TENTH BIENNIAL FUSCHL CONVERSATION
OF THE INTERNATIONAL FEDERATION OF SYSTEMS RESEARCH
Y3K PROBLEM: ACHIEVING A BETTER WORLD BY THE YEAR 3000

Report from Y3K GROUP

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ABSTRACT

This report summarises the progress made by the so-called Y3K Group during the 10th Biennial Fuschl Conversation. The idea for naming the group had been suggested by Gordon Dyer and Gordon Rowland in March 1999, triggered by a climate of concern generated over the so-called Y2K problem. Our consciences and senses told us that the world that mankind had created was in a sorry mess. With a systems design approach we have the chance to create a vision of what we want and then begin a design process towards that vision. By the end of the conversation we had achieved a set of principles for Evolutionary Guidance for 3000, along with several avenues for further conversations.

INTRODUCTION

"Citizens, the 19th Century is grand, but the 20th Century will be happy. Then there will be nothing more than old history. Men will no longer have to fear, as now, a conquest, an invasion, a usurpation, a rivalry of nations with the armed hand, and interruption of civilisation depending on the marriage of kings, a birth in the hereditary tyrannies, a partition of peoples by a Congress, a dismemberment by a downfall of a dynasty, a combat of two religions meeting head to head, like two goats of darkness, upon the bridge of the intimated, they will no longer have to fear famine, speculation, prostitution from distress, misery from lack of work, and the scaffold and the sword, and the battle, and all the brigandages of chance in the forest of events. We might almost say: there will be no events more. Men will be happy."

Victor Hugo "Les Miserables"

This report summarises the progress made by the so-called Y3K Group during the 10th Biennial Fuschl Conversation. The idea for naming the group had been suggested by Gordon Dyer and Gordon Rowland in March 1999, triggered by a climate of concern generated over the so-called Y2K problem - the fear that a large number of the world' computers might crash on the changeover from 1999 to 2000. In the event, the predicted Y2K disaster was largely a non-event - a

technological problem was cured by a technological fix.

In the view of Rowland and Dyer, this simple technological problem was much less problematic and less serious than the issue of "what would we as systems designers wish to see for human-kind for the Year 3000." Our consciences and senses told us that the world that mankind had created was in a sorry mess: for instance the gross inequalities of wealth, power and opportunities that still exist between nations and peoples; continuing wars and terrorism; a global spread of horrific diseases; drug related crime and, perhaps most worrying, the concerns with Planet Earth itself as it suffers from pollution and global warming. Thus Y3K became a metaphor for a much more desirable future.

The Year 3000 also had an advantage. The choice of Y3K to focus the vision was deliberate in that it is far enough away for it to be removed from our current biases and to be NOT predictable on the basis of our current knowledge and technology. With a systems design approach we have the chance to create a vision of what we want and then begin a design process towards that vision. It also forces us to think and not rest on the assumption that everything is too difficult and that nothing can be done. Something ought to be done if succeeding generations and we take responsibility to continue to design the future and not just let the future happen. Yet too, our work must be framed within a guiding principle of system design that "it is unethical" to design a system for someone else. At best we can provide an outline, a set of markers, to help current and future generations to follow.

The aim for outcome from this initial Fuschl conversation could not be very ambitious. But we hoped that we might be able to define some markers for action in our lifetimes that we might be able to begin immediately which would take us towards a vision of a more desirable vision of global humanity in 3000 and not away from it. By the end of the conversation we had achieved a set of principles for Evolutionary Guidance (Banathy, 1989) for 3000, along with several avenues for further conversations.

PARTICIPANTS AND PREPARATION

The members of the group were:

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Gordon Rowland	USA	(Gordon R)	rowland@ithaca.edu

The team represented an interesting variety of backgrounds and cultures for tackling this theme, as was quickly demonstrated when they shared their input papers. Sabre described that she hoped to be able to apply the theoretical work of the conversation to the area of sustainability in her

own life. Her paper also drew on some very interesting ideas due to Benyus (1997) which reminded us that we should learn to listen to nature for clues in maintaining sustainability and energy efficiency. She also provided us with the extraordinary quote from Victor Hugo above, which reflects unfulfilled hopes of a better future from an 19th century perspective. Gordon D had provided an initial set of triggers that form the basis of the introduction to this report. He looked for a time when gross global inequalities and images that, for example, that came through television from Ethiopia left him feeling less guilty. This could only happen when Governments in emergent nations were inclined to spend less resource on arms and more on positive technology. It was essential to re-evaluate the spiritual, intellectual, social and physical nature of humanity, and mankind's relationship with our Earth environment. Yoshi provided a historical summary of changes over the last 1000 years as a precursor to providing a range of trigger questions that would need to be addressed, including "what we could design and what we must leave." He was interested in exploring criteria for what it meant to be "rich," "complete" or "satisfied." Lynn had reflected on a possible framework for developing this conversation. This linked to questions of:

"I"	how I want to be? how I should be?
"We"	what needs to be addressed collectively in terms of social systems
"Natural World"	what we needed to do in relation to the natural world[hereafter shortened to "World"

Gordon R described how he had drawn on an experience whilst at the 1999 Asilomar conversation which linked to our inability to describe the complicated nature of sand types (it was all just "sand"); but that the people of the North had many words for snow. This had led him to reflect that if language could be purposefully changed then it might serve as an attractor for a desirable future. Hence he had drafted his input paper to illustrate the possibility we might develop complex language around an attractive concept such as love, for example, in 20,000 words, the equivalent of our typical current working vocabulary.

STRUCTURE FOR EMERGENT TRIGGERS

Following the introduction and discussion of the input papers, a number of key trigger questions emerged which were located within the structure of a basic system design process: preparation for design, leaping out, and valuating the design process. See below:

Preparation
* reflect on past and present
  what is good? what is bad?
  what have we gained and learned as human beings so far?
* contemplate future

what can we assume? not assume?

what changes are unlikely? likely?

Leaping Out

*　　　what would characterise the ideal?

what markers or indicators can we use?

*　　　some possible frameworks for thinking:　I, We, World dimensions of "I"

core values and ideas... leading to ideals and enabling systems and Evolutionary Guidance System (EGS)

Valuation

*　　　what does it mean to be human?

*　　　what question is left out?

We needed to check that we remained within the principles of systems design with this list. We noted that it was simply a list, it was not a model. Other cultures might challenge our answers to the questions but not the framework. Differentiation between cultures would come from their answers to "How do we guide evolution towards the ideal?" Gordon R noted that it would be awkward to apply typical objective measures for valuation to a future 1000 years hence, so he suggested that a richer understanding of what it means to be human might be a reasonable proxy measure of the value of our work.

This initial framework provided many options for proceeding, from dealing with one or two questions in depth, to superficial coverage of most or all. To begin we selected what seemed the most interesting question - what does it mean to be human?

