Designing Academic Conferences in the Light of Second-Order Cybernetics

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> Context • A tension exists between the needs and desires of the institutions providing the funding for academics to attend conferences and the potential for transforming the knowledge and understanding of conference participants (and society more generally). The author has experienced this tension at conferences in a number of disciplines, including cybernetics. > Problem • This article addresses the problem this tension creates for those more interested in constructing knowledge – action, learning, understanding (even wisdom) – than in advancing their own careers and celebrity. Approaches to the problem can recognize the importance of funding and career-building in the current society, while still experimenting in ways that could generate new ideas. > Method • Ideas from second-order cybernetics are used to derive design principles that might alleviate the tension and encourage deep conversations, idea generation and experimentation. The author draws on experiences with designing, organizing and participating in cybernetics conferences over a period of 34 years. > Results • An academic conference designed to a set of broad, second-order cybernetic principles, where participants are informed of the design intent before they decide to attend, can open an opportunity for learning, understanding and the creation of new ideas in ways that would not otherwise be available. Although there are no guarantees, such designs can attenuate the tension, often experienced at traditionally designed conferences, between advancing individual careers / celebrity and building new knowledge together. > Implications • The design principles derived, already exhibited in some conferences, could be useful to organizers wishing to foster incompatible and opposing ideas and facilitate dialogue among conference participants. These same principles have implications for the design of other social systems and point to the possibility of a new and more humane society. > Constructivist content • A feature of second-order cybernetics is that knowledge is continually changing as our desires change, and we must take responsibility for the consequences of the ideas we construct and use to satisfy our desires. > Key Words • Design by constraint, dynamics of interaction, asynchronicity, tyranny of the clock, times of truth, moments of art.

Introduction

« 1 » Over the past 38 years, I have participated in more conferences than I can even begin to enumerate. These conferences have been both disciplinary and professional, large and small, in countries, cities and resorts around the world. Over the past 34 years, I have designed, organized and participated in cybernetics conferences almost every year and often more than once a year. Except for the cybernetics conferences, my only expectation when attending an academic conference has been to give an address, serve on a panel or present a paper, hoping to build my résumé and meet the scholarship requirements of my job as an academic. At conferences on higher education, I also expect, as a university administrator, to make some contacts and learn what some other colleges and universities might be doing to address specific problems. In all cases, I have no expectations of making a huge difference in the world, in the discipline or profession of the conference or even in the lives of attendees, including my own. However, my approach to cybernetics conferences has been different.

« 2 » Beginning with the conference of the American Society for Cybernetics (ASC) in Washington, DC, in 1981, the program for which I organized, my expectation for cybernetic conferences I attend has been that I will meet or run into one or more people with whom, at some point during the conference, I will have a conversation that will advance or replace an idea I have, or inspire a new one. These are people who have become intellectual friends and whose company I have come to cherish. Of course, this expectation could be met without the conference; the conference just serves to get people together at the same place and time so that I can meet or run into them (which could hypothetically happen at any conference). The advantage of keeping my expectations at this minimal level is that I have always left the cybernetics conferences with my expectations exceeded, an experience not generally had at the non-cybernetics conferences.

« 3 » My observation after all these years is that each cybernetics conference (and I am talking predominantly about the conferences of the ASC) has had its own distinct character. They have been experimental, with designers and organizers trying out new formats or creating new contexts for interaction. My enjoyment has been in experiencing something different, something new, each time, and the experience has more often than not refreshed and stimulated my thinking. I have been and
continue to be tempted to raise my expectations when I now attend cybernetics conferences, an urge I have made special efforts to resist: I want to be surprised beyond any expectation I might have, or at least leave no less happy than when I arrived.

« 4 » My recurrent enjoyment of the conferences, along with my attitude with respect to expectations, leads me to ask: Is there something about my experience that might inform the design of conferences, whether about cybernetics or otherwise, when what is desired exceeds the mere advancement of a participant’s celebrity and career? Is there something about cybernetics itself, and in particular second-order cybernetics (SOC), that could be appropriated to develop a set of design principles for such conferences? I argue that traditional academic conferences serve a role that maintains the status quo of structures and institutions in the current society. I would like answers to the above questions to challenge that role. It is perhaps instructive that a recurring dialogic thread at conferences of the ASC has been the challenge to the desirability of the current society, including a cybernetic challenge to the desirability of a society that rewards celebrity and achievement, the very functions that inform the design of traditional conferences.

« 5 » In this article, I first discuss the traditional academic conference in the context of our current society. I then describe some features of second-order cybernetics that might be useful in identifying design principles for conferences that seek new ideas — in particular, new ideas that might challenge the status quo and offer alternatives for thinking about a new society. A few examples of cybernetic conferences where one or more of the design principles were in play follow, along with a few suggestions for the design of possible conferences based on the principles. Finally, I offer some concluding thoughts on the implications of the academic conference for society at large, and postulate that conferences designed in light of SOC could be framed to contribute to the conceptualization of a new and more humane society.

Traditional academic conferences

« 6 » I use the word “traditional” to talk about conferences where the primary activities are keynote/plenary speakers, panel discussions and parallel paper/poster presentations. I do not know exactly when or how this became the ubiquitous form for academic conferences, but it does align itself with the emerging institutional requirement, particularly in the modern research university, that academics disseminate and publish their research in order to acquire promotion in faculty rank and the enhanced salary and other benefits that go with it. The academic conference has become the default way for faculty to get their work out to their peers, increase their visibility to journal and book editors and advance their standing in their discipline or profession.

« 7 » Of course, academics getting together to talk about common disciplinary and professional interests goes back centuries: the 1930s French mathematics group working under the pseudonym Nicolas Bourbaki is a classic example of a few academics who met periodically for the sole purpose of discussing the reformulation of mathematics grounded in set theory. The ten Macy Cybernetics Conferences, 1946–1953, explicitly gave priority to discussion over presentation, with the first five conferences deliberately eschewing the publication of transactions so that the participants would feel free to speak openly and talk about the development of ideas still in progress. More recently, the Gordon Research Conferences on Cybernetics, 1984–1988, left considerable time for conversation, including the entire afternoon of each day. They also did not publish proceedings. In the typical academic conference of today, however, that conversational activity tends not to be designed into the conference, but rather relegated to networking opportunities for attendees. It might be significant that attendance at these examples of conversational conferences was by invitation only, some being highly selective and even secretive in some cases.

« 8 » Another aspect of the traditional academic conference is that it is designed to generate surplus revenue for its parent organization. The surplus then helps pay for staffing the organization, as well as for other programs and communication products for its members. In some cases, the surplus is so great that the organizations become highly dependent on maintaining or growing the attendance at their conferences. A drop in attendance can create fiscal difficulty for such an organization. By catering to the need, created by the modern university in particular, for faculty and other professionals to advance their celebrity and build their resumés, these organizations have a huge audience from which to draw. That universities and other employers will pay for their people to attend these conferences provides an added incentive for maintaining the traditional design, enhancing it with guest programs, entertainment, tours, exotic locales and so on to attract attendees who might have multiple options from which to choose that year.

« 9 » My first academic conference was in January 1977, the annual meeting of the Society for General Systems Research (SGSR) in Denver, Colorado. Although traditionally designed, I remember leaving with my mind whirling. In addition to the session in which I presented my first paper, I remember Francisco Varela presenting (in parallel session, in a jam-packed room) his calculus for self-reference (Varela 1975), Heinz von Foerster giving a talk at which I recall him mentioning Carlos Castaneda (Tales of Power, 1974), and Kenneth Boulding (The Image, 1969), in his inimitable way, giving one of the keynote talks. At the same time in the same city, the annual conference of the American Association for the Advancement of Science (AAAS) was being held, and SGSR hosted one of the AAAS panels: von Foerster chaired, with panelists Margaret Mead, Ernst von Glasersfeld, Varela, Joe Goguen and Boulding. Immediately after the panel, I had a chance to go to lunch with a few people, including von Glasersfeld. That is all I can remember of that conference, but I can report that my experience of traditional conferences since then, including some cybernetics conferences, has all been downhill — no new ideas, no mental stimulation (with one notable exception: an IEEE special conference on “Norbert Wiener in the 21st Century,” held in Waltham, Massachusetts in June 2014 — a traditional design, but hardly a traditional theme).
Second-order cybernetics

10 At SGSR conferences in the later 1970s, a few people interested in reviving the ASC, the last conference of which was held in September 1974, would get together and discuss the possibilities for a new form of ASC conference. There was agreement that the traditional design of academic conferences left us unsatisfied; we wanted ideas to be offered, and incompatible and opposing ideas considered. We wanted a design that would foster such ideas and facilitate dialogue around them. It would have to be a different form of conference, but one that recognized the tension between our desires and the need for academics and professionals to present their papers and get funding from their employers or grant sponsors. It occurred to some in the group that perhaps we could apply the ideas of cybernetics, and especially SOC, to the design of a cybernetics conference, and generate some alternatives.

11 I speak of cybernetics of the second order when I wish to describe what happens to our thinking when we turn cybernetics back on itself – that is, when we take the cybernetic concept of recursion and apply it to the body of ideas called cybernetics: the cybernetics of cybernetics. Mead (1968) had proposed that the ASC apply cybernetics to the design of its own organization and activities. This inspired von Foerster to coin the term “second-order cybernetics,” perhaps as a way to insert some new life (and identity) into a field that had come to be associated with information theory, code-breaking, automatic control, artificial intelligence and robots – that is, computer-based technologies. The admonitions of Norbert Wiener (1954) concerning the potential abuses of these technologies, particularly by governments and corporations, needed a conceptual foundation upon which ethical and epistemological issues could be rigorously addressed.

12 SOC provided a foundation for addressing these issues by proposing an explicit accounting of the observer and the observer’s desires. Over time, this idea caught on and attention shifted away from the technologies, per se, and toward human experience and concerns, including the relationship between humans and technology – that is, biological, psychological and social concerns. Recognition of the role of the observer had been a part of cybernetics from its beginning (Wiener 1948: 162–164; Ashby 1956: 87f), and SOC is still cybernetics, and vice versa. I say this to protect the word “cybernetics,” an endeavor that the introduction of the qualifier “second-order” has admittedly complicated. There is no first order, per se: there is the inconsistent or incomplete use of cybernetic ideas (ideas extracted for a particular use with no reflection on the desires of, or responsibility taken by, the user), often referred to as cybernetics (or first-order cybernetics), and then there is the corrective action that completes the circle as suggested by the ideas themselves, called second-order cybernetics. I regret that the use of the term “second-order” invokes the existence of a first order and want to be clear that there is no cybernetics without an observer, whether accounted for explicitly or implicitly:

13 What von Foerster’s formulation (2003a: 292–294) encouraged was the explicit consideration, in cybernetic inquiry, of topics such as human knowledge and understanding, biology of language and cognition, responsibility and freedom, social and organizational design, self-awareness and consciousness, radical constructivism, alternative logics, self-reference and autonomy, conversation, anti-communication, deuterolearning, alternative therapies, the arts in society, composition and performance and decision making – in other words, topics in which our studies cannot avoid dealing with undecidable questions, questions only we can decide and answers to which we can choose (see also: Glasersfeld 2007a).

14 The ASC was chartered in 1964 and held a few conferences over the following years. The last ASC conference in the 1970s was held at the University of Pennsylvania with the theme, “Communication and Control in Society”; von Foerster gave his talk on “Cybernetics of Cybernetics,” the lead article in a book of papers from the conference, edited by Klaus Krippendorff (Foerster 1979). At about the same time, von Foerster and Brün offered a special topics course at the University of Illinois in 1974 on the cybernetics of cybernetics that led to a book, with a distinctly different design than any previous academic book, under the same title (Foerster 1995). With growing interest and a longing for another conference, it fell on me to organize the program for the next ASC conference in 1981, on the theme “The New Cybernetics.”

