autonomy and responsibility are a continuous thread throughout his work, an autonomy based in biology with responsibility being its social consequence. In his account, von Foerster relates his experience in postwar Vienna, noting the existence and disappearance of public posters:

"What posters? Enormous photographs from within a concentration camp: the mangled, emaciated, naked corpses tossed into a pile. The caption: 'This is your responsibility'." (Foerster 1989: 809)

« 14 » The shift from "observed systems" to "observing systems" that is von Foerster's benchmark for second-order cybernetics can be considered to be more a call for responsibility than as a novel sort of methodology. He acknowledges Gordon Pask's two orders of analysis:

"The one in which the observer enters the system by stipulating the *system's* purpose. We may call this a 'first-order stipulation.' In a 'second-order stipulation' the observer enters the system by stipulating *his own* purpose." (Foerster 1979: 7)[2]

With a "cybernetics of cybernetics," von Foerster asserts that "the observer who enters the system shall be allowed to stipulate his own purpose: he is autonomous." Without this, "we shall provide the excuses for those who want to transfer the responsibility for their own actions to somebody else" (ibid: 8).

« 15 » I have lived and worked on the fringes of the academic world, and the design of academic conferences has not been a core issue of concern for me. As an academic librarian and as an involved member of my home community, I have taken guidance from a proposal advanced by von Foerster as a solution to what he calls the "many-brain problem":

"The so-called 'communication channels,' the 'mass media' are only one-way: they talk, but nobody can talk back. The feedback loop is missing, and hence the system is out of control. What cybernetics could supply is, of course, a universally accessible social input device." (Foerster 1972: 5)

Working to build responsive civic institutions and promoting transparency in public process are parts of my life that are themselves based in conversations that in turn have been informed by the conversations I have experienced at ASC conferences.

« 16 » In addition, as a librarian, my job was in part to guide people through an iterative question-asking and -answering process. In group work related to imagining the design for a digital library for marine resources, the knotty problem of coordinating specialized and common languages arose. Having questions at the center of my work life prompted me to think that diverse communities of interest could find common ground more around the questions that people share than around their competing facts and knowledge bases. This prompted the conceptual design and rationale for a "question-centered learning environment" that was a key outcome of my dissertation research (Schroeder 2003).

« 17 » This approach is in line with the tradition of autonomy, responsibility, and self-discovery through conversation that Richards seeks to advance in his remarks on meeting design. Among other examples, he describes the challenging ASC meeting that was structured by Team Syntegrity in 1999 (§40). This prompted me to look again at a related approach suggested by Anthony Judge. His longstanding efforts devoted to compiling and organizing the *Encyclopedia of World Problems and Human Potential* are grounded in part in a cybernetic world view. His suggestion of "tensegrity organizations" (Judge 1984) could help nurture the kinds of encounter that are advocated in Richards's article. A meeting or workshop on what a tensegrity organization may be, and how this approach could support successful meetings of a non-traditional type, could be one way to advance the conversation that has been initiated here.

2| With the terms "first-order stipulation" and "second-order stipulation," von Foerster restates a distinction that Pask presented as between "taciturn" and "language oriented systems" (Pask 1970: 15). This distinction is explained by Pask in terms that are suggestive of von Foerster's reframing, for example: "In essence, of course, the purpose *for* or the purpose *of* the system is invented by the observer himself and it is stated in the observer's metalanguage for talking about the system" (ibid: 23). Thanks to Ben Sweeting for suggesting a closer look at this source.

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Cybernetics, Conversation and Consensus: Designing Academic Conferences

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> Upshot • Richards offers a variety of second-order concepts relevant when designing academic conferences. I insist and add on a few ideas. An emphasis for both: How can one design a space and structure that encourages deep conversations?

The challenge of writing a second-order cybernetic response

« 1 » In his target article, Larry Richards writes about the challenges of writing for an academic journal from a second-order cybernetic perspective (§46). I feel this challenge when writing this commentary. Yes, explicit second-order cybernetic responses are rarely desired. They are difficult to understand and create, particularly when trying to write for an academic journal. The notion of objectivity gets in the way of the dynamics of observing, drawing distinctions and establishing connections. All of which seems easier (for me) when constructing a movie.

« 2 » Question: Does second-order cybernetics require explicit inclusion of one's recursive self when reporting, in and out of academia? Is this dilemma a conflict, contradiction or conundrum? As Herbert Brün once said to me in 1993:

"Conflict requires a change *in* a system. Contradiction requires a change *of* a system."

First, disclosure

« 3 » I consider Richards a colleague and a dear friend. After 20 plus years of turning together in conversations, we have come to agree (I think) on many things cybernetic. Nowadays when I find myself in disagreement with Richards, it is a delight, a joy. It usually means that there is a good chance that when in conversation with him, something new will emerge – a difference that makes a difference – information. Hence a learning experience.