HUMANNESS

There was unanimous agreement to three characteristics identified as being fundamental to humanness and human needs:

- intellectual curiosity and physical challenge e.g. pioneering spirit
- creativity and the need for achievement
- affinity and love

The conversation was enlivened by consideration of challenging questions prompted by the prospects of advances in space travel and medical technology in the next 1000 years. Within that timeframe, medical technology may make it possible to live for say 600 years but would an individual that old still be curious? Two important questions were:

"Does the human species need this planet?"

"Do we wish to remain human?

and, for example, if we were to develop technology to colonise Mars would we still be human?"

These deeply philosophical questions could only be answered on an individual basis. We choose here to illustrate two very different views on this question:

View A

Mankind has not necessarily any special link with Earth although Judaeo-Christian religious perspectives will assume this. A Buddhist view assumes no special links with Earth or with corporeal form. Under this perspective the gradual disappearance of human form or replacement with technology is conceivable, even to the ultimate of man being non-corporeal and not based on this planet.

View B

A view of mankind being firmly rooted to Earth, as simply one of many diverse species on a closely integrated ecosystem which has evolved on the Planet. This perspective may not admit that living in a capsule on Mars in 2600, and for example drinking re-cycled urine as a water source was "human."

Subsequent discussion and sharing in plenary raised the possibility of a third perspective based on a middle road approach to applying nano-technology or neural technology to humans. Enhancement of the human being with these techniques rather than replacing the human being, seems to be a key issue. We were also reassured when reminded by Nicholas Paritsis in plenary that "Computers do not think, they simulate thinking."

SHOULD WE RETURN IN 3000 WHAT WOULD WE MISS?

We then returned to the other questions under "preparing to design." We already knew what was bad in the current world. Thus we decided to reformulate the remaining questions under "reflecting on our past and present" to read

"What would we miss in 3000 if we returned and found it was not present"

We shared our thoughts following time for individual silent reflection and then collected them through a Nominal Group Technique-type process. The individual thoughts clearly reflected individual value systems. We made no attempt to evaluate or prioritise them, and provide the full list we generated at Appendix 4. Of interest was that though there were differences in detail a number of key themes emerged. If they were not present in the Year 3000 the group discovered that they would all miss:

* interpersonal relationships
* a sense of fun and joy
* creative art process
* intellectual and physical accomplishment (passionate endeavour)

* a healthy and beautiful natural world
* expressions of our past and culture
* social structures (education, judicial,...)
* evidence of characteristics that underpin our current social structures (respect, discipline, good behaviour,)

Yoshi pointed out that this was simply a list, and as such does not convey any feeling of the experience of participating in the activity indicated. We noted that virtual-reality technology might be a future mechanism for recording this. In pursuing this line further we agreed to generate a further list of items. This would contain things which we would be either very disappointed if they were not present within society in 3000, or which would be our aspirations for that time. This effort generated two different types of list: features of the world we wanted to see at that time, and processes and feelings which we hoped would be present in humanity to a large degree:

Features
* everyone has sufficient food, water and shelter
* evident recognition and appreciation of human multi-intelligence, as defined by Gardner (1999)
* an imperfect but "loveable" world in which:
        -harmony/balance of living creatures is evident
        -advantages and disadvantages of imperfectness are recognised
        -effect/benefits of music, etc. on human development is evident
        -there is appreciation of birth, growth and death
* a design culture as a away of thinking coupled with a non-coercive EGS, as indicated for example by a greater participation in visioning and in generating markers for further futures.
* new ideas on currency (away from money as a sole measure of worth)
* learning and development systems, consistent with what is known and needed by the community
* energy consumption in balance between peoples
* evident progress towards reducing imbalances in power and opportunity

Processes
The processes we hoped to see:
* everyone falling in love/being loved
* conflicts that occur are resolved in ways that help people to learn and grow (and not resolved by violence)
* sense-making occurs at deeper and deeper levels
* all people are able to pursue their aspirations
* giving and receiving kindness
* human life is seen as a creative and artistic endeavour
* feeling of satisfaction for a job well done
* being touched by beauty

* enjoying the sensory experience (all senses)
* protecting another and being protected
* feeling satiated or complete

We recognised that these feelings were important bases for markers for an Evolutionary Guidance System (EGS).

Design Context

We continued as part of the preparatory phase by trying to consider what assumptions we might make or not make for this long-term future. The questions of assumptions represented the first major difficulty in the progress of the conversation. This arose from a combination of perspective, culture and language, and whether or not current technology predictions for the next 30 years should be incorporated. The difficulty arose not just between individuals from East and West but between individuals from the West. We discovered a major difference between the definitions of "assumptions" and constraints used by Gordon D and Gordon R. Following a review of the conversation process the ideas were recast as a list of elements of the context within which the design would still need to proceed in the next millennium, i.e.:

* the existence of tools and technology influencing human development and impacting on the environment
* continuing scientific research making the impact of new technology even more important to assess and control
* continuing medical research and technology allowing the definition of "humanness" to be revised
* some continuing imbalances between resource and power rich/poor remain
* some continuing concerns with Earth environment
* the need for ongoing systems design

We noted the possibility of "special events" or discoveries, which completely change the nature of our understanding of the Universe and the opportunities that may open up, but we cannot speculate in 2000 at the possible influence of such an event.

THE LEAP

As part of our leap we considered two major ideas: the first draws on a community discussion approach practiced by the Okinagan Indians of British Columbia; and, the second relates to the "I", "We," and "World" mentioned above.

The Okinagan (OK) Model

Lynn introduced us to an ancient and remarkable technique practised by the Okinagan (OK) Indian Nation of British Columbia for gaining an understanding, reaching agreements, and

solving problems concerned with difficult issues for which competing perspectives exist. He provided the following description. Referred to as the "Four Societies," the approach affirms that there are four important perspectives that will always exist and need to be heard. The four are: (1) the traditionalists who are concerned with history, traditions, ceremony, and a "sense of place;" (2) the visionaries who are concerned with the future, what might be, and how that imagined future might be attained; (3) the interpersonal relationship folk who are concerned that all voices are being heard and honored; and (4) the action- oriented people who wish to "get on with it," to solve existing problems immediately.

The approach, here overly simplified, asks each member of a group to identify with the perspective (or Society), that most closely represent their natural concern and interest. Each Society forms and meets as a group to address the issue(s) solely from their single perspective. Following the meetings, the four groups convene to report their deliberations and/or recommendations. The primary responsibility of each group is to develop a deep understanding of the other three perspectives and to ensure that the other groups understand theirs. The basic premise is that deeper understandings are reached across the four perspectives. The process creates a context and environment in which a heightened respect for others is developed and full consideration of ideas and multiple perspectives becomes more likely. The process diminishes the motive for personal victory and enhances the motive for integration of competing interests.