15 I had no experience with organizing conferences and had only attended a few, 2 The word “cybernetics” has been and still is used in some communities to talk about the science of computing, automatic control and virtual reality, along with the technologies it has spawned, as though these phenomena exist independent of the observer and the observer’s desires. I say this is and has been an incorrect use of the word if the implications of the ideas of cybernetics as developed by Wiener and Ashby are taken seriously. What the introduction of the second order has done is to make it obvious that this is an incorrect use – that is, unless the cybernetic idea of recursion is applied to cybernetics itself, a logical inconsistency arises that cybernetics cannot ignore. Norbert Wiener (1954) was, I think, clear about his desire that responsibility for the use of cybernetic ideas be embedded in cybernetics, although he did not yet have it formulated as such. So, I choose not to use the word “cybernetics” to talk about the scientific basis for mass surveillance technology, drones that can select their own targets or hierarchical control systems in social organizations, despite whatever histori-
virtually all with a traditional design. The conversations at the SGSR meetings in the later 1970s, as well as at a gathering at Roger Conant’s farm on Deer Isle, Maine, in 1980, did produce some ideas for experimentation. There was an exhibit room where attendees could display works of art – not to show off their artistic talent, but to provide an alternative setting and stimulant for conversations. There was an evening called “The Oral Tradition,” where attendees could tell stories about past experiences at conferences or other cybernetic events. I cannot say that there was any explicit attempt to design the conference using second-order cybernetic ideas, although the focus of the conference was clearly on the second order. However, building time and space for conversations into the program and offering alternative avenues for triggering conversations is consistent with a second-order cybernetic approach, as I discuss below.

Some relevant features of SOC include:

- The centrality of one or more observers/listeners/participants in the formulation of a concept, theory, description or explanation with respect to an experienced phenomenon of interest – that is, knowledge does not exist independent of an observer/listener/participant (Foerster 1984, 2003b; Glaserfeld 1984).
- The importance of the desires of the observer/listener/participant in the selection of a phenomenon of interest, and in its subsequent formulation – that is, desires are as important a topic for investigation as the phenomena experienced (Glaserfeld 2007a; Foerster 2003a).
- The orientation towards constraints and resources, as opposed to goals and achievement – hence, desires as constraints. That is, if I know what I want and that it is possible to acquire it, I do not need cybernetics; I need cybernetics when I know what I do not want and that only a reconfiguration of resources – elements, relations, dynamics – will exclude it (Richards 2007).
- The temporality of all formulations and, therefore, of all human knowledge, including the formulation of time itself (Glaserfeld 2007b; Boscolo & Bertrand 1993).

The avoidance of hierarchical thinking whenever possible, giving precedence to recursive relationships, especially in social systems; or, at least, treating hierarchical relationships as temporary (Richards 2013).

The role of dialogic interactions (and their dynamics, including the requirement for asynchronicity – that is, a friction, conflict, disagreement, inconsistency, being out of sync) among observers/listeners/participants in the generation of continual change in human knowledge and understanding (Gordon Pask’s inaugural address “Conversation and support” for the guest lectureship in general andrology at the University of Amsterdam, 1987; Richards 2010).

The responsibility assumed by the observers/listeners/participants for their formulations and the consequences of using them (Foerster 2003a).

Von Foerster (2003a: 301) was also careful to note, whenever asked, that the use of the term “second-order” should not be taken to open the possibility for a third, fourth or higher order. He did not intend it to imply a meta-level. Rather, it was a linguistic choice to indicate the cybernetics of cybernetics – cybernetics in circular relation to itself, not as meta- to itself. Early cybernetics and SOC are mutually supportive, each providing a perspective that together creates a new cybernetics. Whatever paradoxes this recursion may generate are a consequence of the language (English, in this case) and its logic. In cybernetics, these paradoxes are either embraced or alternative logics are applied: a first principle of cybernetics is circularity (Foerster 1992), not hierarchy. Hence a seventh feature:

The avoidance of hierarchical thinking whenever possible, giving precedence to recursive relationships, especially in social systems; or, at least, treating hierarchical relationships as temporary (Richards 2013).

Design principles

Current academic conferences tend to be designed for participants to present their concepts, theories, descriptions or explanations, and/or applications thereof, and for audiences to observe and listen, allowing perhaps a few questions at the end of presentations but otherwise no substantial interaction. Such a design encourages presentations of ideas that assume an external, objective world, separate from the experiences and desires of the presenter. Participants are seeking some permanent status for their ideas in the configuration of current human knowledge; the primary role of the dialogue with an audience is to tweak the articulation of an idea to make it more likely to be accepted – not to stimulate a conversation about the desirability of the idea and its consequences, or to generate new ideas. I claim that even this traditional design of a conference can be justified in the light of SOC if all participants are aware of the desires implicitly built into the design and take responsibility for the resulting consequences (for science, education and society). However, designs that make the desires of the designers explicit by building them into the structure of the conference might support and facilitate the type of dialogue that embraces incompatible and opposing ideas and thus generates new ones.

I offer some principles that might be useful in the design of alternative conferences in the light of SOC. References to the features of SOC from which these principles are, at least in part, derived appear in parentheses after each principle.

Principle 1: No ideal design

Do not approach the design of a conference with the idea of creating the ideal one, the design that will then be used in all subsequent conferences – that is, it is in the continual change and variety of conference designs that value gets added, new forms of conversation emerge and intellectual stimulation occurs; while this principle embraces an experimental approach to conference design, it does not imply that anything goes (SOC Feature #4).

Principle 2: Design by constraint

Design the conference not to achieve a goal in the sense of a specific outcome, but rather to avoid certain events, behaviors and outcomes (for example, people not being recognized or being recognized too often at the expense of others, disagreement by attacking rather than engaging others, ideas not having a chance to be heard) – that is, design by constraint (Fischer & Richards 2015). Designing by constraint does not guarantee particular outcomes: anticipating the variety of personalities who
will show up and the dynamics of interactions could arise so that the design can preclude all possible undesirable behaviors is problematic. While the design may not guarantee a spectacular result, at least it opens up a space in which new ideas, new thinking and new intellectual friends have the opportunity to emerge, and when that happens, it is spectacular (SOC Feature #3).

**Principle 3: Avoidance of undesirable behaviors**

22 Encourage the events, behaviors and outcomes desired in a conference by designing to avoid those that will interfere with the desired – that is, if every attendee is treated as an unique observer and participant, as suggested by SOC, then any interaction that could be taken as violent (by either those in the interaction or a third-party observer) is to be avoided (SOC Feature #2).

3 I use the word “violence” when I wish to speak of a situation in which any party to an interaction experiences a reduction in participation (loss of choice or alternatives), whether experienced by themselves or observed in others. The extreme case occurs when the only alternative perceived as an available response to a behavior by one or more individuals in the situation is a violent one – one they do not want to use, but have no alternatives. In a conference this could be manifest by dismissing the ideas of others before a conversation can happen, dominating a conversation so that others cannot participate, rambling incoherently, mischaracterizing the statements of others, as well as the obvious: yelling, name-calling, ganging up and so on – all behaviors I have seen at traditional conferences.

The idea of the counter-conference, a parallel conference with designated space, as at the 1986 ASC conference in Virginia Beach, was a design feature intended in part to serve as an alternative venue where people, unhappy with the interactions at the main conference, could go and have their own conversations. At this conference, not many people wanted to leave the main conference, as they did not want to miss out on anything, even if they did feel slighted. The idea of a counter-conference might be better reserved for spontaneous insertion, created as needed. Perhaps some rules of interaction discussed at the beginning of the conference would help make alternatives clear. I also wish to note that what is taken as violent by some may not be taken as violent by others. So, an attention to the possibility of unanticipated consequences of undesirable behaviors is needed. Perhaps some rules as they did not want to miss out on anything, even if not required. The role of the conference designers is to make an announcement, clarify a guideline or facilitate a change of conference format (in response to concerns raised and proposals offered), and instruct the conference primarily to see and hear a celebrity in the field can, by design, be exposed to alternative perspectives, and celebrities can be encouraged to orient their talk toward stimulating a conversation and to make themselves available throughout the conference for such interaction (SOC Feature #7).

**Principle 4: Flexibility**

23 The experimental attitude suggests that mistakes (undesirable consequences not anticipated) may happen; so: include in a conference a readiness to change and the flexibility that will allow the design to adjust while the conference is still proceeding – for example, participants might be informed upfront of this possibility and instructed in their role should it happen; this principle does not excuse lack of attention to detail by the conference designers – a mistake is still a mistake (SOC Feature #1).

**Principle 5: Performance**

24 Treat all programmed presentations, speeches or panel discussions as performances – that is, to the extent that such traditional activities are a part of a conference program, the presenters can be instructed to pay as much, if not more, attention to the dynamics of their presentations (how they present) as to the subject (what they present), treating their time in front of an audience as an opportunity to stimulate a conversation and encourage alternative ideas; in an academic conference, performance is to be taken as a playing or experimenting with dynamics, an attempt to entice an audience into a conversation with the performer or with each other or even with themselves (that is, thinking) (SOC Feature #5).

**Principle 6: Conversation**

25 Build conversations into conferences either explicitly through the assignment of tasks to groups of participants requiring conversation or implicitly through the scheduling of substantial time following a presentation or talk intended to stimulate a conversation; the task, presentation or talk can trigger a conversation if it offers just enough of a provocation – that is a friction or conflict (an asynchronicity) – to pique curiosity or mutual disagreement (SOC Feature #5).

**Principle 7: Non-hierarchical arrangements**

26 Avoid the emergence of hierarchy and, when hierarchy cannot be avoided, encourage it to be temporary (Richards 2013) – for example, the organizers of a conference can design their presence to be minimal, emerging as the organizers only when necessary to make an announcement, clarify a guideline or facilitate a change of conference format.

27 Try to avoid the tyranny of the clock – that is, since a conference needs a start time and an end time so that attendees can plan their travel, the schedule of events and activities between those times can be designed such that the clock is not the limiting factor in the ability of participants to have the type of conversations they desire (SOC Feature #4).

28 Facilitate the conversations among participants in a way that encourages, if not requires, participants to take responsibility for their language and actions, and the welfare of each other – that is, the desires of the participants with respect to the dynamics of their interactions can be open for conversation as the topics discussed. Until such caring behavior becomes standard, individuals may have to be invited to serve in this role, staying alert to dynamics that could derail a conference if allowed.

4 I use the word “performance” when I wish to speak of sharing my presence and conveying my thoughts in a way that will stimulate conversations that I want. (Brün 2003: 118) It involves giving attention not only to what is said (content) but also to how it is said (dynamics).

5 I use the word “responsibility” to speak of my awareness of my desires with respect to the consequences of my actions.
to persist. I am not a fan of highly-structured approaches to this situation; however, I have been at conversational conferences where such structure proved useful. For example, at one conference each participant was given five (or some other number) tokens at the beginning of a day (or session) that they could employ at any time to interrupt a monologue and/or to talk themselves for a limited time (say, two minutes). This is an opportunity for designers to be creative (SOC Feature #6).

Principle 10: Reflecting

«29» Focus any discussion on the design of the conference (during, at the end, or later) on proposals for new experiments rather than on complaints about the current one – that is, rather than ask how we can improve on this design, ask what we want to try that is new and different; this does not preclude reflections on what we want to avoid, an essential consideration for any experiment (SOC Feature #1).

«30» These principles are intended to encourage conferences where participants can engage in stimulating conversations, generate new and alternative ideas and leave intellectually stimulated and mentally/emotionally refreshed. If a conference can change the thinking of individual participants, it also has the potential to influence social change on a much larger scale. Recognizing this potential suggests an attention in conference design to a certain type of overriding process of knowledge-building – a process that includes times of truth (temporary truth) and moments of art (pivotal events that can trigger a reconfiguring of currently accepted knowledge and introduce a period of new temporary truth).

