes", as proposed, is then the resultant (in mathematical terms) of the varying continuous voting pressure on those holding that particular "stake" -- in directly comprehensible analogy to the physical case. By comparison, conventional voting might then be seen in terms of the primitive dynamics of a "tug-of-war".

- as a complement to the use of (rigid) "poles" as construction elements, the "pole"-based approach could be extended, in a manner consistent with Beer's analysis, to include flexible material linking such mutually antagonistic poles -- namely associative links binding the disparate poles together. This approach is exemplified by understanding of the kind of tensegrity construction fundamental to geodesic domes and was explored in relation to the strategic dilemmas of the 1992 Earth Summit (Configuring Globally and Contending Locally: shaping the global network of local bargains by decoding and mapping Earth Summit inter-sectoral issues, 1992; Groupware Configurations of Challenge and Harmony - an alternative approach to "alternative organization", 1979 )

Main issues include:

- resolving the technical issues of how masses of people configure themselves around polarized issues and how they work together to configure a larger construct -- a process described on a small scale in the syntegration process as "problem jostling" -- for which computer protocols have been envisaged
- providing a ludic engaging dimension as has been characteristic of involvement in the Tetris computer game
- administrative management and coordination of the whole process
- providing linkage to database content on the polarizations and their extremes
- action taken with the (as a cross-issue integrative) construct when produced, by whom, whether:
  - with the world media (for which the outcome would be highly visible)
  - in interaction with world leaders
  - as an open access facility for the population at large

**Constructs (simulation)**

As another alternative to a word-focused approach, again with much greater emphasis on an integrative outcome, it can be imagined (with much more intensive work) that a form of interactive model-building process could be devised. In effect this is a dynamic extension of that discussed with respect to architectural constructs (above).

One prototype for this approach is that of SodaConstructor, developed by Ed Burton of SodaPlay -- the project of a London-based company called Soda Creative Ltd as part of their research and development process. Users, accessing freely, can construct animated. If satisfied with the result, these can be stored online (selected examples; walker) on the SodaPlay server or offline on their local computer. Sharing a model online involves either sending it to the SodaZoo or posting it in the SodaForum. Users need to be online to login into a SodaPlay account to save it on the SodaPlay server. Some users develop their own independent interfaces to facilitate construction of models (see SodaGenerator).

SodaConstructor is a freely accessible Java technology-based online construction kit that gives players the ability to build and visualize interactive creations using limbs and muscles. By altering physical properties like gravity, friction, and speed, curiously anthropomorphic models can be made to walk, climb, wriggle, jiggle, or collapse into a writhing heap (see description of underlying physics). A SodaZoo has been built up, where a large and active worldwide community of sodaplayers has placed a strange and diverse menagerie of SodaConstructor models. Under funding from the UK National Endowment for Science and Technology and the Arts (NESTA), SodaPlay is currently developing SodaConstructor and related software into a flexible toolkit to deliver creative learning and fun to schools in the UK [more].

As discussed elsewhere (Animating the Representation of Europe: visualizing the coherence of international institutions using dynamic animal-like structures, 2004), the animal-like models could be used to render strategy-delivering programmes (including international
institutional structures) more meaningful and appealing by using dynamic representation techniques that have the recognized communication strengths of animation -- notably for the media. This is seen as a means of shifting beyond the "pillarization" of international initiatives (presented above). The success of SodaConstructor in attracting millions of users at all levels of society is an indication of the creative potential of such tools. The success of the UIA in holding thousands of organization elements in large relational databases, and displaying them in interactive maps, is an indication that operational significance can be given to such maps.

Main issues include:

- technical issues of offering access to larger numbers of people to a Soda Constructor type facility
- technical issues of how masses of people configure themselves around particular types of animation and how they work together to configure a larger animation
- possibilities of morphing animations of a similar pattern
- advantage of facilitating the emergence of a complementary set of animations, on the assumption that a minimum number is required to hold the complexity of the strategic situation
- providing a ludic engaging dimension as has been characteristic of the Soda Races on the Soda Constructor site -- racing competing models
- administrative management and coordination of the whole process
- action taken with the (as a cross-issue integrative) construct when produced, by whom, whether:
  - with the world media (for which the outcome would be highly visible)
  - in interaction with world leaders
  - as an open access facility for the population at large

**Constructs (gaming)**

Arguably there are many lessons to be learnt from massively multi-player online role-playing games (MMORPGs) and from virtual environments such as *Second Life*.

The relevance of some of these possibilities to impact on strategic thinking has been explored elsewhere (*Playfully Changing the Prevailing Climate of Opinion: climate change as focal metaphor of effective global governance*, 2005)

**Melodies and songs**

There is the possibility of formulating the results of any massive interaction with the population in terms of music or song.