The I-We-World Domains
We attempted to apply the four OK perspectives to three different system levels: I, We, and World. In doing so we found that the relationships among levels, that is, I in WE, I in WORLD, and WE in WORLD, were as much or more important than the levels themselves. A draft of the characteristics we generated for the ultimate combination of I in WE in WORLD was collated by Gordon R and is given below. The manner in which he generated this from the levels and relations can be traced in Appendix B. Much more work could be done here, but the issues of balance among the perspectives, and relations of individual to social group and natural world were to have substantial influence on the formation of our EGS.

I in WE in WORLD
> Visionary: dream with openness, understanding, appreciation, and connection to self, collective, and world

> Traditionalist: foster respect for, and develop and nurture habits that celebrate and preserve, what is good in the collective and world

> Interpersonal relations: be present as an individual who respects, and who through dialogue/conversation, nurtures relationships with others and the natural world

> Action: lead through responsible action and appreciation for connections

EXTENDING THE OK MODEL FOR MULTI-CULTURAL PERSPECTIVES

We decided to explore the OK model within our own group. The following analysis of the outcome and process was provided by Yoshi. Figure 1 below shows his analysis of the interactions among the four role types, or rather orientations, of the OK model as might be expected within a typical systems design group. In the picture,

White arrow: Indicates strong influence
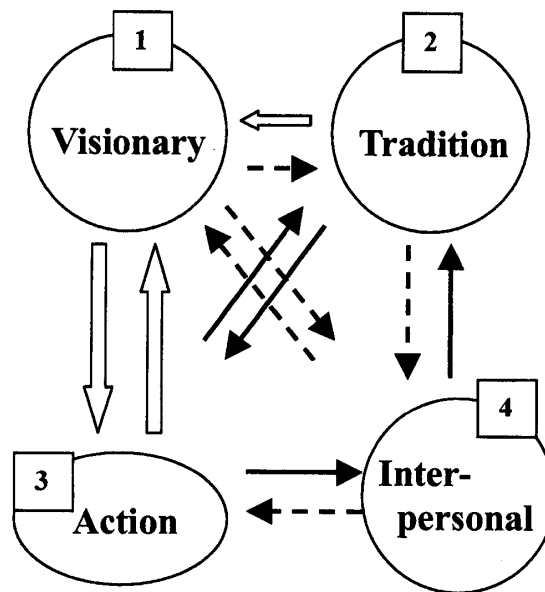Solid arrow: Indicates influence
Dotted arrow: Indicates weak influence

Figure 1

Those four role orientations of the OK model are interrelated and interactive. Comments on interactions between them follow:

(1) Visionary <= (2) Traditions

Systems designers will take into account tradition (and history) to formulate their vision. Hence, a strong influence of Tradition on Visionary is possible. On the other hand, the influence of Visionary on Tradition seems to be weak. Rather, the results of Action influences Tradition particularly where action has led to success, which in return influences Action.

(1) Visionary =><= (3) Action-oriented

This seems to be a key connection for normative systems thinkers. They have an idealized vision of the future, from which the Action plan is developed and implemented. From such Action planning and implementation, the idealized images of the future will be modified/new Visions will evolve. However, see the critique of this below in the context of the difficulties that emerged

within our own group's conversation.

(3) Action --><-- (4) Interpersonal Relations
Action can influence Interpersonal Relations, while accumulation of Interpersonal Relations may or may not lead to Actions.

(2) Tradition --><-- (4) Interpersonal-Relations
It seems that the Interpersonal Relations can help formulate Tradition, while Tradition has some influence on Interpersonal Relations.　Ackoff (1981)　presented a typology of planning for systems design, as follows:

Inactivism   Do nothing and wait for calm water again
Reactivism   Go back to the Good Old Days
Preactivism   Prevent a predicted future problem, and
Interactivism   Design and create the future

Given the possible extreme alternative viewpoints of system designers, the Tradition-Interpersonal Relations connection could either be seen as

Inactivism: by a proponent who argues "Let nature take care of itself"
Interactivism: by a proponent who argues "We should develop our systems design culture through interpersonal relations"

The Group did not spend much time on discussing the Tradition-Interpersonal Relations connection.　This connection could be a useful area to explore in Transcultural Conversations.

(1) Visionary --><-- (4) Interpersonal-Relations
This connection may seem less important for many systems designers.　But there could be Visions of the future based on Interpersonal Relations, i.e. using Interpersonal-Relations as means to define future visions.　But we can also imagine there could be a Vision of the Interpersonal Relations themselves, i.e. Interpersonal Relations being the key objective of future visions.

The Visionary - Interpersonal-Relations connection can be related to a non-normative systems design process like the Ethical Accounting Statement (EAS)(Pruzan 1990).　EAS places emphasis on consensus-seeking processes and not on idealized outcome.

Reaching a vision in the Interpersonal Relations mode would not use concepts such as "leadership," or "normative thinking."　Rather, it will probably use concepts such as "naturally emerging consensus," and "harmony,"

Yoshi offered the following metaphor to clarify the difference between idealized systems design in the traditional sense, and Interpersonal-Relations based systems design.

"Idealized systems design (in the traditional sense) is like a steam-
ship. It overcomes natural obstacles such as wind and tide, and
reaches its destination 'overcoming environmental restrictions' with
a strong will, and a clearly defined goal.

On the other hand, Interpersonal-Relations-based systems de-
sign is like a sailboat. It does not stand against nature; rather, it
will coexist with nature and take 'natural advantage' of it. The
sailboat travellers can change their destination, as the wind goes.
But the voyage will be harmonious with its environment, and proba-
bly more fun than the steamship voyage, if the travellers allow the
travelling process as a part of its value of the journey, rather than
considering the end as the sole purpose of the journey. With a
steamship, you will arrive at the destination as selected earlier. In
the sailboat, you might come out as a different person from the
voyage, since the journey itself was an end, in addition of being the
means of reaching a destination." (Horiuchi, 1979)

The Group found this metaphor extremely helpful, but noted that idealized system design does
not necessarily imply a strong omnipotent designer in charge, or that direction is never changed
based on dissenting input. Lynn suggested the following expansion to the metaphor. The steam-
ship is goal oriented, has a destination in mind - that of arriving at the best possible port of
call. The schedule may be adjustable, the crew may change at times, and deviation from the
agreed upon course is permitted only by consensus. But, there is general agreement that certain
travel conditions (values concerning the end destination as well as crew participation) will re-
main constant.

