

Addenda to My Conversation With Harold Channer

 Posted on 17 December 2014 by [cjf](#)

[Harold Channer](#) invited me to the studios of [MNN \(Manhattan Neighborhood Network\)](#) in New York City to record two one-hour editions of the TV program “Conversations with Harold Hudson Channer” on Tuesday the 25th of November, 2014. Since few things I write or speak come out fully baked, I thought I’d add a few additional thoughts to clarify, improve, or correct some of my comments. Since I value discussion, I sprinkled my remarks with many questions which I hope will elicit your feedback in the comments.



object 1

BFI Challenge Prize

As much as I love [Kate Orff](#)’s work and her [Living Breakwaters](#) project, I regret using the word “best” in the context of the BFI ([Buckminster Fuller Institute](#)) Challenge Prize. I was also deeply moved by previous winners including [John Todd’s Challenge of Appalachia](#), [Allan Savory’s Operation Hope](#), [Blue Ventures](#), and [The Living Building Challenge](#): each of them ranks as “best” in my eyes. Moreover, the “best” aspect of the [BFI Challenge](#) is the large number of inspiring runners-up and also-rans who give me hope that the creativity of Humanity will overcome the profound challenges our civilization faces.

My mistake was lapsing into the conditioned reflexes of our special-case American culture with its fixation on casually dubbing a “best” or “favorite”: a cult of exceptionalism. Of course, we are all extraordinary! Exceptionalism and its undue attention on the so-called “best” ignores the nuances of the greatness and weakness inherent in each of our efforts and can foster distorting prejudices.

Are you working to curb your overuse of favoritism and exceptionalism?

Bucky’s World Game Ethic

The Bucky quote that Harold and I struggled to remember is

to make the world work for 100% of humanity in the shortest possible time, with spontaneous cooperation and without ecological damage or disadvantage of anyone. —
R. Buckminster Fuller

Synergetics

The [Synergetics Collaborative](#) is a 501(c)(3) non-profit organization dedicated to discuss and build Synergetics as a subject through our scientific and educational programs. We are working to understand, develop, and consummate Bucky's vision for a "science of synergy".

The exploration instigated by my reading of *Synergetics* inspired me to think more comprehensively and more synergetically. However, *Synergetics* isn't a how-to manual: to a large extent it is an exploration of fascinating models that together with hard work can lead to new ways of thinking. When viewed with curiosity and attention to its integrated significance, *Synergetics* is a tantalizing, not-quite-complete glimpse of the dynamical shape of dynamical thinking: a tool to strengthen one's faculties for Comprehensive Anticipatory Design Science.

I think one of the most important aspects of Synergetics is its attention to modelability: "Comprehension of conceptual mathematics and the return to modelability in general are among the most critical factors governing humanity's epochal transition from bumblebee-like self's honey-seeking preoccupation into the realistic prospect of a spontaneously coordinate planetary society." ([Synergetics 216.03](#)).

Some Resources on Synergetics:

- [My essay synthesizing Scott E. Page's "Model Thinking" with Synergetics to suggest a new kind of science](#)
- [My essay "Reading Synergetics: Some Tips" which recommends building the models and more](#)
- [The Synergetics Collaborative YouTube Channel](#)
- [The On-Line Edition of Synergetics](#)

Ignorance and Unlearning

Inspired by [Stuart Firestein](#), I see ignorance as a tuning in to the negative space, the questions, that structure knowledge. As Firestein notes, the facts are one study away from becoming reframed, emended, superseded, or rejected. The questions on the other hand organize our knowledge. So although facts and knowledge are important, it is the ignorance, the questions, that give us our framework for understanding. Bucky understood this with his great clarion call "[Dare to be naïve](#)" to express the pivotal importance of saying "I don't know" and "could it be?" which are prerequisite to asking the right questions.

Unlearning is the process of integrating new knowledge and questions with facts already known. We learn that items previously thought significant are side-shows. Previously overlooked questions and ideas can profoundly reorient our thinking. Ignorance spearheads the unlearning and gives us the kind of deeper understanding needed to design better solutions.