« 4 » I met Richards when attending my first American Society for Cybernetics (ASC) conference in the fall of 1992. As a professional social worker, I have attended numerous conferences, yet nothing compares to the magnitudinal epistemological shift I experienced (before or since) at that conference. (Why?) I remember at the first dinner of the conference Richards explaining, to me, "observing" and why "This is a cup" matters. I *could not* understand, yet I was curious to know more. Cybernetic thinking, like ASC conferences, seems to attract curious people.

« 5 » In his target article, Richards speaks of the 1992 conference as an example of a tradition within the ASC for designing experimental conferences (§3). During the 1992 conference, about 65 participants were situated on a small island in the middle of nowhere. Eating, working, playing, thinking, arguing and learning together, we were immersed in each other's doing. The conference appeared designed to invite participants to explore *our* cybernetic thinking while exploring the cybernetic *doings* of Herbert Brün and Humberto Maturana (§36). Reporting, listening, participating and performing were all fundamental features built into structures of that conference. Formal, informal and deep conversations were the central processing techniques utilized throughout that conference.

« 6 » In his article, Richards uses the term "deep conversation" when pointing at a particular method of dialectical interaction in which participants intentionally embrace their differences, tensions and conflicts – our asynchronicities – without violence (structured abstract).

« 7 » I have come to view asynchronicity as a point of departure for turning together in deep conversation so that deep learning might generate a transformation of self and maybe even a society. In this context, a transformation starts with one's self.

Second, cybernetics is deep

> *[T]he cybernetics of observed systems we may consider to be first-order cybernetics; while second-order cybernetics is the cybernetics of observing systems. (Foerster 1979: 7)*

> *In second-cybernetics the focus is on the system doing the observing, thinking, exploiting and all that, which is all based on self-organization.*[1]

« 8 » When reflecting on one's observing and its consequences, a second cybernetics emerges. It shifts the vocabulary onto observing one's self, one's self-organization, one's responsibility, one's ethics, one's desires – always nested in the dynamic relations and behaviors of our experiences (§§12, 16, 17): *Recursion – always back on self, never quite the same.*

« 9 » In his article, Richards suggests that unless we understand the dynamics of recursion in our thinking, our logical inconsistencies will continue (§§12, 32). When I embrace recursion as a fundamental cybernetic activity along with self-organization, I open a space for understanding our differences differently. I understand we understand differently when understanding. That our knowing is grounded in our thinking and our thinking is grounded in who we are and that each of us has an epistemology. When I share aspects of my epistemology with others' epistemologies, an ontology might emerge.

« 10 » Another second-cybernetic concept that emerges when thinking about the dynamics of recursion is *observing one's observing.* I claim there is a shift in one's emotioning when observing one's observing that opens space for one to be different in that moment.

« 11 » In his article, Richards suggests circularity (not hierarchy) is the "first principle of cybernetics." The circularity of observing generates a second-cybernetics when looking and thinking about ways of thinking as a choice. He also voices his concern about creating a language of first-, second-, third-order cybernetics, suggesting "orders" may generate the illusion of meta levels and that meta levels "signal" hierarchy, which is to be avoided whenever possible (§26).

« 12 » Agreed. However I find making distinctions between a first, second and maybe a third cybernetics useful in my life and work. Aside: in order to deal with my conflict between not wanting to generate hierarchies and the usefulness of distinguishing between a first- and second-order cybernetics and since language is never trivial, I decided to remove the term "order" from my descriptions including in this commentary. I asked Richards about this shift in language some time ago. I was curious as to whether or not removing the word "order" would take anything away that he thought relevant to a cybernetic ontology. He said no.

« 13 » As a video-ethnographer, who makes movies with machines about people doing what people do, I discovered first cybernetics to be helpful in understanding trivial machines. Trivial systems by definition possess a set number of possible states that I can calculate, design and manipulate in order to do what I want them to do. An occidental ontology nested in purpose and goals can be useful in this domain.

« 14 » However, living organisms require a cybernetics that orients my thinking about me-you-us as non-trivial systems. Non-trivial systems have an undetermined number of possible states that an organism determines in its dynamics of living. For us humans, this includes living immersed in language. Sure, we know I can be manipulated in the relational space where living happens. Yes, cybernetics can be used for evil too (for example, the use of control and communication to generate propaganda). However, I claim when control and communication are nested in awareness, self-organization and conversation, such manipulation is the less likely to occur.