Application of Analytical Framework to Our Group Experience

The Group ran into process problems from time to time, for example in deciding how next to
proceed and in setting its priorities. Yoshi offered the following reflections based on the analy-
sis above. He concluded from Sabre's input paper and her other comments that the Visionary -
Interpersonal-Relations connection was crucially important to her. When Sabre pointed out the
importance of the Visionary - Interpersonal-Relations connection, the others tried to grasp
Sabre's point in their own way. It appeared that Lynn and Gordon D tried to take Sabre's point
as logical inputs to a systems design approach which emphasised the Visionary - Action connec-
tion. They analyzed Sabre's points; then, systems design approaches, and tried to construct an
expanded systems design model. Gordon R seemed to take Sabre's point as a gestalt in parallel
to Gordon's overall Y3K framework. Since each of Sabre's and Gordon's frameworks is probably
complete in its own way, projecting one framework on another creates a new, overlapped image.

The Group felt that more time was needed to reflect on their experience and the analysis, but the
OK model and the analysis seemed to represent a powerful tool for systems design and process
looking towards a long term future. The strength of the interconnections (the state variables)

in any given context could be seen to represent that culture, so the OK model would appear to be highly flexible.

A key word for Y3K is not perfection, but balance. This implies both balances of the four role orientations of Vision, Tradition, Action, and Interpersonal Relations, and in balance between process and outcome during systems design.

It is possible that our team did not maintain this balance enough in our Y3K Conversation, since we incorporated only the *Outcome* aspect of the Interpersonal-Relations - Visionary connection, without implementing the *Process* aspect of this connection in our own Conversation process. Yoshi suggested, on reflection, a metaphor for our process was that we were usually dashing like a football player trying to catch a pass at a predetermined point. On the other hand an Interpersonal-Relations-*Process* minded football player, would not run to a predetermined point to catch a pass, rather, would run side by side with the quarterback, passing the ball between themselves, seeing where they "naturally" went as the wind took them. This may be what Sabre missed during our Conversation. When we become able to incorporate such a process, we might think of ourselves as systems designers with a higher degree of enlightenment. We note too that it is very difficult to achieve this within a week at Fuschl, when there is an inevitable priority given to outcome (written report) which does not lead easily to presentation of the experience of such a process.

EVOLUTIONARY GUIDANCE SYSTEM

Our final landing point for this conversation was on key principles for an EGS. This was informed by the themes and processes that emerged from our discussions from the preparatory phase, and from our leap. The EGS is characterised by five principles:

1. Movement towards wholeness, in terms of both greater complexity and our markers generated under "I in We," and "We in World"
   WHOLENESS

2. Balance (Balance in terms of emphasis and in elements informing each other)
   Example:　- between the 4 perspectives of the OK model
   　　　　　　- between process orientation and goal orientation
   　　　　　　- within the themes we identified (e.g. things we would miss)
   　　　　　　- the domains of human endeavour as given in the Banathy EGS✳
   BALANCE

3. Preserving and increasing diversity of human and other organisms
   DIVERSITY

4. Enriching human experience
   RICHNESS

5. Increasing dispersion of benefits
   DISPERSION

6. Harmony among the principles above
   HARMONY

Harmony represented an integrative principle. For example, increasing diversity or differentiation, and a move to wholeness might seem contradictory. However, the two combined-diversity AND wholeness-represents the emergence of greater complexity, a new whole made up of a great variety of parts that are differentiated by function and structure and integrated by their inter-communication and mutually beneficial relations. Such emergence is perhaps fundamental to the evolutionary process the EGS is intended to guide. Thus a state of harmony achieved through the combination of the various principles is implied: diversity AND wholeness; richness (depth) AND dispersion (breadth); balance in attention and energy given to all (see graphic depiction below). And the desired evolutionary future is a move toward greater and higher levels of complexity.
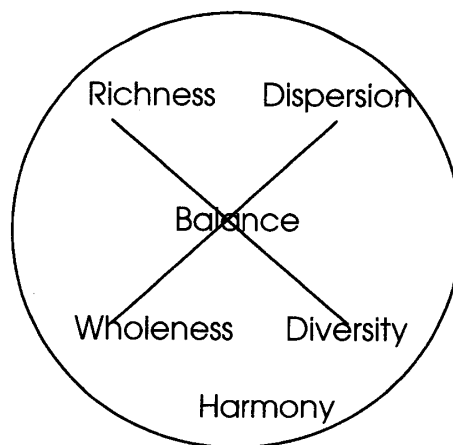

Figure 2

Our conversation gained from the wider discussion in the final plenary presentation. A view emerged that the dominant characteristic of these principles is "balance." This is balance both within a principle and balance between principles. For example, we would not wish or expect there to be complete equality in terms of dispersion of benefits. While doubtless impossible to achieve, such a position would remove incentive and challenge from individuals. We propose an "appropriate balance." It is clear that our current vocabulary is inadequate to describe the types of principles and processes that we have in mind. Gordon D reflected that there might be words in other languages and cultures that we could incorporate into the systems vocabulary. Charles Francois reminded us of the word "palaver." In Swahili culture it means an extended discussion

within a village community to reach agreement, i.e. very close to the ISI-style of conversation. We note that ethnic words like this when they are incorporated the English language often assume a pejorative meaning.

Hence as our conversation closed the issue of language had resurfaced. We have two language-linked themes for possible future work (1) to search for ethnic words to enrich our systems vocabulary, and (2) to develop a more complex language to describe attractors.

CONCLUSION

All members of Y3K team expressed satisfaction at what they had gained from the week. At the start of the conversation no one had a very clear idea at the direction that would be taken or what to expect as outcome. So there was a collective sense of surprise at the feeling of progress we shared. We found some very rich trigger questions to stimulate fundamental reflection on what it means to be and to remain human, and whether the human species has an immutable connection to the Planet Earth through its place in a complex "chain of being." Given the topic and the variety of perspectives that the team represented it was not surprising that we needed to take stock and review our conversation process from time to time.

We were able to begin visioning for 3000. We did this through consideration of what we would miss from our heritage and the present, if it were not still to be found, or be disappointed with if it were still not achieved, or have ambition for, by that future. Our conversation was not without its obstacles. We found it impossible to reach consensus on a set of assumptions to make for 3000 but we bypassed this difficulty by asking a different but related question. We also had problems with maintaining the conversation process to achieve optimum positive synergy. An exploration of an Okinagan Indian Nation model of group discussion gave us insights on possible underlying causes of the process problems we had experienced. These were shown to be linked to the variety in individual conversation/design style preferences - from those who prefer an (idealised) outcome approach to those who prefer a consensus seeking approach. Thus the OK model proved to be a powerful tool for thinking about conversation process and systems design.

The exploration of the Okinagan model coupled with the "I in We" and "We in the World" perspectives also gave fruitful insights towards six principles, which constitute an EGS, for the Year 3000, or similar long-term future. We also identified some markers in terms of desirable behaviour patterns for the Year 3000. These desirable behaviours provide a basis for considering future education and human development programs, which will be worthy of exploring in further conversations. A search for a richer systems vocabulary and language base was also identified as a direction for future work.