«31» The idea of times of truth is that we accept concepts, theories, descriptions and explanations, and their associated way of thinking, as temporarily the case (that is, as the best currently available human knowledge) as long as it is useful to do so. When no longer useful, or superseded by more useful ideas, what we accept as the case is brought into question and the opportunity to create a new, albeit still temporary, truth reveals itself. This is, of course, an explicitly constructivist notion (Richards 2007). When inconsistencies, contradictions or a shift in desires not accommodated by the current knowledge occur – that is, there is an anomaly in a current domain of thinking and discourse – what is accepted as the case may change in response to the anomaly. These occurrences of anomaly are opportunities for moments of art. These moments occur when an inconsistency, contradiction or new desire reveals itself through an act of composition – challenging current logic and thinking. If that challenge is taken up, as it might be under a second-order cybernetic epistemology, a new time of truth is created. Moments of art then become pivots for social change; this, I claim, is the social role of art⁶ (Richards & Young 1996).

«32» Since inconsistencies often arise when distinct phenomenal (or logical) domains bump into each other (such as biology and government, economics and education, medicine and ecology), conferences that foster transdisciplinary interactions can be useful in moving thinking into new territory. In addition to inviting participants from different disciplines and professions (including the arts), the presence of artists, composers and performers can be useful in facilitating the knowledge-building process, specifically by introducing perturbations or provocations (that is, asynchronicities) into the dynamics of interaction of the conference. Furthermore, the process of knowledge-building that can happen in a conference is isomorphic with the process of change in society at large. On the larger scale, the role of a conference can be to serve in itself as a moment of art, a pivot for social change – not as a result of what is produced by the conference, but through the dynamics of interaction triggered by it that could reach into other social systems after the conference is over.

Experimental conference designs

«33» Experiments with design have been a distinguishing feature of conferences of the American Society for Cybernetics (ASC) since 1981. A few examples might demonstrate how the principles of design above become apparent in some of the conferences. However, they are not intended to demonstrate how conferences should or should not be designed; they are intended to stimulate thinking and conversation on possible experiments to try in future conferences. I am not going to identify the organizers of the various conferences referenced below; while some had a clear leader, many involved multiple organizers and I do not want to slight anyone. For me, they were all wonderful conferences in their own way, although I do recognize that attendees accustomed to the traditional conference design might not have been so pleased. My delight was as much in the bramble of experimentation by the designers as it was in the substance of the conferences and their conversations.

Avoiding parallel sessions

«34» Conference-goers often complain about missing a presentation they wanted to see and hear because there was another one scheduled at the same time. At some ASC conferences, as many as four or five parallel paper sessions have been scheduled. At the 1995 ASC conference in Chicago, Illinois, an attempt was made to schedule all presentations without using a parallel structure. The tradeoff was that all submitted presentations were limited to 10 minutes, with 5 minutes for questions and comments. To compensate, an hour was scheduled every morning for attendees to get together and discuss any of the papers of the previous day or other topics, with the authors present. Substantial time was also scheduled for lunch and supper.

⁶] I use the word “art” (in its compositional form) when I wish to speak of that which would not happen without the artist (or composer) and the artist’s (or composer’s) intentions. (Brün 2004: 289) Moments of art can happen when participants in an interaction recognize an anomaly – a contradiction, an inconsistency, a conflict, an asynchronicity – and turn it into an opportunity for sustaining, shifting or creating a new interaction, an act of composition, whether or not the participants use this vocabulary to describe what they are doing. Under this formulation, the act of doing art plays a role in social change, whether the artist or composer acknowledges it or not. To acknowledge it is to take responsibility for its consequences, not in the sense of establishing causal links to outcomes, but in the awareness that the dynamics of interaction stimulated can sustain, create or eliminate choices and alternatives. Taken this way, art serves as a perturbation or provocation in the dynamics of interaction we call the social world (Richards 2010).
breaks, so that more conversations could occur at that time. It was interesting to see how people condensed their presentations to fit the time restrictions; my experience was that the shortened presentations were superior to what I would have taken away from longer presentations on the same topic. So, this design had two features I found desirable — no parallel sessions and short presentations.

**Using celebrity speakers**

« 35 » We live in a celebrity-oriented society. Many people, both academics and professionals, gravitate to conferences where they might have a chance to meet, or at least listen to, someone well-known in the field or topic of the conference. Although second-order cybernetics gives every individual the ability to make unique contributions and therefore downplays celebrity, the need to have a critical mass of people at a conference for financial reasons leads to invitations to certain individuals who will attract a significant number of attendees who would otherwise not come. These well-known individuals are often put into the conference program as stars, and therefore act that way, creating a de facto hierarchical structure that detracts from actual conversation (and the incompatible and opposing ideas than come with actual conversation). Since celebrities generally have their way to the conference paid, one option is simply not to invite them and opt for a smaller attendance. Except for the banquet speaker on the last night of the main conference, the 2013 ASC conference in Bolton, England, might fit that option. While the conference was small, the conversations were robust, and there were apparently sufficient attendees to cover the expenses of the conference (given that celebrity expenses did not have to be paid and that it was held at a university).

« 36 » Another ASC experiment with the use of celebrities was that of two conferences on Texts in Cybernetic Theory, 1988 and 1992, held in the fall at summer camps in Felton, California and Seabeck, Washington, respectively (Donaldson 1988, 1992). The idea was to design the conference entirely around a few well-known authors — William Powers, Humberto Maturana and Ernst von Glasersfeld in 1988, and Herbert Brun and Humberto Maturana in 1992. By the way, I suspect these authors would likely prefer not being referred to as celebrities: they did not actively seek the status; they just fell into the role by virtue of their charisma and the popularity of their work, and then played the role in the interest of the rest of us in the celebrity-oriented society in which we find ourselves.

« 37 » Each author was asked to prepare a text for the conference on some aspect of their thinking about cybernetics, which all the attendees would read prior to arriving. One day was devoted to each author, each giving a presentation on their text, followed by small groups of attendees meeting to identify some questions for the authors, and then the authors having a chance to respond to the questions. The last day of the conference was devoted to comparing and contrasting, and, where useful, integrating some of the ideas. The authors were available for conversation during the entire conference; the conversations in small groups and throughout the conference were intense and constructive, and differing viewpoints had a chance to be heard and challenged. Of course, no papers were solicited or presented; any activities other than those surrounding the texts, including performances, were unscheduled. Despite this feature, there was sufficient and enthusiastic attendance.

**Downplaying paper presentations**

« 38 » Many people claim to attend academic conferences to present their paper(s), attend the talks by the big name speakers, network a little in the hallway or bar, and maybe participate in tours, banquets and/or entertainment events. That is, attending paper presentations is not a high priority, even if they do it anyway. Downplaying paper presentations has been an experiment at a few ASC conferences. At a special conference in Montreal, Canada, in 1990, people could bring whatever they wanted to present or perform, but no prior solicitations were made and no program was prepared. Rather, on the first evening of the conference, with attendees present, a program was created that allowed all offers to be accommodated (without parallel sessions). Some presentations were a half an hour, others just five minutes, with adjustments to the program made as necessary during the conference. For example, I gave my first presentation, in five minutes, on "Why I Am Not a Cybernetician," in which I introduced the idea of the cybernetician as a crafts-person in and with time. I expanded it to a 45 minute plenary presentation the following year (Richards 1993).

« 39 » A similar experiment was tried at a succession of three ASC conferences in 2010 (Troy, New York), 2011 (Richmond, Indiana) and 2013 (Bolton, England). Paper presentations were not scheduled ahead of time, although they were solicited with the opportunity for publication in a special issue of a journal. Rather, time was set aside in the evenings for presentations, and those who wanted to give their presentations could do so. For some, making their papers available for attendees to read was sufficient exposure, at least enough for them to get funding from their employer or sponsor to attend the conference, so they opted out of making a presentation. The daytime program of these conferences was then devoted to small group conversations on the theme of the conference and other special, often experiential, activities. My observation was that those attending the evening paper presentations at these conferences, and not all did, were more engaged than they would have been if the presentations had been pre-scheduled. Perhaps the presenters, and the audience, appreciated the opportunity for the presenter to opt into the presentation. I think there were mixed reactions about the overall format of these conferences. Some liked the conversational groups, while others indicated that they were not a good use of their time; I am sure that these differences were in part affected by the particular people in the groups, although the expectations of individuals was also surely a factor. I appreciated the format as an experiment in conference design, and especially liked some of the post-conference conversations (Glanville 2011).

**Facilitating conversation**

« 40 » Conversation can be facilitated at a conference simply by giving time and space for it to happen (a lounge, long meal breaks, an afternoon off). Conversation can also be built into a conference program by scheduling it around specific topics/tasks. This can be done in small groups or for the conference as a whole, if size permits. Going a step further, an entire conference can be designed using a structured approach to conversation. This happened at an ASC conference in 1999.
in Falls Church, Virginia. After a day of pre-conference presentations, the three-day main conference was organized using Stafford Beer's syntegration process (Beer 1994). Experienced facilitators kept it on track. The topic for conversation was quite open-ended – new directions for cybernetics. Groups of five were created around themes they identified, and process roles were distributed among the groups. At no time were there less than 15 people in a room – the primary group of five, five in the role of critics/respondents (used to provide suggestions or other input to the primary group) and five in the role of observers (as witnesses for later reference). Groups roamed from one room to another per the prescribed distribution (which was carefully timed).

« 41 » Without going into detail on the process, I can report that I left the conference physically exhausted, and did not initially know why. I remember saying to someone that, while I was glad to have experienced the process, I did not know if I would voluntarily submit myself to it again. After being away from it for a while, I was able to reflect on the experience and say that I absolutely would do it again. What I remember about the conference is not so much the topics discussed, which were significant, but the exposure to a non-hierarchical process that I had not previously experienced and of the struggle to accommodate a structure that was not aligned with my way of thinking. Creating non-hierarchical structures that support dialogue and foster incompatible and opposing ideas, among thinking/caring people, is not a trivial undertaking and begs for experimentation.

**Integrating performance**

« 42 » In addition to encouraging presenters to treat their presentations as performances, performance by experienced actors, musicians and artists has been a part of ASC conferences since at least 1982 (Columbus, Ohio). These performances often get scheduled in the evenings, leading to a perception by some that they are intended as the entertainment for the conference, and indeed some are quite entertaining. However, performances can contribute directly to the theme or topic of a conference. They can challenge current thinking, including current logic and desires; they can create awareness of alternatives; and they are an opportunity to play or experiment with dynamics. If taken seriously, they can stimulate conversations that would not otherwise happen. At an ASC conference in 1987, at the University of Illinois, one day was designed as a cybernetics fair: people in a large room could move from table to table to listen, talk and experience demonstrations, or to organize a table themselves. Interspersed throughout the day were performances that served as breaks in the fair, encouraging people to stop and reflect and to move on if they wanted, with a performance possibly stimulating a new thought. I contend that performance in this sense could have a place in all academic and professional conferences, particularly if the designers/organizers have any interest in the conference serving as a potentially pivotal event in the dynamics of interaction in other social systems and in society at large.

**Mitigating the tyranny of the clock**

« 43 » In the current society, throughout most of the world, human lives in the workplace, in school, in families, everywhere they turn, are regulated by the standard clock. Without the clock to synchronize our behaviors and actions, current society would collapse. While some might frame such a collapse as a desirable occurrence, we cannot just ignore the clock, or employ an alternative one, in designing conferences. Conferences must have defined start and end dates, or no one would come. As a result, the conversations people might like to have at a conference may not happen, simply because there is no time for them among all the other events scheduled. One experiment to address this dilemma has been designed into the three ASC conferences previously mentioned, in 2010, 2011 and 2013, along with the 2014 conference in Washington, DC. The main conference started with an evening reception and ended with a banquet on the night of the following third day. By scheduling two days of pre-conference and two days of post-conference events and activities, some flexibility in time became an option for those who chose to advantage themselves of it. There were no additional fees for these extended times, although they did create additional work and facilities cost for the organizers. Of course, there was no guarantee that specific people with whom one might want to talk would also choose to take advantage of these times. My experience, however, was that there were always people around and some of the most interesting conversations took place during the pre- and post-conference days.