A range of possibilities -- with examples of their implementation -- are documented in some detail in a separate paper (*A Singable Earth Charter, EU Constitution or Global Ethic?*, 2006). Basic alternatives include:

- a competition to transform a written declaration (arising from some of the above processes, or more conventional approaches to declaration construction) into music or song and then voting on the result (as is done with the annual Eurovision Song Contest)
- submission of melodic elements to be ranked and selected into larger constructs, themselves subject to ranking -- using some of the techniques whereby music can be constructed from sound sampling
- use of the possibilities of generative music whereby seed melodies are used to generate more extended pieces (a technique extensively developed by the SSEYO Koan group now integrated into the Tao Group's *intent® miXaPlayer™* (a multimedia mixer and player for the capture, creation, editing, mixing and playback of user generated content on mobile devices; miXaPlayer enables an extendable range of end-to-end multimedia services and vertical applications for both personal use and interactive social media creation and publishing in online communities).
- use of the possibilities of combining sounds as in *polyphony*, *overtone chanting* and *organ resultants* as a means of giving credence to combinations of otherwise opposing voices (cf. *All Blacks of Davos vs All Greens of Porto Alegre: reframing global strategic discord through polyphony?* 2007)

Main issues include:

- technical issues of offering access to larger numbers of people to such a facility
- technical issues of how masses of people select particular sound samples for integration into a larger piece
- advantage of facilitating the emergence of a complementary set of songs/music, on the assumption that a minimum number is required to hold the complexity of the strategic situation
- possibilities of morphing songs of a similar pattern
- ensuring a cognitive relationship between the songs and the content of relevance to strategy articulation
- administrative management and coordination of the whole process
- action taken with the (as a cross-issue integrative) songs when produced, by whom, whether:
  - with the world media (for which the outcome would be highly audible)
  - in interaction with world leaders
  - as an open access facility for the population at large

**Issues**

This approach would focus on issues in a manner analogous to the above focus on Questions.

It is appropriate to note that the Union of International Associations maintains databases on over 50,000 extensively interlinked *world problems and strategies.*
Symbols

This approach would emphasize the identity dimension through which the complexity otherwise held by issues, questions or metaphors is compressed into a symbol or image. The use of symbols has of course long been a characteristic of socio-political (and religious) identity -- as it is for individual identity. Symbols are of course used for voting in countries where the population is characterized by a degree of functional illiteracy.

Main issues include:

- whether a massive interactive process can ensure the emergence of more powerful enabling symbols -- or sets of complementary symbols
- how symbols (and parts of symbols) on the web can be appropriately linked (via hotspots) to content relevant to clarification of issues and actions upon them
- how distinct symbols (such as the logos of the various Specialized Agencies of the UN) can be interrelated to reinforce the sense of an integrative approach to the often uncoordinated programmes that they represent.

Clearly many of the issues in the organization of this visual approach are analogous to those described above, notably with regard to images. One interesting metaphor for the exploration of this process is the emergence of Chladni patterns as a result of resonance amongst a multitude of (magnetized) particles -- giving the possibility of dynamically emergent symbols. Based on Chladnii's work, photographer Alexander Lauterwasser captures imagery of water surfaces set into motion by sound sources ranging from pure sine waves to music by Ludwig van Beethoven, Karlheinz Stockhausen and even overtone singing.

Cross-modal possibilities

Clearly the above possibilities would be of different appeal to different people -- or groups of people -- especially given different access to necessary technology and different cultural preferences. As a marketing challenge, the technical question would be how to interrelate any combination of these modes of massive participant interactivity. How can one feed into or usefully constrain another? How are synergy and multiplier effects to be elicited? A particular issue is the extent and nature of the interaction encouraged between participants as first explored for a number of major international conferences (Participant Interaction Messaging improving the conference process, 1980) and now basic to a wide variety of chat-room facilities. These might be seen as a prelude or parallel process to any of the above.

Of particular importance in ensuring both participation and visibility to the media, is the role of exemplars in embodying integrative dimensions and contrasts. Here the challenge is to move beyond the role of such Very Important People (VIPs) in "importing" public attention to themselves as exemplars -- endorsing particular views such that many have no need to reflect on them or take responsibility for them. Massive public participation can usefully be reframed in terms of "Very Exportant People" (VEPs) in appropriately "exporting" attention to their representatives to complement the role of VIPs.

Fundamental to the success of any such exercise is the degree to which participation is felt to be significant as providing an emergent focus for integrative action in response to the complex of governance issues -- whatever combination of approaches is used,

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