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APPENDIX 1: INPUT PAPER BY SABRE BRAHMS

The task of envisioning the world in the year 3000 is so broad; sustainability is only one possible line of inquiry toward defining the essential aspects of a future society. Because of my concerns for the fate of the planet, this topic, though limited in scope, provided me with an excellent foundation for my participation in the group.

I read several books on the topic and was quite influenced by one that viewed sustainability through the eyes of scholars in the Southern Hemisphere (Gomes, Kirana, Songabele, and Vora, 1992). The four authors, from different countries in Asia, Africa, and South America, were invited to Holland to assess Dutch society in terms of sustainability. The book made a clear point that the wealth of the Netherlands is dependent on the exploitation of other countries, mostly those in the Southern Hemisphere. Though this is not a new point, it was presented from a uniquely southern perspective, a point I had not understood so clearly as a northerner.

Interested in continuing my research that would further an understanding beyond my perspective as an American, I reviewed a book written by a group of Africans (Kalipeni and Zeleza, 1999), which assessed sustainability issues in African cities. The authors also intimately linked a lack of sustainability with poverty and the unequal distribution of wealth. Additionally, the authors suggested that in South Africa, for instance, a lack of sustainability in cities relates to the original design of the cities themselves. Architectural blueprints were originally drafted with a colonial/domination mind-set. Though the rhetoric and politics continue to change in South Africa, people remain living in cities that were built to keep blacks from white and to keep wealth in certain districts and out of others.

The above books successfully assessed some of the problems associated with sustainability but did not offer many suggestions for overcoming our current dilemma. I therefore proceeded in my inquiry to seek creative and hopefully radical solutions, radical because as Banathy (1996) explains so well, it will take nothing less than a complete redesign of our current social systems to affect positive change in our future. I found some very compelling possibilities in Benyus' (1997) writing:

> Nature runs on sunlight.
> Nature uses only the energy it needs.
> Nature fits form to function.
> Nature recycles everything.
> Nature rewards cooperation.
> Nature banks on diversity.
> Nature demands local expertise.
> Nature curbs excesses from within.
> Nature taps the power of limits.
> (Benyus, 1997, pg. 6)

Benyus first asserts that nature conducts itself in a sustainable manner. The author then suggests that we have much to learn from nature's example. The main premise is as follows: if we mimic nature's ways, we can learn to live sustainably as well. The book provides various examples of research from fields such as biology and structural engineering that is looking to nature to help answer human problems. I will review one case as an example.

Wes Jackson, a biologist and agriculturist, who lives in Kansas, the prairie region of the United States, has spent over twenty years researching indigenous prairie plant life in order to understand what makes it a sustainable plant community. Jackson is concerned with current planting practices. Each year, the earth is tilled, new seeds are sown, much water is administered, and large amounts of chemical fertilizers and pesticides are applied. This modern agricultural system uses too many resources (i.e., water and human energy), poisons the ground and water, and erodes thousands of pounds of topsoil each year.

Jackson's goal is to produce food for human consumption in a system modeled after the indigenous one found growing on the prairies of Kansas. He carefully observes and documents this perennial system, which renews itself from year to year. It does not need to be newly tilled or seeded, it needs no more water than rain provides, and its natural diversity protects it from insects, thus eliminating the need for pesticides. Fertilizer is provided through the decay of plants that produce. Jackson analyses his data and then applies it to experimental farms that run themselves like a prairie.

Benyus compares the current human tendency toward over-consumption with other natural systems. She describes that we conduct ourselves like a "Type I" system, which will be defined in

detail below. She suggests that we have the developmental task, as a society, to move to higher levels of sustainability, as is typified by "Type II" and "Type III" systems.

Type I systems use resources as quickly as they can, reproduce as much as possible, obliterate an environment, and move to the next opportunity. An example of such a system is a group of flour beetles that live in a barrel of flour. These beetles quickly consume the flour, reproduce, and move to the next bin. Another example of a Type I system is a group of weeds in a freshly tilled garden bed. They take advantage of the disturbed soil and make very quick use of nutrients. There is nothing wrong with this system type in connection with other more sustainable communities. The problem appears when Type I systems become more powerful than others.

Type II systems function as longer-term communities. They use energy more efficiently and produce fewer offspring, but store energy for times of limited resources. They successfully overcome Type I systems when resources are limited. They are still more vulnerable than Type III systems, but are more stable than Type I systems. An example of such a system is a field that is filled with perennial berry bushes and other woody seedlings. The plants in this system store energy in their roots, thus able to renew themselves after a drought. Where berry bushes grow, weeds are crowded-out.

Type III systems use patience as a strategy. They are the long-term dwellers on the earth and exist in relatively stable equilibrium. They use resources very carefully and produce very few offspring, but they protect these offspring well. An example of such a system is a redwood forest. Redwood parents shade their seedlings that can only tolerate less sun. Redwoods can survive blazing forest fires, long droughts, insect attacks; they live for hundreds of years.

To conclude, I would like to weave together the assessments in the beginning of this paper with the suggestions at the end. As is stated in Gomes, et al. (1992, pg. 106), "in a sense, you could say that the Western civilization and its northern peoples are living a hopeless case of drug addiction. No matter how clearly you communicate to them that their behaviour is destructive to themselves and others, they can not control it. They keep on taking more and more, unless they are forcefully restrained."

I agree with the above assessment but disagree with its hopelessness. Though we humans sometimes act like Type III systems, for instance, we are very protective of our young, we also act like Type I systems, particularly in our use of planetary resources; in reference to sustainability issues, we act more like the beetle in the flour bin. A major and radical ideological change is necessary in order to stop our current addictive behaviour toward consumption, but I would like to believe that this change is possible.

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APPENDIX 2: INPUT PAPER BY YOSHIHIDE HORIUCHI PAST (Y1K), PRESENT (Y2K), NEAR FUTURE (Y2010-50) AND FUTURE (Y3K), WHERE ARE WE GOING FROM WHERE, AND WHY?

I. INTRODUCTION

It is an intriguing challenge to think about Y3K. In order to help formulating a framework for Y3K project, here, I will try to make a quick time trip. Firstly, we will visit Y1K as a point in the past. We will try to see what happened 1000 years ago, as a hint to predict how Y3K will look like in Y2K. We review Horiuchi, Yoshitaka (1977). and, Horiuchi, Yoshitaka et al. (1981). Secondly, we will go to Y2010-50 as a time period in the near future. We will have a brief overview of the prediction of our near future by "What Science Will Know in 2050," *Scientific American*, December, 1999 issue (hereafter, SCA 2050) and also, the *Scientific American, Special Issue: Key Technologies for the 21st Century*, 1999 (hereafter, SCA 21). Thirdly, from the Y2050 prediction, I will make a wild, wild, wild guess on Y3K. Finally, we will look at Y2K. Ideally, we will have a kind of a stereo view of Y2K from the past and the future.