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Conclusion

My experiences with conferences of many types leads me to conclude that an academic conference designed with a set of broad, second-order cybernetic principles in mind, and where participants are informed of the design intent before they decide to attend, can open an opportunity for learning, understanding and creating new ideas in ways that would not otherwise be available. In particular, I have found designs that experiment with new structures and processes, open spaces for conversation (both physical space and time), incorporate rules or other devices to avoid undesirable interactions, treat desires as constraints rather than as goals to be achieved, assign tasks to be performed together, pay attention to the potential tyranny of clock, allow for adjustments in format during the conference, downplay paper presentations in the traditional sense (reducing parallel sessions and shortening presentations), engage invited speakers in conversation rather than isolate them, integrate the arts and performance and limit hierarchical arrangements to be interesting, if not enlightening. As such, they could even be taken as prompts for turning conferences into social transformation events. At the least, I do not like to see such proposals or attempts dismissed as impractical or too radical.

Finally, I would like to comment on a challenge offered by a reviewer of this paper. In my words, the challenge is: How would I think about the presentation of this academic paper in light of the same second-order cybernetic features I used to derive design principles for the academic conferences? Is there not a contradiction in proposing some rather radical ideas for the academic conference in an academic paper that is quite traditional in style and format?

I think the answer has to be “yes!” Constructivist Foundations, while non-traditional in some ways, is an academic journal that seeks contributions from people who will be rewarded for scholarly publication. Therefore, I wrote the paper with certain standards of style and format in mind. While I might have experimented with diagrams and maybe some vignettes and dialogue, and gotten away with it, I would have preferred, given my orientation to second-order cybernetics, to write it as a poem, a play or a short story (or, even better, as a mystery novel, movie or animated film), for which I doubt I would be so fortunate. The liberal use of the first person (except in the abstract) and the self-referential nature of these concluding remarks are as far as I felt I could stretch the expectations and still respect the accepted standards. I hope it is clear that I have thought carefully about all the suggestions I have made, and my desires inherent therein, and that I take responsibility for their consequences. I appreciate the opportunity the reviewer has provided to reflect on the contradiction; it highlights the dilemma of second-order cybernetic thinking in the current society and its social institutions.

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Open Peer Commentaries on Larry Richards’s “Designing Academic Conferences in the Light of Second-Order Cybernetics”

Can Conversations be Designed?
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Richard’s article presents a well-argued discussion of conversational conferences, with a particular focus on the design of such conferences. Richards bases his discussion on many years of personal experience with conversational conferences, primarily those organized by and for the American Society for Cybernetics. In this context, it relates to second-order cybernetics and conversational processes to allow new understandings to emerge, and are less concerned with achieving predefined external goals. In this context, conversational conferences aim to create opportunities for conscientious collective construction of individual knowing.
Constructing experiences individually and collectively

Although it sees all learning as essentially private, radical constructivism acknowledges the social dimension of learning (Scott 2001). Conversation theory offers a theoretical model describing the dynamics of (social) conversational exchanges as a basis of learning, involving self and other (Glanville 2007b). Conversational processes between human beings rely on the willingness of participants to engage in conversation (as Richards points out in design principles 3, 7, and 9). As described in the 2013 ASC conference website, conversation involves collaboration: “We will work together (collaborate) in small groups and through plenary sessions, to improve understanding and acting, explored together” (http://asc-cybernetics.org/2013/?page_id=12). Joining a conversation is a personal decision and cannot be forced – just as insight and knowledge is personal and cannot be externally induced in individuals. In this sense, the success of a conversational conference heavily depends on the willingness of everyone involved to accept the basic premises of engaging in conversation with others, potentially to change existing ways of thinking and to accept differences in viewpoints where they arise. The most problematic aspect of conversational conferences may thus be the difficulty of establishing an atmosphere of trust and equality among all participants, as Richards points out in design principles 7 and 9.

Conversational conferences cannot offer any guarantee that all attendees will experience insights, learning, or enjoyment. Paradoxically, Richards describes his most memorable conversational experiences as having taken place at conventional academic conferences (§9) and remarks that he has not been able to repeat similarly rich and rewarding experiences at later conferences. This comment is a reminder that personal experience at any event relies strongly on each individual’s past experience – such that rewarding experiences may neither be predictable nor repeatable for ever-changing individuals. One cannot, to paraphrase Heraclitus, attend the same conference twice. This comment also emphasizes that even conversational conferences organized with the best intentions cannot cause rewarding experiences intentionally.

The cybernetics of designing (conversational conferences)

How, then, can conversational conferences be designed – and can they be designed at all? The answer to this question forms the central aspect of Richards’s article and can be characterized in terms of both cybernetics and design. In terms of cybernetics, Richards takes his own participant-observer position into account and builds his argument on insights gained through having being involved in conversational conferences. This personal approach allows him to appreciate the participants’ experiences first-hand, which he describes as ideally involving stimulating conversations, generating new and alternative ideas, and leaving intellectually stimulated and mentally or emotionally refreshed (§§3, 30). Through participating in conversational conferences, Richards is also acutely aware of the challenges that can arise when implementing conversational conferences – less desirable experiences such as disrespectful behaviours of participants, the formation of hierarchies, the desire to adhere to conventional conference formats, fixed schedules, and participants’ expectations not being met. Several of Richards’s “design principles” for conversational conferences directly address such challenges in order to enhance participants’ experiences during the conference.

The remaining “design principles” in Richards’s list address questions of designing the conference itself. They are based on an approach to design that employs constraints rather than goals (Fischer & Richards 2015). As Richards points out, design by constraint does not aim to achieve certain goals, but to avoid undesirable events (§21). Design by constraint is designing in a cybernetic sense: instead of determining outcomes, opportunities for interactions are provided that may have a wide variety of potential outcomes. Richards refers to conversational conferences as potential generators of desirable social change (§30) and sees the role of such conferences as creating platforms for new or alternative ideas to emerge. As Ranulph Glanville (2007a) has argued, conversational processes are central to the activity of designing, of creating something new. Due to their conversational nature, the outcomes of design processes are open-ended and somewhat unpredictable.

Richards recognizes this in his first “design principle” (§20) by emphasizing that any conversational conference should be regarded by its designers as a process rather than a final outcome, eventually leading to the next and yet again different conversational conference. Experimental conferences provide opportunities to gain new insights not only for their participants, but also for their organizers.

Design, cybernetics, conversation, and radical constructivism are strongly interconnected (Herr 2015): conversational processes underlie the creation of the new during designing, and designing can be described as the fundamental cognitive act involved in construction during reflection (Glanville 2006). If conventional conferences are devices to maintain the status quo, conversational conferences are devices to engage in conversation to create the new collectively. That which is new is, however, individually constructed and somewhat unpredictable, which leads to a setting in which the success of conversational conferences can be gauged less by means of reaching goals or producing certain outcomes. Rather, the main outcome of conversational conferences can be seen to lie in rich personal experiences and the individual changes participants go through as a result of learning to resonate with others and to see through others’ eyes.

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Embed and Unzip: Entailment Structures as a Knowledge Building Tool for Academic Conferences

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> Upshot • Building upon Richards's notions of “design by constraint” and the usefulness of assigning collaborative tasks to conference participants, this commentary suggests a basic application of Pask's conversation theory as a potential aide to fruitful knowledge construction in a conference setting.

1 In a footnote to design principle 3 in §22, Larry Richards enumerates varieties of “violent” behaviour that are, indeed, all too familiar at academic conferences. But while the type of constraining regulations outlined subsequently in design principle 9 (talking tokens) may limit the actual duration of some of these behaviours to shorter bursts of unpleasantness, I do not believe I have seen them engender any deep shift in attitudes towards conversation as co-operative knowledge construction. And, as the decidedly mixed reaction to the series of “conversational” ASC conferences alluded to in §39 indicates, the mere dedication of additional conference time to conversational encounters does not guarantee an exchange of knowledge preferable to that afforded by the opportunity for attendees to listen to the carefully constructed positions of speakers with an established record of thoughtful and productive discourse (one might dare call this “achievement”) developed and elaborated for the listener over an extended period of time. Any presentation by Richards would be a good case in point.1 Richards draws our attention to the opportunity for further creativity in the design of facilitated conversation and, in response, I offer a basic application of a second-order cybernetic tool absent from the target article: Gordon Pask's conversation theory (CT). Much of Pask's energy was directed towards the embodiment of CT in technologies through which individuals could teach, learn, and think together (i.e., CASTE, THOUGHT-STICKER) and that he thought of as “epistemological laboratories” (Pask 1979: 111). The phrase seems to me an apt description of what the reconfigured academic conference gestured to by Richards might become.

2 Pask draws a clear distinction between communication as one-way information transfer and conversation as reciprocal information exchange grounded in a process of “concept sharing” (Pask 1979: 111). Perhaps it is communication in the guise of conversation that has proven so irksome to Richards and others (myself included) at academic conferences. In actual conversation, “independent participants are rendered locally dependent, or otherwise asynchronous participants become locally synchronized.” The “local” nature of this synchronization seems to carry the kind of temporary status that Richards desires, and in no way seeks to elide differences between participants. Indeed, Pask reassures us that the act of conversing itself “surely depends upon their autonomy and distinction” (Pask 1980: 999). In the same paper, he offers a useful example of the kind of conversational concept sharing that he has in mind.

3 So, if A and B are asked about ‘circle,’ they probably come up with different explanations, for example, A draws a circle with a compass on paper, B slices a cylinder. Equivalently, they would write different computer programs in order to generate circles.1 (Pask 1980: 1002)

4 Bernard Scott explains the two main procedures through which a basic entailment structure can be further elaborated.

• Any topic at the lowest level of a hierarchical entailment structure may be analysed further in order to reveal sub-topics. The conversation theory term for such an analysis of a topic is “unzipping.” For example, in response to the question, “What is a table?,” the topic “table” could be unzipped to reveal sub-topics concerned with “having legs” or “having a flat surface.”

• An entailment structure may be embedded within a larger hierarchical form.

Figure 1 • Shared concepts common to participants as the result of agreement. This figure illustrates the stability of these concepts in a single brain. In Pask’s original article, the addition of asterisks to the topics indicates that they are shared by at least two brains.
For example, in response to the question, “What is a table?” the response could be that it is an item of “furniture”; in turn, topics to do with “furniture” may be embedded within a larger structure of topics concerned with “human dwellings.” (Scott 2011: 321; see Figure 2).

> 5 > Pask's notoriously dense texts offer further elaborations of increasing complexity and richness; but I propose that, with only this basic pair of manoeuvres in play, the coherence demands of group inter-weavings of entailment structures could serve to constrain otherwise rambling, endlessly circling exchanges in such a way as to produce not only more constructive discourse on the day itself, but also a graphic record of the exchange that participants can take with them to use (or not use) as they see fit, including the possibility for continued elaboration long after the conference is over. Imagine a “breakout session” in which a topic (concept) is written in its simplest terms within a circle on a chalkboard, flip chart, or projection screen. One after another, participants are asked to add to the emerging entailment structure by either unzipping topics already in play (including alternate unzippings such as our two different procedures for generating circles) or embedding them within other meta-topics. As they do so, each participant could be given a strictly allotted time (say two to five minutes) to explain the rationale behind their addition. Responses to the previous participant’s addition/explanation cannot be expressed in the form of objections, questions, or monologues but only though a further elaboration of the entailment structure with accompanying rationale. The group can cycle through this process for as many iterations as are considered desirable or productive by a facilitator or by consensus. In this manner, a diverse group of participants can assemble a visually tangible “universe of discourse” in which their own personal, philosophical, and/or disciplinary perspectives can literally bump up against those of the others in the group in ways that allow them to illustrate surprising connections, co-exist in productive tension, and all points in between. For instance, I can imagine a scenario in which Participant A unzips a topic in one way, Participant B unzips the same topic in a manner that she is convinced is absolutely incommensurable with A’s offer, and Participant C embeds them both in a larger category that offers some terrain over which A and B could go, perhaps over dinner afterwards, to continue to probe the differences and overlaps between them in ways that could enrich them both.