My comment on unlearning some of our most cherished assumptions is inspired, in part, by this wonderful quote by mathematician Morris Kline "The lesson of history is that our firmest

convictions are not to be asserted dogmatically; in fact they should be most suspect; they mark not our conquests but our limitations and our bounds.”

Do you covet ignorance and unlearning? Should you?

Both/Neither

To me the expression “both/neither” suggests that at least in certain situations either/or binary logic (the so-called [law of excluded middle](#)) can be erroneous. Especially for concepts that are infused with ambiguity, contradiction and paradox. So tension/compression, ignorance/knowledge, conservative/liberal are all both/neither concepts: they always and only coexist, we can’t highlight one without unfairly slighting the other. Both are vital, yet neither can capture the synergetic whole of reality. I was awakened to the importance of ambiguity, contradiction and paradox from William Byers’ interesting book *How Mathematicians Think: Using Ambiguity, Contradiction, and Paradox to Create Mathematics*.

Do you fear paradox and contradiction? Will you dare to explore the world of the Both/Neither?

Transcending Scarcity as Ontological Reality

I agree with Fuller and Channer that humanity now has the wherewithal to transcend scarcity as ontological reality. Although we live on a finite planet with finite time, energy, and resources, we now know enough that for most purposes we can all realize lives of greater comfort and capability than even the great Monarchs of 100 years ago.

I felt Harold’s emphasis sounded too much like talking to the world and collided with the values in the Bucky quote “You can’t better the world by simply talking to it. Philosophy to be effective must be mechanically applied.” To practically and mechanically develop this realization, I would suggest that each of us needs to understand the technological basis of our civilization and develop our design faculty to realize the abundance Fuller posited.

One way to realize your abundance is to work to better understand the complex of subjects that might be impeding your design initiatives. I prepared a guide outlining tools for such self-educational efforts in [my slides for “Education Automation Now and in the Future”](#). These and other tools to learn how the world works can help you more effectively exercise your design faculty to achieve your rightful abundance in service to the [World Game Ethic](#) (in support of 100% of humanity and all that).

Of course, it isn’t easy and personally I have not yet fully transcended the scarcities that frustrate my ideas for better serving 100% of humanity. Have you?

Are the basic resources available for each of us to transcend scarcity as Bucky and Harold promise? Do you think our design capability can transcend scarcity? Can individuals practically apply this realization? How can we do so? Are you still suffering from the brutality of scarcities? What will it take to realize your abundance?

Qualitative Transformation of Civilization

In many of Bucky’s communications, he emphasized the idea of “utopia or oblivion” with humanity facing an imminent “final exam”. Bucky sometimes mentioned specific dates such as [1972 \(see page 5 of the The World Design Science Decade Phase I Document 2: The Design Initiative\)](#) as

representing the moment when the accelerating acceleration of trends reaches a critical point of qualitative transformation. I suggest in the video that Bucky really meant this in a timeless manner: so that each generation faces a “final exam” instead of a literal reading with a specific date followed, presumably, by utopia.

I think the reason Bucky’s communications sometimes focus on the specificity of “now” as a moment of transformation is to impart an urgent sense of responsibility to his audience. [Dennis Dreher](#) impressed this idea upon me at a [Synergetics Collaborative](#) event. I think Bucky’s point in making such dramatic statements is to confer a new and profound sense of responsibility upon Humanity. In my reading of Bucky, I weigh the ideas in these two Bucky quotes as more significant than the special-case, date-focused transformation passages:

- “We humans are manifestly here for problem-solving and, if we are any good at problem-solving, we don’t come to utopia, we come to more difficult problems to solve.”
- “My own working assumption [is] we ... are here for all the local-Universe information-harvesting and cosmic-principle-discovering, objective tool-inventing, and local-environment-controlling as local Universe problem-solvers in support of the integrity of eternally regenerative Universe.”