By the year 3000, it seems that people will no longer have to work for their basic survival, but they will live to think, create art, and enjoy life (judging from the future predictions in SCA 2050.) (All the points in this input paper are merely tentative propositions and open to discussion.)

II. A PAST: Y1K, WHAT DID WE DO RIGHT 1000 YEARS AGO FOR US TODAY?

In the past one thousand years, what changes have we made since Y1K, good or bad? What have

not changed since Y1K? What did Y1K people see as their future? What did Y1K people see as the contemporary world then? Was 1000 A.D. better than 900 A.D.? Did people in Y1K have a hope for a better world in 1100 A.D.? What was "in" in Y1K?

From an historical encyclopedia article someone gave me, title unknown:
"The tenth century was not one of Christendom's best. What with the Vikings in the north, the Muslims to the South and the Magyars in between, few communities escaped violation of some sort. For many, the idea that the world might end in the year 1000 may have seemed positively appealing. But things got better as the century wore on: Christendom's enemies struck less hard and less often, and life became a little easier, and considerably more secure. When the millennium finally arrived and nothing in particular happened, most people were content to solder on."

What They Did Right 1000 Years Ago for Us Today?
Well, we managed to survive the next 1000 years from Y1K to see Y2K!

What They Did Not Expect in Y1K:
1. Flying, telecommunications, computers, biotechnology, better hygiene and longer life. Global warming and pollution. (Industrial revolution, and its effects and side effects.)
2. Heliocentric (Copernican) theory, Newtonian physics, Einstein physics and development of natural sciences.
3. Vast advance in medicine.
4. Democratic view of people.
5. Earth becoming too small for humankind.
6. Anything else?

What Have Not Changed Much in the Past 1000 Years:
1. Human nature. We are still the same humankind as before and not becoming more mature people than 1000 years ago.
2. Nature of human societies. Still we have ups and downs, good news and bad news. It does not seem that our societies are closer to the utopia than 1000 years ago.
3. Our biological needs. We live longer than before, otherwise, our biological needs are the same as before. We still have to eat.
4. Anything else?

Medicine
"During the Middle Ages, ...medical knowledge was kept alive mainly by Arab and Jewish physicians. (s.v. "Medicine," *Concise Columbia Encyclopedia*, 2nd ed., 1989.)

Science
In philosophy, science, medicine, etc, the Islamic world offered many to the West and the rest of the world.

Education
It seems that the Arabic and the Jewish worlds had a lot to offer those days in science, education, medicine, philosophy, etc.　They were not only passing the Greek knowledge and knowledge from other parts of the world such as China, to the contemporary people then, but they also added many of their own discoveries and inventions.

Universities
There were seventeen Islamic universities in the Umayyad emirate in Spain.　European universities were founded in the 12th century on.

Religion/Philosophy
Most of the current major religions have already been born before 1000 A.D.
Scholasticism in the Christian Europe.

Politics
Contemporary democracy is yet to appear.

Art, Economy, Education, Military, etc.
Please fill in other areas such as, art, economy, education, military, etc.

I would like to find out what the people in the past (especially in Y1K) thought they should leave for the future generations.　Anybody knows something about it?

III. NEAR FUTURE: Y2010-50, PREDICTING THE NEXT 10-50 YEARS
(A Quick Summary of SCA 2050 and SCA 21)

1.　"The most important discoveries of the next 50 years are likely to be ones of which we cannot now even conceive.　The questions we do not yet have the wit to ask will be a growing preoccupation of science in the next 50 years.　That is what the record shows."　(Sir John Maddox, "The Unexpected Science to Come," SCA 2050, pp. 30-35)

2.　"What marvelous century the 1800 must have" been!　Only the most perceptive people appreciated, in 1899, that there were flaws in that position."　(Ibid.)

3.　"The discovery of a unified theory that describes nature at all energies will put us in a position to answer the deepest questions of cosmology: Did the expanding cloud of galaxies we call the big bang have a beginning at a definite time in the past?　Is our big bang just one episode in a much larger universe in which big and little bangs have been going on eternally?　If so, do what we call the constants of nature or even the laws of nature vary from one bang to another? (Steven Weinberg, "Unified Physics by 2050?" SCA 2050, pp. 36-43)

4. "The tension between scientific advances and the desire to return to a simple and more 'natural' lifestyle will probably intensify as genomics seeps into more and more of our daily lives." (Francis S. Collins and Karin G. Jegalian, "Deciphering the Code of Life." SCA 2050, pp. 50-55)

5. "Various projections suggest that the degree of (climate) change will become dramatic by the middle of the 21st century, exceeding anything seen in nature during the past 10,000 years.... "Climate change is happening now, and more change is certain. We can act to slow it down, and we can sensibly plan for it, but as present we are doing neither.... The real stumbling block is the long-term commitment to global climate monitoring." (Thomas R. Karl and Kevin E. Trenberth, "The Human Impact on Climate," SCA 2050, pp. 62-67)

6. "It is impossible to explore where we may be heading 50 years from now without looking back an equal number of years at the charged history of the nature/nurture controversy.... Most likely what will happen in the next millennium is that evolutionary approaches to human behaviour will become more and more sophisticated by explicitly taking cultural flexibility into account. Hence, the traditional either/or approach to learning and instinct will be replaced by a more integrated perspective. (Frans B. M. de Waal, "The End of Nature versus Nurture." SCA 2050, pp. 56-61)

7. The postponement of human aging raises difficult issues for public policy and personal ethics.... (I)n 2050 it may be a reality that gives headaches to Congress and high spirits to the middle-aged." (Michael R. Rose, "Can Human Aging Be Postponed?" SCA 2050, pp. 68-73)

8. "Properly educated, the ... robots will become quite formidable. In fact, I am sure that they will outperform us in any conceivable area of endeavor, intellectual or physical. Increasingly, such a development will lead to a fundamental restructuring of our society.... Ultimately... it is likely that our descendants will cease to work in the sense that we do now. They will probably occupy their days with a variety of social, recreational and artistic pursuits, not unlike today's comfortable retirees of the wealthy leisure class. (Hans Moravee, "Rise of the Robots," SCA 2050, pp. 86-93)

9. "The controversial genetic aspects of intelligence, violence and other complex traits will then be available for direct scrutiny--and, conceivably, manipulation. How much will that transform basis and practice of medicine, law and government? (John Rennie, "Introduction: The Uncertainties of Technological Innovation," SCA 21, pp. xi-xiii)

10. "The residents of less developed countries (in the future) exit life more quickly; consequently, their governments will be spared the harsh decisions about which citizens should be tossed from the collective lifeboat.... The very reductionism to the molecular level that is fueling the medical revolution also poses the greatest moral challenge we face. We need to decide to what extent we want to design our descendants. (Arthur Caplan, "Commentary: An

Improved Future? " SCA 21, pp. 77-79))

Caplan is discussing the impacts of medical advances on the people. We Y3K team can ask the same question about us, Y2K people, trying to "do systems design for our descendants." Can we decide what is good for them 1000 years away? If "Yes," what would that be? On the other hand, if we say "No," what does it mean?