> 6 > As mentioned above, fully articulated CT, as well as entailment meshes themselves, offer layers of analytical complexity well beyond what has been outlined here. The two fundamental activities of embedding and unzipping are offered, in this context, as enabling constraints designed to expedite fruitful academic exchange of the sort that Richards desires without requiring conference participants to have a deep background in CT. I believe I share a similar desire to that of Richards and hope that this offer may make some contribution in this direction.

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> Upshot > Fostering conversation is shown to be a central element in a cybernetic approach to meeting design. A history of successful meetings on cybernetic themes suggests how designing for conversation may also be applied to academic conferences generally.

> 1 > As a longtime member of the American Society for Cybernetics (ASC), I have appreciated Larry Richards’s commitment to fostering participation and innovation in ASC meetings. His target article has given me an opportunity to reflect on these meetings and their unique satisfactions. My response intends to support his desire to introduce some of these qualities into academic meetings and life generally, and to bring his perspective to bear on the future meetings and organizational structures of the ASC itself.

> 2 > I find myself responding to Richards’s article as if we are now at a conference together, joining a conversation. I experience the warmth of greeting old friends and new, and the openness to ideas that I may not have encountered before. This themed journal issue is a sort of academic conversation, especially as it includes responses to the centerpiece articles. As a former librarian, I am inclined to see bibliographies as gatherings, assembled by authors. As a person fascinated by the social network of cybernetics, I read Richards’s article beginning with its reference list, then worked backward through his conclusion before starting at the proper beginning.

> 3 > Richards has thoughtfully outlined a set of criteria for what he considers to be a successful academic meeting. He bases these on over 30 years of personal experience at conferences, some of which he helped to organize. Many of the meetings he describes are in the tradition of cybernetics, particularly “second-order” cybernetics, with which he has been involved throughout his academic life.

http://www.univie.ac.at/constructivism/journal/11/1/065.richards
He contrasts the unique character of these meetings with his experience of “traditional” academic meetings of a more disciplinary and professional cast, which in his view often fall short of a desired potential. His descriptions of many meetings in the cybernetics tradition illustrate how perspectives related to cybernetics have been applied in various intentional ways to the meetings themselves, in terms of the topical choices, the implied or intended outcomes, and the ways the interactions of the meetings are structured. This perspective also informs his proposals for mitigating what he sees as a tension “between advancing individual careers / celebrity and building new knowledge together” (§44) that characterizes most academic conferences.

This is the perspective from which he responds to the broader question: Can the insights that are collectively termed “second-order cybernetics” be useful for those who are planning academic conferences generally? His discussion overall is an appeal to nurture conversations, broadly conceived, as part of the expectations and planning for such meetings.

In a sense, his discussion suggests a specific application area for the meta- or trans-discipline of second-order cybernetics. Richards provides an evocative set of areas of inquiry in the cybernetic domain (§13) and characterizes this domain in terms of Heinz von Foerster’s “undecidable questions” (§44), and leaving the meeting “intellectually stimulated and mentally / emotionally refreshed” (§30). These all can be situated within the notion of the centrality of conversation as advanced by Klaus Krippendorff. Expanding on Ludwig Wittgenstein’s metaphor of “language games,” Krippendorff suggests that conversation “well may be ongoing, a ‘way of life’ in which people have the courage to change their being with each other” (Krippendorff 2009: 2). Though these outcomes are far beyond the expectations of traditional academic meetings, Richards suggests that they can have a place there, helping to resolve the intrinsic tension he describes.

I would like to mention another kind of tension that arises when we contrast meetings that are constructed along cybernetic lines with traditional academic inquiry. This involves very different ideas of what Richards calls “new knowledge” (structured abstract and §44). For myself and many of a cybernetic or constructivist persuasion, knowledge resides in the cog-nizant human subject in social relationship, rather than as embodied in the artifacts that preoccupy the knowledge accounting systems of the academic world. An approach toward this deeper tension through a shift from knowledge-based to question-centered learning environments will be briefly mentioned below.

The idea of “conversation” is a core concept both in the cybernetics tradition and throughout Richards’s presentation of what makes for a successful conference. Fostering open but structured conversations has been a constant in cybernetics meetings, classes, and projects going back to the Macy Conferences of the 1940s and early 1950s. Conversation emerges as the heart of the communication facet of the communication-and-control formula of the early cyberneticians.

Conversation, however, is not just a way to help define a discipline; its significance goes beyond disciplinary concerns. Terry Winograd and Fernando Flores claimed that at the heart of social organizations are systems of conversations and commitments (Winograd & Flores 1986: 158). Similarly, Krippendorff, who thoroughly explored conversation in an article published in Constructivist Foundations, states that “conversation has become the starting point of my conceptualizations of being human” (Krippendorff 2009: 1). In an earlier presentation of his perspective, he asked:

Is conversation an unattainable ideal, or maybe the luxury of a leisure class? I think it could perhaps be construed as such. But I don’t think so. I think it is the ultimate reference point for being human.

How do we open space for conversation in any social setting, including academic meetings, in any social microcosm where we somehow find ourselves committed to participate? I see Richards’s extended reflection about meetings in cybernetics as a counterpart to his presentation “A History of the History of Cybernetics: An Agenda for an Ever-Changing Present” at the 2014 ASC conference, where he offered reflections on the history of the Society itself, and on his own participation as one of several past presidents of the Society who gathered there.

The Society stands as an expression of the lineage of conversations in cybernetics going back at least 70 years. It may help our focus to remember the world that spawned the cybernetics movement in the 1940s, and that marked some of the motivations of its founders. In his introductory remarks in the first Macy Conference proceedings, of the March 1949 meeting (the sixth meeting of the series), its organizer Frank Fremont-Smith raised the question to how far the complexity “of the computing machine type […] potentially threatens individual decision?” He also stated:

One can say also that the physicists have given us the ultimate weapon of hostility. Now perhaps it is important for all of us, including the physicists, and the mathematicians, to learn something about the nature of hostility."

Conversation was seminal for von Foerster. The words “circularity,” “epistemology,” and “responsibility” are in the title of his account of it (Foerster 1989). The themes of
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)

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 among 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 Synergy 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.

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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
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.

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 Brun once said to me in 1993:

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

http://www.univie.ac.at/constructivism/journal/11/1/065.richards
First, disclosure

4 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.

5 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.

6 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.

7 In his article, Richards uses the term “deep conversation” when pointing at a 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).

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 emotion 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


2 See my multimedia presentation “What’s so radical about radical constructivism?” presented at the 19th Annual International Personal
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 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).

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.

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.

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.

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

Third, doing cybernetics

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?

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!“

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

From my movie “Living cybernetics,” ACS. Available at http://gentrificationknotproject.net/living-cybernetics

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)

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.

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.

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.

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.)

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).

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Avoiding Violence by Design
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> Upshot • I propose that a lack of a common ground or culture of understanding is a design flaw in academic conferences that creates opportunities for violent reactions. I suggest that an additional or revised design principle or praxis should be considered through application of second-order cybernetics.

1 Based on his many and varied experiences, Larry Richards describes a series of 10 principles to be used as guidelines for designing academic conferences in light of seven features of second-order cybernetics (SOC). In this commentary, I focus on the third principle in order to bring attention to what appears to be a persistent flaw in the design of academic conferences that results in the inciting of violence and disruption of the intent of the conference. Principle 3 has to do with encouraging desired “events, behaviors and outcomes” and avoiding those that “interfere with the desired,” especially “any interaction that could be taken as violent” (§22). Richards helpfully footnotes his definition of violence as:


2 This extended definition of violence is helpful because it identifies and details a number of situations that are in fact too frequently experienced in academic conferences. Other related behaviors that could be characterized as violent and disruptive include interrupting, verbally attacking, insensitive sarcasm, or disruptively leaving a session. Avoiding these types of violence and disruption should be of particular importance to those who desire to design conferences with alternative structure, activities and outcomes, especially as described by Richards in light of the SOC features. However, it is inherent in the alternative design and nature of these conferences that certain types of violent situations are incited, albeit unintentionally, by the inadequate attention given to establishing a common basis for participation by all attendees before or at the beginning of the conference. Establishing a common basis could be understood as creating culture in the way discussed previously by Richards in his constructivist approach to social policy formulation (Richards 2007). Herein, I suggest that acknowledging the persistent reoccurrence of violence in alternative conferences indicates a design flaw that requires further reflection and analysis to determine what is needed—a new or revised principle, or a new or improved praxis.

A challenge of alternative conference design
3 While Richards recognizes that violent behaviors are present at both traditional and alternative conferences, the focus of his article on designing conferences with alternative formats provokes a closer examination of the ways in which alternative conferences are structured that incite violent responses. Alternative conferences are those designed with intentions that go beyond presentation of papers and exchange of predetermined information. The focus is often on generation of new ideas from the interaction of participants from varied disciplinary backgrounds as well as with a range of experiences. Varied processes for building knowledge will likely be employed in these conferences and the settings might be intentionally unusual and unfamiliar to stimulate innovative thinking. Thus, the patterns and settings of interactions as well as the subject matter might be unfamiliar to many attendees. They are being inserted into a new culture. If culture functions as a system of constraints on human behavior (Richards 2007), then being quickly inserted into an unfamiliar culture can create behavior problems. The novelty can present several challenges to participation for new attendees and those who attend the conference infrequently.

4 An even more experimental approach to the design of academic conferences, where a new set of experiences and expectations are created for each annual conference, can expand these challenges to include an impact on even the regular attendees. Challenges to attendees’ participation include confusion, fears, and/or lack of confidence due to either surprise about or lack of understanding of the norms and expectations surrounding the format and content of the idea exchange, i.e., the culture of the conference. Such confusions, fears, and lack of confidence can and do result in situations that incite violent behaviors or disengagement. Whether attendees are supposedly functioning as observer, listener, or participant, a sense of exclusion can result even if there has been explicit invitation to engagement and certainly when the invitation has not been forthcoming. Such situations are typically not intentional, but rather the results of some design failure and clearly interfere with the desired outcomes of alternative conferences. Analysis of a design failure is the ethical responsibility of conference designers—an ethical responsibility that can be evaluated in light of the four principles of common morality, to do no harm, to provide benefit, to respect individual autonomy, and to treat all [attendees] with justice (Beauchamp 2007; Beever & Brightman 2015).

5 Several examples of alternative conference designs with experimental approaches are provided in Richard’s article (primarily from his experiences with the American Society for Cybernetics (ASC) since 1981). While my attendance at these ASC conferences has been recent and limited, I can provide several additional examples from other recent conferences with alternative formats or components, namely the 12th Early Atlantic Reading Group (EARG12) in April 2012, the 10th Design Thinking Research Symposium (DTRSI0) in October 2014, and the 11th Engineering, Social Justice, and Peace (ESJP11) conference in September 2015. From my participation in these conferences as observer, listener, and performer, I can attest that all of these conferences had attendees who experienced such challenges to participation. So while...
ASC conferences do have some unique designs, experimental approaches, and desired outcomes, the challenge of avoiding inciting violence by design is more widespread.