« 15 » Richards once said that when cybernetics is enacted in conversations, a primary function of conversation (autonomy) is not communication (control) but the maintenance and creation of distinctions.[2]

1| From my movie "A Conversation with Ernst von Glasersfeld, Cybernetics Wisdom and Radical Constructivism," 2005, available at http://jlombardi.net

2| See my multimedia presentation "What's so radical about radical constructivism?" presented at the 19th Annual International Personal

« 16 » I have come to think that a third cybernetics emerges when combining first and second cybernetic concepts into one's doing cybernetics. For example, when observing one's observing. From this way of thinking, cybernetic concepts generate an interconnected horizontal network of similarities and differences not only in theory but in a practice, a praxis. A praxis in which cybernetics becomes not only a way of thinking about ways of thinking but also a way of thinking about ways of acting when doing cybernetics.

« 17 » So, how might the cybernetics of cybernetics, a cybernetic ontology be a useful model for guiding one's observing, listening, participating and performing in a conversation? How might all of this relate to designing an academic conference?

Third, doing cybernetics

« 18 » Experimenting with conference designs that incorporate a participatory model that is nested in conversation and creative thinking is a tradition in the American Society for Cybernetics (§33). Based on Richards's suggestions and my thoughts, how might I design an experiential academic conference nested in the following cybernetic concepts: circularity, recursion, dynamics, observing, evolution, choice, responsibility, ethics, constraints, desires, observing one's observing, performance and a mystery? How would I structure such a conference so that deep conversations become a fundamental feature throughout such an event?

« 19 » An excerpt from American Society for Cybernetics Conference 2014:

"Tom Fischer: Google grants us 5 million dollars. What are we going to do with it?
Lombardi: If we had the money, to do what we will, want, desire with others while embracing our conflicts, tensions, differences without violence. So that (deep) conversation can happen and newness emerge. Then, we will know where we are going.
Paul Pangaro: I love you Judy, that's beautiful. I don't know what to do!"[3]

« 20 » I now offer one response to Paul's question:

"Cybernetics is a technical methodology enabling us to tackle practical problems that would otherwise defeat us by their complexity. All these models must start with the question: What do we want?" (Ashby 1981: 115)

« 21 » First, I need to create a space where participants are willing to take responsibility for participating in a process designed to provoke conversations about what they want and need – desires. Experience tells me that a conversation about desires with a diverse group of people will generate asynchronicity in a language space. So I need a transparent structure that embraces cybernetic concepts for facilitating formal conversations. A pre-conference handout about the facilitative structure and its guidelines should be distributed to all participants prior to the conference so they can make a conscious choice to participate in the conference conversations or not.

« 22 » The conference can include a variety of activities, all types of performances including short presentations, conversations about desires, special guests, etc. Only one thing remains the same throughout the conference. A facilitative structure designed so that deep conversations are more likely to occur. So that whenever there is a formal conversation during the conference the facilitative structure is implemented as a guide.

« 23 » Richards talks about Stafford Beer's "syntegration process" as a possible prototype (§§40f). I have not fully experienced the Beer model, only the ringing bell, which turned me off.

« 24 » I have experienced the consensus direct democracy model (https://www.youtube.com/watch?v=6dtD8RnGaRQ) that was used during the Occupy movement in 2011. This model has been adopted by many alternative and radical organizations and a few democratic work places in the United States. It is a structured facilitative process that works when participants work it by choice. Every participant's participation is fundamental for the process to work. It is an acephalous (horizontal, leaderless) model for exploring constraints, possibilities (resources) and making decisions that require deep listening:

"Deep Listening is a way of being." (Pauline Oliveros, from my movie "Living Cybernetics" cit. op.)

« 25 » Direct democratic consensus is designed to provoke deep conversation when facing asynchronous interactions. So that conversation becomes a vehicle by which a self-organizing, observing/listening/participant is invited to become a performer. A participant/listening/performer in the co-creation of a language space that generates an organization of its own that is presence oriented and process directed (Butler & Rothstein 1987).

« 26 » Many argue that the consensus model does and will not work, particularly given the tyranny of the clock. Another major obstacle to implementing or participating in a consensus direct democracy model is an occidental ontology that perpetuates a consciousness that is purpose oriented and goal directed, rather than a cybernetic ontology that is presence oriented and process directed.

« 27 » The good news is that for observers interested in a cybernetic ontology, that provokes creative thinking and doing, a direct democratic consensus model is ideal – for now. It reflects a cybernetic way of being in the world that works when participants work it.

« 28 » I wonder what an academic conference designed so that everything can change except the means by which the group structures its conversations would look like when nested in a direct democratic consensus model? I do hope some day to get a chance to know the answer to this question. Only we can decide.

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Construct Psychology Congress, Boston MA. Available at http://jlombardi.net/pdf/what_radical_rc.pdf

3| From my movie "Living cybernetics," ACS. Available at http://gentrificationknotproject.net/living-cybernetics