

# Rethinking Our Relationship with Global Change

## An Interview with Stewart Brand

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### Introduction

*I recently mentioned to a group of PhD students in my class that I was going to be publishing an interview with Stewart Brand. I am guessing that they range in age from early 30s to 50ish. Only the older student had heard of Stewart Brand. So I mentioned it again in another PhD seminar—same response. And many of these students live in the San Francisco Bay Area!*

*Why am I surprised? Well, in the late 1960s and 1970s the Whole Earth Catalog and Stewart Brand were well known to most of the people I knew. In fact, I had attributed to the Whole Earth Catalog a significant role in causing many young people to leave the city and move into rural environments while seeking a more “natural” holistic lifestyle.*

*Then, Stewart Brand’s role in creating the Co-Evolution Quarterly and his frequent writings in it might have meant something to this “younger generation” (1974-1985), but no. Or Brand’s presentation at the TED conference in 2009 (<http://www.youtube.com/watch?v=TuxwiVFgghE>) might have brought him to the attention of these world-aware searchers for meaning, but still no. Perhaps his most recent book, *Whole Earth Discipline*, Penguin, 2009, 2010)—no again.*

*The latter is remarkable because Brand is speaking to many of the core values of the green movement regarding what is required to save the species, if not the planet, from extinction or very severe reduction (the loss of billions of lives). Others of his book fared no better: *Space Colonies* (1977), *The Media Lab: Inventing the Future at M. I. T.* (1988), *How Buildings Learn* (1995), *The Clock of the Long Now* (1999).*

*In the winter of 1978, Brand wrote in the Co-Evolution Quarterly, after an event of many 5-minute speeches,*

I've been wanting to see what I'd do at the end of all this, other than be glad that it was coming down to a chance to go and take a bath. The words that kept coming back to me through the sixty-some speakers we've had, was some kind of dialogue that goes on between grasp and reach. Ten years ago we reached for something with the *Whole Earth Catalog*. A lot of us reached for various things—some to stop the war in Vietnam, some to save various species, some to find a way to stay high. And we have spent ten years refining our activities so that our grasp could catch up with that reach. That's part of this strange transition that many of us have made from something like an outlaw to something like a citizen.

I think we're different citizens and more valuable citizens for having been outlaws, and I think we're, maybe more forgiving toward the present and hopefully oncoming set of outlaws. I hope that there'll always be that dialogue.

But for ourselves each time that the grasp catches up with the reach and we come to do something rather well—well enough that it's as if we could do it in our sleep—then probably we are doing it in our sleep. You might think about that grasp that you've got now, the refinement, the citizen quality of your behavior. I mean, I'm having to notice that I'm sitting on boards now. They're wonderful boards: Bread and Roses, Magic Theater, Neighborhood Foundation, in Sacramento I wear a three-piece suit.

I start to look at the boredom, the tedium that comes with doing what you've done well for a very long time exclusively. I think this is the kind of thing that often overtakes public figures, and we...often force that on them, by insisting that Ralph Nader be strictly Ralph Nader. I'd love to see Ralph Nader trash a car in some fundamental sense. All of us have this corner that we get into by being public or by being good at what we're doing.

*This is one of the qualities of a thinker and a doer like Stewart Brand. He has not for very long let the boredom overtake him before he has moved on, expanded his activities, created a role for himself to bridge different domains of world energy and power. In no way has this been more clearly demonstrated in the spiral of his activities from the libertarianism of the Whole Earth Catalog to the active community involvement and advocacy for coordinated world efforts to save the species.*

*In 1968, in the "Purpose" of the Whole Earth Catalog, Brand wrote: "We are as gods and might as well get good at it." Here it is—2011—and he is encouraging us to step more fully into our godlike role to create a generative future for the human race. We are challenged by the fact that the "engineering/scientific" mentality that has dominated Western (particularly American and US-influenced) cultures has been the expert, the engineer, the scientist. A key question is, how can we step more confidently into that godlike role and not end up with disastrous results. Here is what Stewart Brand has to say on the subject, in our conversation concluded before the Fukushima nuclear disaster.*