**Design failure**

« 6 » If the results of a design include undesirable outcomes (violent behavior in this case) either by failure to avoid intentionally the undesired or by unintentional triggering of the undesired, then there is a flaw in the design. However, the root cause of the failure is not immediately clear. Whether the failure is from an inadequate or missing design principle or from an incomplete or inadequate praxis cannot be ascertained by either an external or an internal observer. Analysis of the design failure in light of the features of SOC would suggest that the design did not adequately account for the “centrality of the one or more observers/listeners/participants in the formulation of” knowledge (feature 1, §16); that “the importance of the desires of the observer/listener/participant” (feature 2, §16) were not adequately considered; or perhaps that “the avoidance of hierarchical thinking whenever possible, giving precedence to recursive relationships, especially in social systems” (feature 7, §17) was not achieved in the design. In any case, alternative conference designs that intentionally create uncommon experiences and encourage interactions from many disciplinary perspectives with the desire for enhanced and innovative knowledge production must consider the necessity of establishing some common ground of understanding and interaction on which all attendees might stand and engage if violence is to be avoided.

**Establishing common ground**

« 7 » Richards has some awareness of the importance of establishing common ground, or at least recognizes the need to inform attendees “of the design intent before they decide to attend” (§44). He sees this as especially important with experimental conference design, where there is the possibility of “mistakes (undesirable consequences not anticipated)” (§23). However, the depth of this awareness and consideration in the design of alternative conferences has typically been insufficient. Alerting attendees of the design intent is one part of the preparation needed, but this should be expanded to include all variations in structure, additional or novel activities, or experimental formats for engagement. To develop a common ground or culture of understanding, more than an alert is needed. To respect their ability to make informed choices, all attendees should be prepared with clearly articulated details and with descriptions of the expectations and options associated with any unfamiliar or experimental formats or practices. In fact, new attendees should be given details and descriptions of even the formats, activities, expectations, and content that would be familiar to regular participants so as to establish a just and equitable potential for participation for all. Establishing a common ground of understanding or culture in this way provides accessibility of engagement in the conference and reduces potential situations of harm and violent responses due to frustrations about perceived exclusion from the benefits of participation.

**Participation is essential**

« 8 » Situations of potential exclusion or incited violence due to frustration by limitation or perceived power dynamics are clearly to be avoided by academic conferences such as those of the ASC, where engaged participation is seen as essential and desired. Engaged participation is essential for knowledge creation and for creating harmonious societal impact. This can be seen as an issue of social justice in which those in the know (regular attendees/participants and the conference designers) have the power to exclude or to dominate the conversation. Richards recognizes this critical issue in design principle 2, yet he also suggests that “Designing by constraint does not guarantee particular outcomes: anticipating the variety of personalities who will show up and the dynamics of interactions that could arise so that the design can preclude all possible undesirable behaviors is problematic” (§21). Clearly, this is a significant challenge that requires deeper reflection and analysis and potentially new principles or practices.

« 9 » So how much preparation is needed to achieve a common ground or culture for all attendees and how much of this preparation can be done in advance of the conference when potential attendees still have a chance to decide whether or not to register (respecting their autonomy)? These questions are of particular interest to me and to my artist collaborators, who have contributed performance art components to several academic conferences, both traditional and alternative. Our desire in these components has been to introduce novel conceptual material and perspectives on the conference theme in an alternative format that inspires new thinking. We see our performance work as creating essential asynchronicity and dialogic interactions in light of the SOC element (feature 5) requiring a friction, conflict, disagreement, inconsistency, being out of sync among observers/listeners/participants in the generation of continual change in human knowledge and understanding” (§16). However, we have regularly encountered the challenge of determining how best to prepare attendees with a common ground of understanding and expectations that provides accessibility and engagement as an observer/listener/participant without reducing the novelty, surprise, and shifts in perspective that are intended to create an asynchronicity that inspires new thinking and stimulates conversations (McMullen, Jaycox & Brightman 2016).

**Designing a new principle or new praxis?**

« 10 » Recently, I participated in two academic conferences with approaches to establishing common ground at the beginning. Both approaches were inadequately designed in that they were not able to prevent undesirable violent behaviors in reaction to the conference. The recent ESJP 2015 conference began with a welcome and icebreaker, followed by a guided discussion on the theme. The first session was a plenary panel of several members of the coordinating committee discussing an overview of the roots of the ESJP conference. While this approach provided some common ground of historical and conceptual understandings as well as inviting an open forum for dialogue, it was clear that some attendees came to the conference with a different understanding and found this information presented in the first main session very challenging to their participation. It seemed to have come too late and too publicly and without clear options to avoid violent responses. This approach also did not capture all attendees as some arrived later in the conference. At the 2014 DTRS10
conference, a pre-conference workshop was offered specifically to engage attendees in personal experiences of the performative content of the conference (McMullen, Jaycox & Brightman 2016). While this workshop was well received, it was not attended by all who later were impacted by the performances and it clearly did not prepare some attendees adequately for the novel artistic approach they encountered. Attendees could have been better served by including a discussion of how they might respond to the performance in appropriate ways, which could include permission to leave during the performance or not to participate at all.

« 11 » Certainly other, more successful approaches might exist of which I am not aware. And I did not experience the pre-conference workshops at ASC 2014 and 2015 or the opening sessions at ESJP 2013 and 2014. Yet the challenge remains to consider more deeply a design principle or practice of creating a common ground of conference culture early and adequately to avoid inciting violence and other undesirable behaviors. If societies such as the ASC and ESJP that have intentions “to contribute to the conceptualization of a new and more humane society” (§5) and to be “a network of activists, academics, and practitioners dedicated to social justice and peace,” respectively, continue to design alternative conferences then this challenge is especially pertinent. So I conclude with questioning whether more concerted attempts are required to design a better praxis for alternative conferences or whether an additional design principle is needed to avoid inciting violence. Could a new design principle be formulated in light of the features of SOC and added to Richard’s initial set of 10? Would this not be an application of SOC to the creation of principles for designing academic conferences?

Desires, Constraints and Designing Second-Order Cybernetic Conferences

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> Upshot • I relate my own organizing of participating in and organizing conversational conferences to Richard’s discussion. Perhaps contradictory to Larry’s argument, I believe that in order for conversational conferences to be successful, they require some rules, structure and some hierarchy. Below, I would like to add reflections from own experience and also point to some guidelines worth considering, taken from Callaos’s recommendations.

« 1 » Larry Richard’s argument appears to me as idealistic as it is radical in that it recommends rigorous second-order cybernetic principles for conference design. However, I think this also might be its practical weakness. The target article suggests second-order cybernetic principles that conferences should implement or adhere to, linked to Heinz von Foerster’s notions around “human experience and concerns, including the relationship between humans and technology – that is, biological, psychological and social concerns” (§12). These suggestions recall Margaret Mead’s recommendations from the inaugural ASC conference that cybernetics should be conducted in a rigorously cybernetic manner (Mead 1968). Randolph Glanville writes that a cybernetics conference should not only discuss cybernetic ideas but be done in a cybernetic manner (Glanville 2011). This was implemented, in a structured design, at the 2010 ASC conference at Rensselaer Polytech in Troy.

« 2 » From my perspective, progress has indeed been made in developing an ever-changing conference format with surprising variety – that deeply engages in Heinz von Foerster’s aforementioned themes – yet after almost 50 years a genuinely self-organising cybernetic conference is still waiting to be implemented. Why is it so difficult for a genuinely self-organising cybernetics conference to emerge, even among committed and experienced participants? Could it be that conversational conferences work better with clear rules, moderators and some degree of hierarchy? Perhaps this is more effective as we are accustomed to this type of structured approach?

« 3 » Richards’s recommendations presuppose that there already is an existing culture of respectful and generous listening. In my view, however, this culture of conversation needs to be reaffirmed and made explicit on multiple occasions. One way of doing this is by participants following a few guidelines, hopefully to be perceived as satisfactory by all.

« 4 » The first conversational conference I participated in was the American Society for Cybernetics 2010 conference at Rensselaer Polytechnic Institute (RPI) in Troy, NY. I experienced this conference as extraordinary inspiring, but also became aware of some frustrating effects, mainly that some individuals monopolised conversations, interrupted or showed little respect for other people’s opinions. Perhaps this was a sign of weak or lacking moderation? In 2011 I conducted a two-day conversational conference at the University of Huddersfield, UK. Both conferences explicitly reminded participants to prepare for the conference by reading Nagib Callaos’s text giving short guidelines on how to conduct conversations in groups, which had been introduced and tested in various iterations over several years at the Puschl and Asilomar conferences and at Callaos’s own conference series:

Groups require moderators which help to find a common ground, make sure everyone can express their views, encourage tolerance, keep conversations moving, ask questions that challenge assumptions, re-establish rules, summarize points, propose changes, register names of participants, take notes and make descriptions.

Establishing explicit ground-rules such as engaged listening, avoiding dogmatism, comments should be brief and last less than five minutes, no

one should monopolise the conversation, comments are directed more to the group — and less to individuals, participants should not be interrupted when they are expressing their views, the group can change rules in consensus.

Wrapping-up conversations: The moderator needs to keep time and fifteen minutes before session end the conversation needs to be wrapped up. Did any conclusions emerge? What have been the main ideas? Is there consensus? What are the basic themes? The moderator encourages participants to identify areas of common ground as well as make explicit areas where perspectives differ.

The development of the conversation is presented in the plenary by the entire group which reports on the themes and trajectory of the conversation, relying on the notes of the moderator.

In advance of the Troy conference, participants were encouraged to make themselves familiar with the guidelines above, and also reminded to follow them, during the conference. Discussions took place in small groups that had the goal of discussing a theme and coming up with questions (instead of answers). All group members briefly reported back those questions in the plenary sessions and gave an overview of the development of the discussion. Often they also reflected on disagreements among participants, communication problems and their frustration. In the plenary sessions Glanville synthesized and reflected upon the main themes, commonalities and differences. In my view, this was extremely helpful as it made explicit what had been implicit before — albeit from one individual’s perspective. It helped to see connections and stimulated one’s own reflections. Either a self-organising second-order cybernetic conference requires a main moderator who synthesizes (and moderates) the points presented by groups in the plenary, or perhaps this can be attempted by all participants. Otherwise much may remain undetected and be lost to the majority of participants. In all, the Troy conference was perceived to be an intense and outstanding conference by the participants I spoke with. During discussions in the breaks, a small group developed the idea of working on a joint publication about methods, knowledge and design. This effort came to fruition in late 2012 with the “Trojan Horses” (Glanville 2012) publication — however, from my perception, the impetus for this publication came from the impression that views of designers towards methods, knowledge and designing were not represented in the mainstream of the conference. This frustration lead to fruitful results.

For the 2011 “Making visible the invisible” conference I organized at the University of Huddersfield, I tried to follow a similar, structured approach. Participants had read Callaço’s short “guidelines.” Conversations took place in small groups, discussing themes and developing new questions. These were reported back in plenary sessions, keywords were captured on cards and jointly arranged into emerging themes, leading to further conversations and new questions. Here I took on the role of synthesizing and reflecting upon commonalities and differences. This was very demanding because I had to be present in the moment. As a result I have very little memory of the event, and am unable to report on the quality of the conference. Glanville reported a similar experience following the Troy conference, remarking that he did not feel as if he had been in attendance. Somehow stress appears to impede the construction of memory. A solution might be to involve the audience more in these reflections, to ask questions. A publication of papers written after the conference was published in 2012 (Hohl 2012). However, outcomes from discussions and plenary sessions were not captured due to my changing employers shortly after the event. Photographs of the event exist but I must admit that I have no clear memory of the themes we discussed.

While conferences are attended by many, the labours of designing and organizing the event in the months before, during the conference itself and the subsequent publication is done by a few. What might we do to spread the workload? How can we make the process of conference design, organising and facilitating more a task of many? In the end, this is a question concerning not only resources but also structure and organisation.