I am inspired by this profound new kind of responsibility. Could it be that our responsibility to steward civilization, our home planet, Earth, our solar system, our galaxy and Universe itself is only just beginning? Stewarding Universe could be Humanity’s greatest project and greatest destiny: unless some generation abrogates their responsibility and fails its final exam, I expect we will face greater and greater stewardship challenges ... eternally. I explore this idea further in [this short science fantasy story about the purpose of humans in Universe](#).

So I agree with Harold that humanity is undergoing a profound qualitative transformation. But I see it as a transformation of dawning awareness of our comprehensive responsibility to steward Humanity aboard SpaceShip Earth and beyond. Indeed some of the challenges that future generations will face will probably make today’s problems look like elementary training exercises (Survivor-lite!). I embrace the challenge. All hands on deck!

Do you find my interpretation of Bucky’s vision to be apt or erroneous? Terrifying or enthralling? How are you going to help your generation pass its final exam?



object 2

Comprehensive Anticipatory Design Science

In the video I mentioned [the excellent free on-line course “Design” with Kart T. Ulrich of the University of Pennsylvania](#), [the Stanford D School](#), and work in [Design Thinking](#) as three recent initiatives in design that should be compared and contrasted with Buckminster Fuller’s vision of Design Science, shorthand for Comprehensive Anticipatory Design Science.

Perhaps these four important elements of Bucky’s work may serve as a foundation for Design Science. First, [Bucky’s World Game Ethic](#) as an imperative for design is unique and may be one of his greatest legacies.

Second, Bucky’s invitation “dare to be naïve” emphasizes the importance of searching for the right questions, mindfulness to [ignorance and unlearning](#), and a mistake-making mystique. Thereby the designer acquires access to the prodigious creativity in the [a priori mystery](#) of Universe.

Third, [Synergetics](#) as Bucky’s vision for a science for thinking comprehensively about how Nature works can help us design more comprehensively and considerately and so better meet the aspirations of the World Game Ethic in our design work. Synergetics, especially when buttressed with the vision from Model Thinking of using multiple models to enrich our understanding, can be a significant tool for design.

Finally, Bucky’s example of making visionary artifacts to help imagine and prototype ideas for better meeting our needs is a powerful way to expand the design frontier through STEAM (Science, Technology, Engineering, The Arts, and Mathematics).

This scientist-artist vision for Design Science may be better appreciated by these Bucky quotes:

- “It is not for me to change you. The question is, how can I be of service to you without diminishing your degrees of freedom?”
- “You can’t better the world by simply talking to it. Philosophy to be effective must be mechanically applied.”
- “You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete.”

- “A designer is an emerging synthesis of artist, inventor, mechanic, objective economist and evolutionary strategist.”

Are these the main elements of Design Science? What inspiration and vision do you derive from Bucky for the practice and development of Design Science? Which of these ideas are unique to Design Science? What great ideas from other design traditions ought Design Science incorporate into its conceptuality?

Resources on Design Science:

- [The Biennial Design Science Symposium at RISD](#)
- [BFI Resources for Design Science](#)
- [“Design Science: A Framework for Change” by Michael Ben-Eli](#)
- [“Comprehensive Anticipatory Design Science An Introduction” by Patrick G. Salsbury](#)

Socio-Political-Economics

In the video I paraphrased this Bucky quip “I learned very early and painfully that you have to decide at the outset whether you are trying to make money or to make sense, as they are mutually exclusive.” I think Bucky meant to critique how money-and-profit driven businesses often neglect important sense-making work due to an excessive concern for return on investment.

I worry that our overly profit-driven business culture is underinvesting in the vital initiatives necessary to prepare the next generation to pass its final exam because the return on investment is too distant and too uncertain. Is there money-making potential in protecting civilization from asteroid impacts? Can profit drive initiatives to restore damaged parts of our ecology to mitigate dangerous changes in the global nitrogen, water, and carbon/oxygen cycles? Probably not. Profit is dangerously myopic. I think that is the point of the Bucky quip I cited.