*Russ: I thought about starting this interview by saying, "I'm talking to a man who needs no introduction," but then I remembered that not everyone grew up in the sixties and spent their time in Berkeley like I did. And not everyone learned about the Portola Institute, which I thought was a brilliant piece of work, especially with the motto, "Fail Young,"—I've taught about that in classes for many years. Then there is all of the things that you've done with the Whole Earth Catalog. There are the adventures you've had in the dynamic social and cultural climate of the San Francisco Bay Area—right down to the famous Otis Redding song, "Dock of the Bay," composed on either your house or office boat in Sausalito on San Francisco Bay. There are so many people who probably don't know so many things about you, yet you are still making an incredible mark on the world. You*

*recently published a Whole Earth Discipline which is something I'd like to learn more about.*

*I did my PhD at Berkeley in Political Science. When I asked you for this interview, I indicated that I was interested in how you think. On page 227 of your book, you reference another Berkeley political scientist, Philip Tetlock, who said, "How you think matters more than what you think." And you went on to talk about foxes and hedgehogs—I think that was the metaphor he used. Yet it seems to me that you're also saying that what you think and how you think about it matters an awful lot. You have indicated that making mistakes, learning from your mistakes, and changing your mind is an incredible part of how you think. Do I have that right?*

Stewart: Well, you mentioned foxes, and scientists are trained to be foxes. They are trained to be persuaded by better evidence or a more persuasive model as more of a sense of what's really going on in the world. I think one of the debates that's happening within the environmental movement across the board—and not just with me—is that there is a fair amount of ideology that is rather hedgehog-like; there will be a hedgehog-like view that basically says, "What nature does is always good and what people do is always bad." There are exceptions to that, but that's the basic rule. So that's just useless. It's kind of comforting and makes one feel good when out hiking and things like that, but there are plenty of reasons to feel good when out hiking. However, it's really useless in terms of political action, knowing what kind of things to try to work on. In thinking about environmental problems, there are design problems that can be fixed rather than tragedies that can only be deplored. So the fox versus hedgehog contrast is one I brought up in this environmental book because I'd like to see a more foxy approach by Greens.

Russ: *It seems to me that you're talking to people like me who have been very invested in some of the shibboleths, if you will, of ecology that included opposition to nuclear power plants, which you're advocating. You also stress the importance of cities and the use of bioengineering, genetically modified and engineered crops and the like. You make a very strong case for the value of Greens shifting to those positions.*

*One thing that comes up for me, and I understand you're a scientist, is that it challenges us to trust; it challenges us to trust the capacity of human engineering to address the ecological issues we have, even when it's high risk. Is that a fair statement?*

Stewart: People got distracted by something called "the precautionary principle" that started out pretty useful. It started out in Europe when there was real evidence of harm caused by acid rain. There was not a clear sense, scientifically, of what exactly was causing it, but they started acting on partial knowledge to try to head it off. That was the precautionary thing to do, and that was right.

Then the precautionary principle got moved over to where if anybody could imagine how some new technology or technique or practice could somehow cause some kind of problem... It seemed to help if the person doing the imagining didn't know very much about things at all; then that was reason to try to prevent that technology or technique or

program from going forward—because someone could imagine something terrible happening. And they were saying that basically one must not risk things. That’s really wrong and basically nuts on two or three levels. I love the idea of precaution, and the thing that I am pushing these days is adding to the precautionary principle the vigilance principle that speaks to the political science view that the price of liberty is eternal vigilance. But the point is about liberty; the point is on trying things. Of course, in researching this book I looked for things that environmentalists felt were high risk, like nuclear power or transgenic crops and found that the opposite was the case—they’re very low risk. There have only been three significant accidents with nuclear and only one of them caused death. That was Chernobyl and there not as many deaths as people thought by several orders of magnitude.

So the one area that really is risky is climate engineering—geoengineering. There you’re doing a risk balancing. I’m pretty sure that geoengineering would only be deployed if there was a sense that climate was really going wacko on us and we were about to lose the rainforest or we were seeing that a trend was under way that was not going to be headed off by any of the modes that we’re working on—mitigation, cutting back on greenhouse gasses takes a long time—the effect takes a long time. If we have to buy time with geoengineering, what we’re doing is balancing the risk of messing with the climate. The nearest certainty is the climate is messing with us and with biodiversity in general. So that is a high-risk situation. The way you reduce the risk is to do lots of very serious research, which means doing, among other things, some interfering with climate in little bits and pieces—the way volcanoes do naturally—and get a sense of exactly how it responds and if the response is the sort of thing that one might want to roll out in the event of an emergency. So you’re doing everything you can to reduce risk, but risk is never zero, and risk is always a question of balancing one risk against another.