At the 2012 ASC conference, taking place at the University of Bolton, UK, Callaço’s guidelines were not explicitly mentioned, and from my perspective, this resulted in a different experience. The conversations at the conference were more informal, aimless and the reporting back was less structured. Although participants were experienced, they did not successfully self-organise. Moderation was managed ad hoc by different individuals in each session. As a result, I perceived the conference to be somewhat less coherent, lacking purpose and a main focus. Events flowed into one another without a clear or distinct direction, plenary presentations were of differing quality. I perceived this lack of guidance and structure as frustrating and the conference experience did not meet my expectations. With a more structured event that encouraged participants to adhere actively to appropriate guidelines, we could have achieved a more satisfactory and fruitful conference experience. During the post-conference workshop, some of us attendees asked ourselves why this conference was less coherent than earlier ones, and how conversational conference might be made more successful (the proposal for this special issue grew from this conversation). How might we compose desires and constraints in order to achieve a satisfying experience for all attendees, as well as meaningful outcomes? Participants desire to meet people, engage in conversations, learn new things, express their own ideas and opinions and learn something new. This desire is shared by all participants. Comparing the 2010 Troy conference to the 2013 Bolton conference and my own experience organising the event in Huddersfield, I think the more structured approach applied in Troy created the best conditions for facilitating second-order cybernetic principles and resulted in a more satisfactory conference experience for all. Perhaps we might view those as the “constraints” that Richards mentions.

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The Tensions between Second-Order Cybernetics and Traditional Academic Conferences

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> Upshot • Richards’s long history and commitment to cybernetics provides a well-rounded view of the dichotomy between the traditional conference and one aspiring for second-order cybernetic attributes. We examine why traditional conferences have proved so resilient, despite their shortcomings, and discuss some issues that underlie the dynamics of the participation of academics in non-traditional conferences.

1 In his target article, Larry Richards (§4), asks us to consider whether second-order cybernetics has aspects that can inform the design of conferences that aim at more than the mere advancement of a participant’s celebrity and career. He proceeds to provide an experiential basis for several principles for designing second-order cybernetics conferences. Richards’s long history and commitment to cybernetics provides a well-rounded view of the dichotomy between the traditional conference and one aspiring to second-order cybernetic attributes. The article focuses on the practical aspects of tackling the problems faced in designing conferences informed by second-order cybernetics. We agree with Richards’s implicit affirmative answer to the question that he asks, and find his proposals to be useful. In this commentary, we offer our reflections on the resilience of some aspects of the traditional conference. We also explore the unstable dynamics of participation in academic conferences informed by second-order cybernetics, and comment on the factors that can help maintain the coherence of these conferences.

2 Richards’s (§9) unenthusiastic comments about traditional conferences strike a chord with us, as they may well do with many readers of this journal. Nevertheless, it should be recognised that the traditional form of the conference can answer the needs of a community of researchers who have broad agreement on a discrete object of study, on the acceptable methods of investigating it, and on the accumulation of results. Members of such communities can attend traditional conferences in the hope of obtaining new information that will enable their work to be relevant to emerging lines of investigation, and to reaffirm their membership of a community of inquiry. However, this justification of the form of the traditional conference is at odds with the epistemological critique made by radical constructivism, which Ernst von Glasersfeld describes as “a theory of knowledge in which knowledge does not reflect an ‘objective’ ontological reality, but exclusively an ordering and organization of a world constituted by our experience” (Glasersfeld 1984: 24). From this perspective, it is unreasonable to accept the existence of objects of study that stand beyond the community of inquiry, or of methods that provide absolute knowledge of the world. Similarly, many cyberneticians reject the division of the world into discrete objects of study. As Gordon Pask states:

Cybernetics[…] like applied mathematics cuts across the entrenched departments of natural science; the sky, the earth, the animals and plants. Its interdisciplinary character emerges when it considers economy not as an economist, biology not as a biologist, engineering not as an engineer. In each case its theme remains the same, namely, how systems regulate themselves, reproduce themselves, evolve and learn. Its high spot is the question of how they organize themselves.” (Pask 1961: 11)

3 Richards (§16) lists six relevant features of second-order cybernetics. In keeping with the circularity that characterises second-order cybernetics, a fascinating and productive event could be organised where the content of the conference consisted exclusively of a shared examination of these features in the lived experience of the participants during the event. However, this event would have more in common with a T-Group than something that would be recognisable as an academic conference. T-Groups, built on the writing of Kurt Lewin (1948) – a participant at the seminal Macy conferences on cybernetics – were events where “only here-and-now interactions were discussed and explained with reference to universal laws of group behaviour” (Engeström et al. 1996: 5). An alternative approach to a focus on here-and-now interactions is to follow Varela’s path from cybernetics to Buddhism, as explored by Francisco Varela and Bernhard Poerksen (2006). Nevertheless, conferences on second-order cybernetics that retain many of the features of traditional conferences continue to be organised and attended, including ones with traditional paper presentations. There is thus a tension between a focus on lived experience, informed by second-order cybernetics, and the continuation of academic conferences in a recognisable form. We believe that this tension manifests itself in both the design and experience of non-traditional conferences.

4 For traditional conference elements to have survived, they must be of some value to participants. Richards (§8) correctly points out the deeply entrenched economic forces that sustain the traditional conference format, even in conferences that seek to take an alternative approach. It is correct that some participants cannot obtain the funding they need in order to attend a conference unless there are paper presentations and the possibility of an accredited journal publication. These requirements are the symptoms of pervasive economic and social processes, which include the monetisation of knowledge, the creation of supposedly objective methods of assigning merit to publications, and the creation of hierarchy in academic activity and networking. Moreover, these economically informed values, if they are to be effective on their own terms, must be perceived as permanent and absolute, in stark opposition to the features of second-order cybernetics proposed by Richards. The organisation of a conference that undermines these economically informed values therefore has social and political implications, which should be recognised by conference designers, both in order to prepare for the resistance that will be experienced, and in order to achieve impact beyond the activities of the conference itself.

5 We, however, do not believe that economically related factors are the only ones at work in maintaining the features
of traditional conferences within the constructivist and cybernetic communities. We propose two additional factors. Firstly, there have been a number of strands within the broad cybernetic tradition that have established clearly defined objects of study, and that have proceeded primarily through conventional academic methods, for example, the work carried out in family therapy and in perceptual control theory. Indeed, one of the present authors has vivid memories of attending a fascinating three-day event that consisted primarily of a traditional extended lecture by Humberto Maturana on the theory of autopoiesis. Secondly, to the degree that cybernetics, as Pask states above, is interdisciplinary, then to that extent it depends on the existence of disciplines. Cyberneticians may well have an interest in attending formal presentations of research that provides the raw material for a study of how systems organise themselves, even if they do not accept the epistemology that informed the investigations.

«6» These observations lead us to believe that in organising conferences informed by second-order cybernetics, there is a tension between two conflicting desiderata: on the one hand, an examination of the processes of communication that give rise to the discourse of cybernetics, both within and beyond the conference, and, on the other hand, provision of an opportunity for interdisciplinary activity, and the exchange of methods for carrying out interdisciplinary inquiry.

«7» Richards (§20) rightly points out that it is not possible or desirable to design the ideal cybernetically informed conference. The tension we have described, in combination with the mix of organisers and attendees, leads to unpredictable outcomes, which need to be handled anew each time. Richards exemplifies the many different experiments implemented over the years, particularly by the American Society for Cybernetics (ASC) conference organisers, and how they fared (§33). In the case of the ASC conferences of 2010, 2011, and 2013 mentioned by Richards, we ascribe much of the success of the events to two factors. Firstly, we ascribe it to their chair, Ranulph Glanville, who had great insight into the participants during the design stage allied with perceptiveness and chutzpah, which enabled the event to be steered as it took place. Secondly, possibly an underplayed aspect in Richards’s article, is the responsibility that the conferees themselves have in their role of working towards the goal of a second-order cybernetic conference experience. The challenge of bringing together this diversity into a single forum including a challenging conference style without the “violence,” as Richards (§22) refers to it, may be too large a burden for only the conference organisers. Partnering with the conferees themselves can expand the responsibility umbrella in a mutualistic method. Many of the participants at the ASC conferences were experienced in making agile shifts of focus between, on the one hand, reflection on the processes taking place at the conferences and their own participation within them, and, on the other hand, the more traditional discussion of discipline-based research and interdisciplinary methods. These experienced participants can take on much of the task of guiding the conference.

«8» Richards (§44) expresses the need to inform the participants of the conference style prior to commencing the conference, and indeed newcomers considering attending the ASC conferences in question (2010, 2011, 2013) were prepared for the event by explicit statements that the three conferences would be conversational in nature, and would not conform to the norms of a traditional conference. However, even with explicit explanations of the conference structure (or lack thereof) and the various other cybernetic based aspects, conference organisers may still face challenges with participants who do not take part in the way these organisers envisaged. In our experience, the stalwarts of the ASC community are keen to spread the ideas of cybernetics, and are welcoming and generous with their time in inducting new participants. Indeed, without making space for new participants, who come with assumptions of the traditional structure of a conference, it is hard to see how cybernetics can grow as a field of enquiry.

«9» One factor that Richards does not discuss is the degree to which electronic media may have changed the function of conferences. These have met with mixed success. Attempts to build online resources and forums around the ASC conference website have achieved sufficient response for the effort to be sustained, but have not taken a leading role in the conferences. On the other hand, many of the long-standing attendees are members of the online Cybernetics Discussion Group, which sends messages around the worldwide cybernetics community on a daily basis. Our participation in this mailing list suggests that the features of second-order cybernetics that Richards sets out would be generally accepted by its members. From a personal perspective, one of the present authors was prepared for his first participation in an ASC conference by having previously participated in the Cybernetics Discussion Group. This gave him a good impression of the kinds of discussions that would take place, and gave him a point of contact with people that he subsequently met at the conference. Similarly, the personal contacts established at the conference give impetus to the discussions on the mailing list. It is unclear what influence this communication channel between a substantial number of conference participants has on the dynamics of the conference, nor if electronic media could replace any aspects of the face-to-face conferences, which Richards proposes, but these are questions that are well worth asking.

«10» Richards recognises that even a traditional conference can be justified in the light of second-order cybernetics, “if all participants are aware of the desires implicitly built into the design and take responsibility for the resulting consequences (for science, education and society)” (§18). This proviso might lead the reader to doubt the value of Richard’s recommendations, as it suggests that any structure can be justified; but this is not our view. We understand Richards to be proposing structures that can nurture certain types of conversation, and as such we see his perspective as being primarily pedagogic. In making a pedagogic intervention, we would argue that the contextualisation of the activities, and the discourse that constitutes and surrounds them, has a greater role than the list of activities offered. From this perspective, Richards’s proviso seems reasonable. His proposals offer practical help in designing conferences. However, in the lived experience of the conference, it is the social and cultural traditions of the participants, their generosity and willingness to share, and the steering of conference activities that determine the success of the event.

http://www.univie.ac.at/constructivism/journal/11/1/065.richards
Connections of Conversation-Based Conferences to the Foundations of Radical Constructivism

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> Upshot: The aim of this commentary is to emphasize connections between conversation-based conferences and the foundations of radical constructivism. The Richards article needs no defense—everything said here is already implied within his text. Nevertheless, drawing out the context may be helpful in showing how his suggestions are rooted in the constructivist project.