In the video I used Bucky’s quip to suggest we might refactor our economy without money. I don’t think that was Bucky’s point. Moreover, I don’t think it would work. I almost succeeded in making that point by explaining [David Graeber’s](#) perspective on debt: the moralities of economics bind us together as a community. That is, money, at least in the form of debt, is a deeply human form of social ethics. In addition, human beings are skilled at thinking in terms of games with their imposed rules ([gamification is now a fast growing new field of study](#)). Therefore, it is probably necessary to include money-honey gaming in designs for any improved socio-political-economic system. Do you think money is important for our socio-political-economic systems?

Although Bucky was usually assiduously apolitical, one of his last books “GRUNCH” was a scathing work on our socio-political-economic systems. These systems may require the attention of design scientists. What do you think? Do you think Design Science should stay assiduously apolitical and restrict ourselves to only work on artifacts? Is there a limited way in which Design Science should work toward improving our socio-political-economic systems? How? And how not?

How does an economy create jobs?

Harold emphasized the loss of jobs as a consequence of the forces of social evolution that Bucky called [ephemeralization](#) (“doing more with less”). I countered with a question about how jobs are created.

In [W. Brian Arthur's](#) book *The Nature of Technology: What it is and how it evolves*, he suggests that ever-evolving technology always creates new needs and opportunities in an economy. It could be that the amount of opportunity created by ephemeralization exceeds the job losses which [Schumpeter](#) called “gales of creative destruction”. Arthur explains that the very same new technological developments that incur this destruction also deliver “winds of opportunity creation”. Unfortunately, the skills to identify and develop these opportunities are often quite different from the skills needed in displaced industries. So Harold's points about the problem of labor are a very significant problem. Arthur's book provides deep insights on the nature and evolution of technology including ephemeralization (though he does not use Bucky's word).

Finally, I will note that our tendency to emphasize the negative (job losses) instead of the opportunity in this discussion parallels our discussion on the value of openness in our culture and the discussion on the media (see below). Could it be that we over-emphasize the losses without fully appreciating the “winds of opportunity creation” that Arthur identifies?

Openness

In the video, I referenced [James Boyle's argument about our bias against openness which is eloquently presented in this short 17 minute video](#).

I also referenced [Johanna Blakley's 15 minute TED Talk which argues that because the fashion industry has almost no ownership rights on its designs, it is more creative and profitable than industries encumbered by intellectual property](#) (she is at the University of Southern California). Another great Bucky quote applies “ownership is onerous”.

The exquisite video series “Everything is a Remix” by Kirby Ferguson explains the mechanics of openness and sharing in creativity: [Part 1](#), [Part 2](#), [Part 3](#), [Part 4](#), and [Embrace The Remix, his 10 minute TED Talk](#).

Finally, here are two short videos on the subject: [Nina Paley's 3 minute video “All Creative Work Is Derivative”](#) and [Jason Silva's exhilarating 3 minute video “Radical Openness”](#).

How do you understand the value of openness? And sharing? Are we biased against openness? Is the [free culture movement](#) and the [free software movement](#) a harbinger for a more open future? Will sharing, freedom, and openness empower our civilization to new heights? Or is it a mistaken pipe dream?

The Media

Yikes, I lapsed into the common but trite conditioned reflex that the media is too negative.

It is important to remind people of the need to be skeptical of media reports especially when they highlight negative news. Negative news always travels fast and the media reach all of us quickly and we can become transfixed on the negative. Another danger from the media is the ability to spread social contagions of all types. So we need to foster a healthy skepticism of all ideas but especially those coming from the media.

It would be helpful if our friends in the media would more diligently engage skeptical voices to help temper the social contagions that race through our culture. However, as Harold points out the media is also a powerful force of good. When those social contagions are movements of major positive reorientation of humanity's consciousness, it is the media who help us realign so rapidly.

We also need to recognize that the media is an important part of the large scale conversation that steers our civilization. It is important to recognize biases toward negativity (which the media often overly accentuate, but do not cause). It is important to keep a balanced perspective on this powerful force in our society.