So that’s just kind of a practical, pragmatic approach that I’m trying to get back into the way people think about these things.

*Russ: One of the elements of that is the perspective that we, for the first time, are in a position to manage Planet Earth. Is that a fair phrase?*

Stewart: Turns out we’ve been managing it inadvertently for about 10,000 years, pretty much since agriculture got going some 10,000 years ago. You can even say it started once we began seriously modifying the landscape with fire on purpose, 50,000 years ago in Africa. All along we’ve been geoengineering, and we’ve been doing things on a scale that affects the atmosphere and affects the climate and affects a lot of things. We can’t go back. We can’t just stop affecting the Earth.

So we have a choice of either terraforming badly as we seem to be doing now, or terraforming well. But we no longer have the choice of not terraforming at all. That’s a tough realization, because we hoped that all we had to do was back off and gaia or nature or the ecology would somehow take care of things. It does take care of a lot of things. That’s what I call the “natural infrastructure” that civilization is based on, among other things. But we are now such a large force in the world that we have no choice but to

figure out how to learn to do the science and the engineering to have our effects in a benign way rather than a malignant way.

*Russ: Your background is in science from Stanford, and you've worked with science over the years. You've written about it in a variety of ways. You clearly have read quite a bit of science; you write about the books that you've read. I knew that you had a connection to Native American and First Nation tribes; I did not realize the extent of it until I read about it in this book. I'm curious to know, aside from the message that you give that we ought to learn from them, but not try and interpret them through our own lens, as an alternative culture. How have those years of engagement with multiple tribes—and being married to an Ottawa mathematician which is a fascinating phrase in itself—influenced how you think about these ecological issues?*

Stewart: Nothing de-romanticizes Indians like real Indians. I got cured of a lot of notions that people have about Indians by hanging out with real folks who are completely amused by white people playing Indian, and avidly reading books about the deep spiritual esoteric practices of various tribes and so on. The tribes do indeed have such practices, but they're not the ones that are in these phony books and sometimes phony movies.

They saved me—I probably would have gone down the path of boy scout wanting to be an old Sioux shaman if I hadn't been headed off by the real folks. But the main practice that I connected with is the Native American Church, the Peyote Church. It is an extraordinary religious/spiritual group and psychological event that is way stronger than any encounter group or anything else. I've been around those and learned a lot from them, but the Peyote meeting is an astonishing piece of work. I'm not telling any secrets, but I write about it because it is pan-Indian—in almost all the tribes, except some of the Pueblo tribes who don't do it, in North America, and seemed to be well-served by it. There's a whole lot of cactus being eaten out there.

*Russ: You mention that the most profound aspect at the Peyote meeting was the showing up of the Peyote woman at the end, and the message she gave. Could you say a little more about what that profound experience was like?*

Stewart: Like everything with Indians, stuff is both profound and comical at the same time. They enjoy that edge; Indian humor never quits. And so the last thing that happened at the Peyote meeting before the final windup by the roadman is that at dawn, one of the women who has been part of the meeting all night has left about an hour earlier. She has gone to get some fresh meat and some fresh fruit. She's bringing in breakfast and is amused at the slavering appetite she sees all around her, because we've all done Peyote all night. We're hungry. We can smell the food, and she's basically saying, "Before you get the food, you have to think about where it comes from." And the answer is, "It comes from me and, by the way, life comes from me." There's a twinkle in her eye. Everybody else at the meeting, I'm sure, heard various versions of this many times. But it was the first time for me. She's right. All of us people are born of women and all life is born from the Earth. And it started getting pretty deep, and breakfast tasted that much better, I guess.

*Russ: So the connection was there. What is the connection of your experience with Native Americans and your sense of time?*

Stewart: They have continuity with their own history, and they often have sort of a timeless reference to what one may call a mythological frame of thinking about everything that goes on. Both of those are deeper than the usual American-Protestant from-the-Midwest perspective on time. Lo and behold, the last couple of decades I've been working on a 10,000-year clock along with the The Long Now Foundation. Who knows? I may have gotten pushed in that direction at a tender age by hanging out with Indians who had a multi-century perspective on things.