IV. FUTURE: Y3K, MY WILD, WILD, WILD GUESS
(From the SCA 2050, SCA 21, movies "Contact," "Star Trek," etc.)

Physically, they will have a much longer average life and less health-related problems than we do now. Will we become "better being" such as Mr. Spoch and the Vulcans in "Star Trek?" I would doubt it. Spiritually, socially, and psychologically, Y3K people will probably still have similar characteristics including shortcomings as we do now.

Longer, Leisure-Class Life　People will have their older parts replaced with new artificial/ bio-technological parts for a longer life. Human aging and life expectancy will no longer be much of problems. In other words, they will not have to work for basic survival, but will be living to enjoy life spiritually, intellectually, physically, etc.

Robot Age　Humankind will be coexisting with robots, and there can be hybrids between them.

Global Warming is Long Gone　Long before Y3K, they will have overcome the Y2K-contemporary global-warming problem as we know now, after many confusions, sacrifices and redesigning. Current scientific estimate is that nature will absorb extra carbon dioxide caused by fossil-fuel burning in about three hundred years.

Better Society, a Utopia?　Regrettably, probably no. We will still have social problems, crimes, conflicts, etc.

Space Age　Humankind will be living on other planets in our solar system and other solar systems. They might be in contact with other intelligent life forms. Also, we might be talking with animals, plants, etc. with advanced IT (Information Technology). There can be many different universes each of which with its own unique logic and dimensions.

Pluralistic View　In addition to space exploration, we may find that there used to be several layers of highly advanced civilizations on the earth long before our time, perhaps tens of thousands years ago, and earlier. With advanced archaeology, perhaps we can learn a lot from such highly advanced civilizations in the past. In Y3K, we may have a truly pluralistic view of our contemporary civilization in terms of other intelligent life, and also in the past on Earth and elsewhere.

Art We will still be singing, dancing, drawing, playing performing arts, moved to cry with a wonderful novel, etc., let's hope.

In sum, in terms of space exploration, life expectancy, science, technology, and other natural sciences and physical aspects, humankind (in a much larger sense than as we know now) will be enjoying life beyond our imagination. Spiritually, psychologically, we will still be humans as we are now, except that we will have fewer problems caused by our physical conditions.

Morally and ethically, philosophically, where will they be: better, worse, different or about the same as we are now?

Socially, what kind of idealized image do we have for Y3K people? I would think this is the issue we hope to deal with at Fuschl 2000.

V. THE PRESENT: Y2K

What can we start doing new for the future generations now? What is good about our contemporary society? What needs to be changed? What can we leave for the future generations to decide upon? In our humble opinion of the primitive Y2K types, what is an ideal state of Y3K world?

What Can We Do Now for Y3K? An Analogy Might Be:
What can we suggest to primitive people in a remote island who do not know any modern technology yet? What can we suggest them NOT to change? Or, what can we learn from them?

Marketing
Current marketing principle ("Customer is always right" thinking) is business-oriented in the sense that customers are the targets of business activities. In order to balance global wellbeing and economic prosperity, we need to invent a new systemic business principle: interactive business principle of idealized future and idealized current business conditions.

Education
It seems that humans and robots will always develop their capabilities well beyond imagination of only a few years before. In such a case, education should ideally be open-minded, and the learners should have skills to adapt to the unexpected. With vastly advanced technologies in Y3K, people will not have to memorize many points. They can use computers for memories. Rather, they should learn creative thinking, information management, and systems design.

Ethics
Natural sciences will develop at an ever-faster pace. All the more, people should learn ethics.

Systems Sciences

What will come after systems sciences in Y3K?　Or, will they have metaphysically developed super systems sciences then?　What is needed for Y3K people to be equipped with?

VII. SUMMARY

The author's intention in this input paper is to provide a starting point for our Y3K Conversation.　Hopefully, we can come up with a focus of our Conversation at 2000 Fuschl. Personally, I tend to think it easier for Y3K team, if we have a sort of focusing point in our Y3K project.　(For example: (1) Design an ideal society for Y3K, and the way to go there from Y2K; or (2) Design a systems education/learning system for Y2K with a vision of Y3K ideal society; etc.)

	Core Value	Natural Sciences	Individual	Society
Y2K	_____	IT age		
Y2010	_____	Systems age		
Y2050	_____	Robot age	Longer life	Environmental crisis
Y3K	_____	Space age	Limitless life	

Trigger Questions:

Y2K for Y3K

What can we design for Y3K people?

What are good about our society?

What can we do good now with confidence for the future?

What needs to be changed in us?

Y1K for Y2K

What are the differences between people in Y1K and us in Y2K?

What improvements have we achieved?　What problems have we created or intensified?　What have not changed?

What did Y1K people try to leave for us?　Did they succeed?　Do we appreciate what they did for us?

Y1K for Y3K

What were the Y1K people's views of Y3K?

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APPENDIX 3: IINPUT PAPER BY GORDON ROWLAND
THE 20,000th WORD FOR LOVE

In November 1999, I participated in a conversation group on the topic of metaphors and their utility in social systems design at the International Systems Institute Asilomar Conversation on Social Systems Design. This was a second year of work in this group, so we quickly moved from a generative to a strategic mode. We spent nearly eight hours per day testing concepts and activities that we had come prepared to share. At one point in the week, we needed to take a break from the work on metaphors, and I suggested we take a stab at what my colleague Gordon Dyer and I had come to call the "Y3K problem." We had adapted the so-called Y2K problem to the sphere of social systems design and hoped to use this to explore a more distant future than we had previously considered. This we had promoted as the topic for a conversation group at the Fuschl event, where we were joined by Sabre Brahms, Lynn Jenks, and Yoshi Horiuchi.

At Asilomar, I posed what I imagined might be close to a trigger question we would start with at Fuschl: what do we wish for humanity 1000 years from now. As Gordon Dyer and I discussed earlier, the question takes one immediately away from present circumstances. When we think of 1000 years hence, looking at current trends, 20th century technology, and so on, is nearly useless. So I thought it might help us refresh our thinking.

I'll report my own response below, but in summary, for all of us this proved to be a very significant challenge. It was difficult to even know where to begin.