Other Bucky-Related Harold Channer Interviews

If you are interested in watching more Harold Channer interviews that discuss Bucky and his work, I can recommend these:

- [Buckminster Fuller 1974](#)
- [Michael Ben-Eli 05-08-14](#)
- [Christopher Zelov 05-29-13](#)
- [Michael Ben-Eli 05-24-12](#)
- [Allegra Fuller Snyder & Elizabeth Thompson 06-04-12](#)
- [David McConville 12-16-11](#)
- [Allegra Fuller Snyder & Jamie Snyder 07-10-08](#)
- [Michael Ben-Eli 10-04-07](#)
- [Michael Ben-Eli 02-20-07](#)
- [Thomas T.K. Zung 11-24-05](#)
- [Christopher Zelov Aug 1994](#)
- [Jay Baldwin Nov 1994](#)

Let me know what you think of my conversation with Harold or these addenda. I'd love to see your perspective on any of the ideas above. I look forward to continuing the conversation!

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Author: [cjf](#)



- Full Name: **CJ Fearnley**
- Web: <http://www.CJFearnley.com>

[Conversation with Harold Channer](#) (2 comments)

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10 Responses to “Addenda to My Conversation With Harold Channer”

1. [dick fischbeck](#) on 17 December 2014 at 6:28 pm

“Although Bucky was usually assiduously apolitical, one of his last books “GRUNCH” was a scathing work on our socio-political-economic systems. These systems may require the attention of design scientists. What do you think?”



I think Bucky is explaining in GRUNCH why he is apolitical.

[Reply](#)

- [cjf](#) on 18 December 2014 at 12:47 am

Dick, In the sense of influencing people (<https://en.wikipedia.org/wiki/Politics>) or making decisions (the definition of politics that I propose in the Part 2 video), I think Bucky was very political. By proposing electronic voting systems and computer decision-making, he is plainly engaging in socio-political-economic discussions.

I do not think it is possible for anyone living in a society with other people to be “purely” apolitical.



However, Bucky strongly believed that the individual ought to only offer options to others: “It is not for me to change you. The question is, how can I be of service to you without diminishing your degrees of freedom?” In this sense Bucky was very apolitical: he assiduously maintained a servant role of always and only presenting options to others. But even this staunchly apolitical stance is political: it is a way of making decisions and influencing others.

Of course, Bucky absolutely abhorred coercive politics. In that sense he was apolitical and admirably so!

[Reply](#)

- [dick fischbeck](#) on 18 December 2014 at 8:29 pm



CJ – I am sure I’ve disagreed with you on whether or not Bucky was political over the years. Like how is encouraging computer decision making a political activity? Sounds like hard science to me. If decision making is the definition of politics, that covers everything. If new-forming the environment is political, again, what or who is apolitical. No one. Not buying it! To me, apolitical means (from your link) not engaging in “...— organized control over a

human community, particularly a state.”

Some cut and paste:

“... there is nothing in politics except knowing how to do without or taking it from one and giving it to the other. That is what the sociologists and politicians attempt to do. They still say it has to be just me or you (Approaching the Benign Environment).”

“Fuller would like to eliminate politics along with the political state—or else reduce politics to housekeeping functions along the lines of the stewardess who warns us to fasten our seat-belts. We must turn our attention to reforming the environment, he says over and over again, not to reforming human nature. Mankind’s greatest benefactors, “the Leonardo-types,” have been bent on transforming their surroundings rather than transforming people. There is only one revolution which will be welcome to all peoples, the Design Science Revolution which will guarantee enough of everything for everybody. Fuller believes we have already, often unconsciously, made a good start in that direction.”

“The fact is that now — for the first time in the history of man, for the last ten years, all the political theories and all the concepts of political functions-in any other than secondary roles as housekeeping organizations-are completely obsolete. All of them were developed on the you-or-me basis. This whole realization that mankind can and may be comprehensively successful is startling.”