*Russ: I saw the video and slideshow on the 10,000-year clock (<http://www.longnow.org/clock/>). It was really interesting—the formations in Western Nevada where you were looking to house the clock and the like. Let me share a quotation from you that's related to this question of time—this comes from the Whole Earth Web site, the Long View:*

I'm interested in events longer than the ego's prison of my lifetime. I'm free to care for other large continuities such as the life of the Earth and the drama of human culture. Previously overwhelming urgencies like the deadline on this book, for me, fall into microcosmic place; worth doing, connected, but not urgent. Religious-scale projects and their comforts have often scourged humankind. I'm thinking of Egyptian pyramids, Muslim jihads, Mongol hoards, Christian crusades, the Third Reich, world communism, maybe science itself. Part of their hazard is that they become their own universe, an infinite regress of self-reference, grounded nowhere.

*That's very powerful, Stewart, and I would say very spiritual.*

Stewart: And at least partly wrong.  
(laughter)

Stewart: I would not put science in that set of categories at all anymore. Some of the rest sounds okay. Boy, do I sound young in that.  
(laughter)

*Russ: Well, that's not a bad thing.*

Stewart: Not a bad thing at all.

*Russ: Can you say a bit about the spirit, about how you relate to the notion of spirit, given your very complex, broad-ranging background?*

Stewart: I don't know. The thing I sort of worship lately is weather.

*Russ: We had a beautiful rainstorm here last night.*

Stewart: Yeah, those are wonderful. Spiritual practice, stuff like that all seems good. I don't actually do any lately. I did some meditation back when I was hanging out with Zen Buddhists in San Francisco. I'm not going to Peyote meetings these days, not going on Vision Quests...those were things that, in their various forms, were very productive for me over a period of time. They've stopped being very productive, so I guess I've stopped doing them. I honor those kinds of activities and lots of people...well, I've seen some fairly spiritual characters become corrupt in their own way. So I know that it's not a guarantee of right behavior. It certainly helps right behavior in most cases, but it's not a guarantee. I've seen things like yoga move in the direction of this—it's like a form of pilates for people in a lot of ways now, which is great. But I get my exercise and my stretching from doing other things, like pulling alien-invasive plants out of the ground. So I have great respect and some familiarity with spiritual matters, and it's not something I'm focused on these days.

*Russ: Does it influence your thinking about ecology—the state of the Earth, the environment and the like?*

Stewart: No. One thing it has done—I've been revisiting Gregory Bateson's material lately, and his daughter Nora Bateson just made a film about him that I'm in. That was an occasion to look back into some of that material. Gregory had as good a grasp of the value of adding another level when thinking all the time. Whatever level you're looking at, you've got to add a level and then you'll gain by it. And maybe at some point "one is one and all alone and ever more shall be so." That kind of contact through Gregory cured me of a purely engineering approach to life, which I think I was getting somewhat from Buckminster Fuller. So this is a sequence of events back in the sixties and seventies that is very useful to me, or I might have not gotten into the much more many-leveled vein of thinking that they've encouraged. And maybe there's another Bateson out there for me at some point. But not lately.

*Russ: Were any of those influences significant in your shift, which I'm assuming this is a shift, from a more hedgehog, shorter term frame of reference to this longer term, seven-generation and more reference to time in the way that you think about how we engage with the Earth and with life?*

Stewart: Most of the spiritual reference to long-time is actually the opposite of long-time—stuff like eternity. Eternity is the opposite of long-time. Usually when I show up at church for someone else's funeral, and somebody refers to eternity, they're always careful to say that it is out of time. You get out of time into eternity, and that's pretty interesting stuff.