Just prior to Asilomar, I had been reviewing the manuscript of Bela Banathy's (in press) new book on evolution. At one point in the book, he makes a nice distinction between complicated (many things) and complexity (many things that are integrated). This was an "a-ha" moment for me. I'd been reading about complexity for years, but finally got it. So as I approached Y3K question, I was thinking about evolution, of the emergence of higher levels of complexity, and because of the metaphor work, about language. (We had reached a point where we could barely open our mouths without recognizing and examining the metaphors in our statements.) So I asked myself what might happen, and what would we wish to happen, in 1000 years with regards to the complexity of language, in retrospect, not a bad indicator of complexity in human systems.

I walked along the boardwalk on the Asilomar dunes, and I thought about the single word I use for sand. That is, I make no distinction between grains of one kind or another, nor among

individual or collective shapes. I wondered if this was because I so infrequently am near a beach, and I thought about people of the north and their many words for snow. I noted how language was shaped by context, and by purposeful attention and appreciation. I saw how "snow" was a clear example of complexity. That is, the people of the north have a more complex concept of snow than I do. They have integrated a greater number of distinctions under the single concept. So perhaps the greater number of distinctions we can meaningfully apply, and the more words we can use to represent these distinctions, the greater the complexity of our understanding and the greater our appreciation of subtleties. As Csikszentmihalyi (1993) says in *The Evolving Self*, greater differentiation among parts (parts with unique structures and functions) at the same time as greater integration (parts interrelated) leads to the emergence of higher levels of complexity.

So, accepting the premise that movement toward greater complexity is desirable and that we can and should consciously shape its direction (conscious evolution), I thought it might be a worthy goal for the next 1000 years to shape language toward great complexity in areas that are more desirable, and away from complexity in areas that are not. For example, we could see fewer words along the lines of violence, war, and hatred, perhaps because the phenomena or referents would themselves be decreased, while seeing many words develop to capture the subtleties of goodness—beauty, love, peace, and so on.

My first thought was that we could integrate 20 words that represent goodness and realized immediately that this was already possible. I added a zero, then realized that 200 was not a large leap at all. I added another zero, and thought about 2,000 for a while. It began to seem very small as I reflected on the entire history of our species, and on the 2,000 years of Christian counting. I added another zero, and for some reason it felt right.

When I reported this to the group, Bela Antal Banathy happened to be present and pointed out that 20,000 words actually represented a human adult's typical working vocabulary - a nice coincidence, that the current working vocabulary might, in 1000 years, be filled with the complexity of a single concept, love. (I don't know what the overarching concept would be called; "love" seems the best placeholder for now.)

Lastly, I asked myself a second question that I thought we were likely to pose in Fuschl: if we are able to converge on what is desirable for humanity in year 3,000, what actions can we take today that will guide us toward rather than away? I wondered if the conscious shaping of language would have a powerful influence. If language captures and represents what we find worthy of attention and appreciation, then can we—by shaping language—shift attitudes, behaviour, and ways of being in the world? If so, how? The best direction I can imagine at present is to in essence reverse the logic of historical dictionaries. What if, for example, we imagined an Oxford English Dictionary (and similar titles in other languages) in year 3000 that includes 20,000 distinct entries for "love." What synonyms and usages could we purposefully generate and promote over the next decades and centuries to bring this about? In what ways might the effort influence

human thinking and action?

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APPPENDIX 4:
THINGS THAT WE WOULD MISS IF NOT PRESENT IN THE YEAR 3000

family structure and familial relationships
friendship and love
laughter
collections of books/archives/history
expressions of past cultures (libraries art galleries etc)
challenge of understanding complexity and acting on it
surprise
living beings
sense of fairness
notion of family
healthy natural world
interacting with other people, learning together, community
love between living beings and things
navigation system
scientific research but...
privacy
seasons, water, sky, rainbows, flowers
beauty
education systems but...
pets
friendship
laughter and joy
respect
discipline
opportunities for sport/fun
sense of responsibility towards others
variety and diversity
passionate endeavour
rituals to celebrate

spirituality but...
genius
music, sculpture, dance, painting, plays, movies
warmth (sun)
language - written and spoken
social support systems but...
conversation
recorded history and stories
education system for children
variety plants/animals
systems design
beer, chocolate, strawberries, bread and women
judicial system
police and fire-fighting systems
mother's role
tools and technology but...
participatory governance

Note: the items with "but... " would be missed but we would expect to see considerable changes within their products and their processes linked to a fairer world

APPENDIX 5: CHARACTERISTICS OF THE IDEAL YEAR 3000 (REFERENCE: OKINAGAN MODEL AS FRAMEWORK; I/WE/WORLD AS SYSTEM LEVELS)

I

Visionary: is able to dream (because one believes that change is possible); sees through complexity in order to find or generate the seed (parti) for the new

Traditionalist: appreciates ritual; develops and nurtures habits for the good

Interpersonal relations: is centered (no hidden agendas or phoneyness; is self-confident); is present (compassionate, affectionate, empathic, generous, good at listening)

Action: courageous; physically, intellectually, spiritually fit

WE

Visionary: collaboratively design; remain open to ideas; diverge

Traditionalist: join together in ritual/celebration; preserve information regarding culture

Interpersonal relations: engage in dialogue and conversation; hold and express mutual respect

Action: act as group on collective will; accept collective responsibility (as opposed to blaming, disavowing)

I in WE
Visionary: share dreams; invite others to share in dreaming; show paths and help others do the same

Traditionalist: foster respect for rituals; act as a role model (habitually preserving the good)

Interpersonal relations: see self as individual in group; be present in company

Action: take the lead; lead by example (and don't ask anyone to do anything you would not do yourself)

I in WORLD
Visionary: open up to, listen to the world (consciously and unconsciously; using all senses); appreciate the complexity of the world (how everything relates to everything)

Traditionalist: engage in ritual to connect to the natural world; nurture habits that benefit (do no harm to) the world

Interpersonal relations: see self in and connected to the world; listen to what the world says regarding potential action

Action: act with respect for the interconnections of self and world; take, accept as a gift, and use only what you need

WE in WORLD
Visionary: design with (as opposed to upon) nature; listen to nature for ideas (biomimicry); construct meaning through co-creative process (human-human, human-artificial world-natural world)

Traditionalist: celebrate nature (e.g., natural cycles); preserve diversity; seek and negotiate understanding through observing and sharing

Interpersonal relations: listen and speak to nature; recognize and appreciate how little we know; honor and nurture relations among social and natural worlds

Action: act with respect for the natural world; accept responsibility for cultural evolution and consciously co-evolve

I in WE in WORLD

Visionary: dream with openness, understanding, appreciation, and connection to self, collective, and world

Traditionalist: foster respect for, and develop and nurture habits that celebrate and preserve, what is good in the collective and world

Interpersonal relations: be present as an individual who respects, and who through dialogue/conversation, nurtures relationships with others and the natural world

Action: lead through responsible action and appreciation for connections