[Reply](#)

- [dick fischbeck](#) on 18 December 2014 at 8:35 pm



“If a player resorts to political means for the realization of his strategy, he may be forced ultimately to use the war-wagering equipment with which all national political systems maintain their sovereign power. If a player fires a gun—that is, if he resorts to warfare, large or small—he loses and must fall out of the game.”

[Reply](#)

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2. [dick fischbeck](#) on 17 December 2014 at 7:00 pm



“Harold emphasized the loss of jobs as a consequence of the forces of social evolution that Bucky called ephemeralization (“doing more with less”). I countered with a question about how jobs are created.”

CJ. Luddism aside, I loved your statement, “I don’t know how you create labor. I don’t understand that at all.”

Chandler congratulates you on a 'well led life.'

"I think people overlook just how powerful it is to have 7 billion people collaborating to solve the global problems.

Your main point throughout is open source and sharing. Radical ideas unfortunately!

[Reply](#)

- [cjf](#) on 18 December 2014 at 12:26 am

Dick, I'm glad you liked some of my comments.

My comment about labor was an attempt to steer the conversation to more fundamental economic issues. I felt uncomfortable with the abstract economics discussion because it was not clear to me how the pieces hold together. In my addenda above (specifically here <https://blog.cjfearnley.com/2014/12/17/addenda-to-my-conversation-with-harold-channer/#CreateJobs>), I outline W. Brian Arthur's theory about how the evolution of technology creates "winds of opportunity". So I can give a tentative answer to my question: labor is created through entrepreneurial activity. That is, through finding and developing opportunities to meet human needs by further improvements in technology. If that is true, then we need to better understand how to find and meet human needs and then value them into institutional solutions. Not an easy task. Moreover, these are not skillsets taught in most High Schools. Yet entrepreneurship may be the antidote to growing jobs after ephemeralization kills old jobs off. Perhaps, we need better technology to foster entrepreneurship?



[Reply](#)

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3. [Lynn](#) on 17 December 2014 at 7:41 pm

Well, regarding the importance of ignorance, this is one reason that I think a liberal education is a very good idea. This way, the number of things that one knows one is ignorant of expands. If you just train more or less strictly in, say, pharmacy, or computer programming, or clinical psychology, there are a lot of unknown unknowns lurking out there for you.



[Reply](#)

- [cjf](#) on 18 December 2014 at 12:48 pm

Lynn, Yes, there is a strong connection between "ignorance" and a liberal education.



I like Bucky's word "comprehensivist" over "liberally educated". Though they roughly mean the same thing.

I like the audacious unachievability of comprehensivity: is it ever possible

to be comprehensive? I think not. One is always aware of the next several subjects to study and integrate with prior learning! However, through dedicated effort one can keep enriching one's thinking by circling through the knowledge of the liberal arts to paraphrase Giuseppe Mazzotta's description of Dante's great "Commedia" (see my essay <https://blog.cjfearnley.com/2012/04/29/dantes-great-commedia-or-poetry-as-a-way-of-knowing/>). For me this has made my ignorance palpably present. That's a virtue, of course!

[Reply](#)

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4. **Lynn** on 18 December 2014 at 8:30 am

Regarding the following:

"I worry that our overly profit-driven business culture is underinvesting in the vital initiatives necessary to prepare the next generation to pass its final exam because the return on investment is too distant and too uncertain."



Under the influence of *i.a.* the book *Too Smart for Our Own Good: The Ecological Predicament of Humankind*, I foresee that deleterious behavior that I consider somehow innate to the human species will continue essentially unchecked throughout the 21st century until, one way or another, it is resolved.

[Reply](#)

5. [jeannie moberly](#) on 18 December 2014 at 6:00 pm

On the "Qualitative Transformation of Civilization" I do find these times to be both terrifying and enthralling. Since we don't know the outcomes of today's actions I like to live "as if" our actions are meaningful and we can design our future. Human power should be more of our energy equation.



Well done CJ and Harold, I was on the edge of my seat....

[Reply](#)

- 6.