That's the kind of thing that can make people comfortable with ideas like the Rapture, which I find interesting and comforting for people engaged in activities that are potentially really deleterious. When we talk at the Long Now Foundation, the long now is the last 10,000 years or the next 10,000 years, and we're really pretty specific about that. Civilization has been gaining ground and becoming more and more civilized and it raises a question: If we're in the middle of that story, what's up for the next 10,000 years? You start getting specific and not all vaguing out into eternity. Certain kinds of things happen

in centuries; certain kinds of things happen in millennia, and they're really different. And ten millennia is different than one millennium. That's useful to bear down on. It's the kind of thing that lets you see how climate changes play out over that kind of period of time. If you look at climate in the last 10,000 years in context of climate over the whole of Earth's history, it's a very nice, sweet, and potentially very short period of climate stability. Every single bit of this is being extremely specific and practical and noticing the difference between long and longer periods of time. Some people think of long as seven generations. Seven generations, in a way, is like counting to three, and then the next number is many.

*Russ: Why a 10,000-year clock and not a 1,000-year clock, or 5,000 or 20,000?*

Stewart: Because that was actually provided by a professional futurist we work with. His name is Peter Schwartz, and he said, let's do this in terms of civilization, and civilization basically started with agriculture and then that set in motion a set of sequential events for humans and everything that humans touched. That is, there are many civilizations within that sequence of events that fell, but over time, they've increasingly known about each other. Retrospectively, we knew about all of them, but the Egyptians did not know about the Incas, and Incas about the Egyptians, but we now know about both. That's a story that is joined for us, along with all of Chinese history, and so on. So that 10,000-year story suggests symmetry and you can say, "Okay, if we can bear that in mind, let's bear that same amount of time in mind forward and see what happens."

*Russ: So basically you build on that by engaging in a form of scenario development, is that right?*

Stewart: Not really. It turns out scenarios are actually quite specifically useless in a 10,000-year time frame.  
(laughter)

Stewart: Any form of planning is quite specifically useless within more than about a fifty-year timeframe. But what you can do is multiply options, so that what you're doing is managing the commons in such a way that humanity has more and more degrees of freedom as time goes by in forms of decades and centuries. It's actually a thinkable, doable set of projects. It also invites some art forms. So our 10,000-year clock is an art form. All it does is give people permission to think long-term.

*Russ: You mentioned Peter Schwartz and Global Business Network—you're one of the founders of that with Peter, and others. That leads to asking about the institutional aspect of engaging with the environment, of managing, of leading, of creating and building in a collective fashion. One part of that is your engagement with Jerry Brown. I'd love to hear if you anticipate being involved with him again if he's elected, which it sounds like he very well might be [He was—Russ]. How do you see these various institutions playing a role? What is needed to use these institutions to further the long view, to engage with the environmental challenges that we're faced with?*



Stewart: The *Whole Earth Catalog* was kind of Libertarian publication. We were basically saying back at the end of the Kennedy era: Ask not what your country can do for you, do it yourself. *Whole Earth Discipline* is much less focused on individual capabilities and responsibilities than on aggregate ones. Looking at the climate issue, there is basically no way to solve the climate in your backyard. One of the major instruments is going to be governments, because somebody has got to make fossil fuels—especially coal—expensive. Ideally just a straight-forward tax seems to be the simplest. And that must be done by the major greenhouse gas-producing economies—by their governments. Corporations can't make coal expensive. Nonprofits can't make coal expensive. Nor can individuals. People connecting online can't.

It actually takes governments to haul off and say, "Coal is going to be expensive here in China, or here in India, or here in the U.S." And unless and until that happens, we are in deep trouble with our climate. Then suppose the trouble comes along anyway and we have to do geoengineering. It is so cheap to do geoengineering—could be as low as \$300M per year basically to get sulfur dust into the stratosphere the way volcanoes do, and we'll cool the planet down by 3°C. There are thousands of individuals who have that kind of money, but you don't want individuals hauling off and doing that, or individual countries hauling off and doing that. It will take very serious intergovernmental, international agreements to manage geoengineering, including the research for geoengineering. So this is the time, and these are all infrastructural issues, both built infrastructure like our energy systems and natural infrastructure like climate. Managing infrastructure is one of the things that we hire governments to do. So I wind up being the promoter of strong, conscious, careful government.

*Russ: And what do you see as the potential for that being realized?*

Stewart: Uncertain. The outcome of the situation we're facing this century is that we don't know yet.

*Russ: Well, thank you so much. I really appreciate you taking the time for this conversation, Stewart.*

Stewart: Thank you, Russ.