Introduction

Having attended, and been involved in planning, conferences that were at least in part conversation-based, I fully support Richards’s carefully considered observations and suggestions. The purpose of this commentary is to draw out the radical constructivist context of the Richards’s target article. In making connections to this context, I will necessarily call attention to familiar radical constructivist ideas of Ernst von Glasersfeld and others. As a commentary in a constructivist publication, I will make no effort either to develop or to defend these ideas since it is the connection of the conversation-based conference to the underpinnings of constructivism that I wish to emphasize. In addition to being excellent and needed suggestions for the reform of conferences, Richards’s ideas for conference reform are rooted in the constructivist ideas of knowing. Since this reply to the Richards article is required to be short, I forego the usual introduction except to say that I will focus on the following key points:

- The constructed (though not arbitrary) nature of experience—what we invent is always within the “domain specified by our body and nervous system” and is constrained by our history as living individuals (Varela 1984: 320);
- The nature of knowing as something that is generated within each organism, not something that exists as independent “knowledge” in books or other storage devices;
- Desires and goals as criteria that guide and interact with the forming of knowledge;
- Conversation and communal interaction as key components in the invention of our reality as we invent and experience it.

Conferences that focus on conversation and second-order processes are rooted in a radical-constructivist epistemology

I will not expand or explain this heading but rather provide the reasoning that led to it. In other words, the above heading is the conclusion of this section rather than its beginning. Traditional conferences, especially in science, focus on presentation of findings that are treated as if they are observer-independent, objective (though always incomplete) truth. In other words, findings are treated as linear discoveries about the world. While conversation can be a legitimate part of such conferences, the status of the scientific (or other) endeavor itself is never in question in traditional conferences; one does not turn a discussion back on itself to consider the doing of what one is doing as a circular system in which there is no direct access to the world as it is. Richards’s article presents a fundamentally different concept of conferences based on a constructivist understanding of knowing as constructed within and among human beings.

In radical constructivist views— for example, those of von Glasersfeld (1984), Heinz von Foerster (1984), von Foerster & Bernhard Poerksen (2001), Francisco Varela (1984), Humberto Maturana (1970), and Maturana & Poerksen (2004), and others—science itself is a special kind of coordination among human beings that leads to the discovery and sharing of constraints that have been found, through careful and systematic observation and experimentation, to be constant across a range of situations and conditions (as observed and experienced). Constraints, while never directly experienced, are what we know of the world outside our experience. Everything in our world but the constraints, we build up from our own experience. In other words, the basis of science (and other enterprises) is the coordination in a community of practitioners, of perceptions, actions, and language. (There is no assumption that perceptions and actions are identical or even similar; simply that the parties involved in coordinating perceptions and actions are satisfied that acceptable coordination has occurred.)

Given that one accepts (since there is no way to prove either a constructivist or a realist point of view) a radical constructivist view, the world as we attempt to understand and describe it comes about through the circular process of coordination of language and experience. A point to make here is that if one accepts a constructivist point of view, then understanding the world requires understanding how we come to discover constraints and to invent a world that makes sense of those constraints. This is the pro-

1 A simple example of discovering constraints provided by von Glasersfeld is that of a bricklayer discovering that (at least in the case of building with bricks alone) “wherever there is to be an opening for a door or window, he has to make an arch to support the wall above” (Glasersfeld 1984: 37).
ess that has been given the name “second-order.” The term “second-order” names the necessary process of using language to explore a world in which language is part of how we invent and experience the world. We use language to describe the process of inventing that happens, at least partly, in language. Given that we accept the previous sentences as part of a useful description of how we invent the world, then language is not just a tool for communicating what we have discovered about an independent world: language is both a component of the world we have built up and the tool we use to understand that world.

“5” While not a necessary component of every conference in science, a second-order consideration or exploration of any science project is always a potential way to understand that project better – including its goals, its findings, its reasons for being, its usefulness, its purposes, who funds it and why, who it benefits or harms, and so on. Once a scientific project is seen not as a search for objective representations of a reality, but as a way, invented by a community of practitioners, of perceiving, describing, categorizing, and understanding constraints, then all aspects of the entangled circular processes that gave rise to its doings and findings are legitimate matters for exploration.

“6” A conference that is, at least in part, conversation-based, opens the possibility of a second-order exploration of the endeavors being presented and/or explored at the conference. To say what I say here requires using language in a second-order way for there is no second-order language. Such language is not easily read or written because it involves using language to explore the language we use in inventing the world. In everyday language, the descriptor and even the description are usually invisible – we see only that to which language points. In everyday experience (and everyday language), we perceive and act in our world directly; to perceive ourselves as inventing our world, we attempt to observe how we do this; we turn our process in on itself – hence, the design of the cybernetics of cybernetics, and so on. But, for all the difficulty in doing so, by doing so we open up a space for new possibilities. Conferences that are not designed to focus on conversation tend to exclude conversation, thus restricting the space for new possibilities. What the Richards article explains so well are the whys and hows of opening up such a space.

Desires are criteria that shape cognition, and (therefore) our experience

“7” A key concept in the Richards article is the idea of desires as criteria for the design of conferences and how they might be evaluated. That the concept of desire is a central concept of the article is suggested by the fact that the word “desire” (including forms of the word such as desired, desiring, etc.) occurs twenty-five times. Consider that a desire, like a goal, is a criterion for making comparisons. As von Glasersfeld points out, we construct our reality in part through comparisons that can be understood as resulting from a goal or purpose (in as much as comparisons are always made with regard to criteria):

Constructivism necessarily begins with the (intuitively confirmed) assumption that all cognitive activity takes place within the experiential world of a goal-directed consciousness. [...] The goals that are involved here arise for no other reason than this: A cognitive organism evaluates its experiences, and because it evaluates them, it tends to repeat certain ones and to avoid others.** (Glasersfeld 1984: 32)

“8” In other words, a desire, like a goal, shapes our cognition and, therefore, our experience of the world, with nature acting as a set of constraints that, although we do not experience them directly, limit our experience of “what works.” Desire, as a type of conscious goal or purpose that affects our comparisons, can be considered as having the same status as any goal – and the same function as a key mediator in experience and in the construction of knowing. (Richards rejects making conferences goal-oriented – on which point we are in agreement, but this is another matter.)

Examining and reflecting on our criteria can enlarge our possibilities

“9” By examining and reflecting on our criteria for comparisons, we become capable of changing our criteria and enlarging the scope of our actions. This is a circular process that involves second-order activity: making what we do an object for examining and reflecting. In other words, the possibility of opening a space for change arises when we examine what we do (making it a part of our doing). This is a circular process in which examining our doing leads to action and experience that can then be examined as part of our present doing.

“10” The examination of what one does as a way of opening up what one does to new possibilities that, in turn, become the subject of examination tends to be inhibited in activities that reflect views of the world and knowledge rooted in metaphysical realism. That is, believing that one’s findings flow from discoveries in a real world (as if these discoveries were independent of the goals and experiences of the producers who create these findings) makes the circular nature of the invention of knowledge invisible – as happens in the tradition of traditional conferences. This circular activity of examining what we do as part of our doing is more easily carried out with others rather than strictly within ourselves. Hence the need for conversation – and for conversation-based conferences.

“11” Before developing further the connection between conversation-based conferences and radical constructivism, let us first consider an objection to radical constructivism that is relevant to the whole idea of conversation-based conferences and other temporary or long term communities. One problem with radical constructivism is that radical constructivism denies that we can know an “independent reality” as it is. But so what? Radical constructivism leaves science intact. After all, what we care about is that science works. As we learn where what we know is inadequate, we can modify what we know to fit new discoveries: that's science.

“12” On the other hand, the metaphysical realism that radical constructivists object to can be regarded as merely a convenient heuristic for developing scientific and technical knowledge. Though a radical constructivist, this represented my own view until recently. I believe that the beginning of an answer to this objection (that constructivism may be accurate but it does not change anything – we carry on as if the world were real) can be found by changing the emphasis of radical constructivism from a focus on the impossibility of knowing an independent
realogy to a focus on the circular nature of knowing rooted in comparisons. While all we know of the world is that the world supplies constraints to our (necessarily constructed) knowing, and though we “never get to see the constraints of the world, with which our enterprises collide” (Glasersfeld 1984: 37), we are constantly coming up against constraints and having to change what we do. This we share with all living organisms.

Radical constructivism expands the space for new possibilities

Our goals are also constraints – and through making the study of what we think and do part of our thinking and acting. When we accept a metaphysical-realist stance, we act as if we are coming up against a real and objective world rather than coming up against constraints – and so we act as if we have no choice in the matter but to act as we do. A useful and desirable point of radical constructivism is to see second-order processes as useful and desirable. The point is that to be a radical constructivist implies that the world in which we live is not a given; only the external constraints of the universe are given. In a metaphysical realist view, we are on a trajectory through a world that is external to ourselves; we can change direction, but we cannot change the world itself. Seeing the world as a radical constructivist lets us see the world as more fluid and open to change through our participation. The argument for radical constructivism is that we prefer it to other alternatives. Conferences designed to allow and encourage conversation and second-order processes can be part of the process for seeing the world as one that is more fluid and open.

Conversation is part of how we co-create our knowing – and the processes we use to create that knowing

If potential knowledge is a collection of facts waiting to be discovered (as in realist views), then how one goes about the process is not as important as making the actual discovery. If knowledge is discovered, then what is important is the thing itself that has been discovered, not the nature of the experience that led to it. If, however (as in a radical constructivist view), what has been discovered cannot be separated from the experience of the observer, then one would do well to do pay attention to whatever one might learn about the experience – and about experience in general. This is what second-order processes attempt to do; namely, to examine the circularity of what one knows or does.

Expand the possibilities of science through conversation and second-order explorations

The point is not to reduce a science to a set of opinions, but to expand its range by making its goals and practices an object for consideration by its practitioners. Some form of conversation, whether designed or not, is essential in making it possible for a group or community to consider its goals and practices. A conversationally-based conference can be one way of doing this. (Other forms, such as a small group [two or more] meeting on a regular basis might be another.)

Designing conferences for constraints rather than outcomes addresses an ethical challenge

An ethical challenge flows from acceptance of the radical constructivist position. Varela sums up his biologically-based version of the constructivist position and how it changes the traditional way of viewing the world as follows:

“[T]he age-old ideal of objectivity and communication as progressive elimination of error for gradual attunement is, by its own scientific standards, a chimera. We should do better to fully accept the notoriously different and more difficult situation of existing in a world where no one in particular can have a claim to better understanding in a universal sense.” (Varela 1984: 322f)

Varela then goes on to point out that if we accept the above statement, then logically we have ethical obligations towards others:

“This is indeed interesting: that the empirical world of the living and the logic of self-reference, that the whole of the natural history of circularity should tell us that ethics – tolerance and pluralism, detachment from our own perceptions and values to allow for those of others – is the very foundation of knowledge, and also its final point.” (Varela 1984: 323)

This is precisely the position that Richards takes in his article. Further, since the designers of a conference stand in a position of power relative to those who come to the conference, Richards suggests that we choose to design conferences (and possibly other interactions) so as to provide constraints, rather than to push particular goal-oriented agendas.

Being nevertheless aware of our situation as we describe it, we can choose

The promise of creating conferences that enlarge our possibilities for change can be enthusiastically embraced despite the ambiguity, uncertainty, and risk involved – for ambiguity, uncertainty, and risk are part of the process of learning, especially learning that is open-ended and that involves second-order processes. Involving oneself in a (second-order) process of examining one’s own process is not easily done. There are problems of language – we do not have language that allows us to easily enter into human, sustained, deep consideration of our own practice. To do so means allowing one another to question existing ideas and practices, including those that are held to be most basic or even sacred. My own experience is that such undertakings can be difficult and frustrating; the process is uncertain and the outcomes unpredictable. Yet 1 completely and enthusiastically support such efforts and regularly place myself in situations where I am in hope of changing precisely because I know I cannot control the outcome.

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Proposing a Fictional Conference Day Using Larry Richards’s Cybernetic Design Principles

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> Upshot - This commentary gives voice to Richards’s desire to move away from traditional formats, such as the paper presentation, by digressing from the OPC format by illustrating how the proposal inspires and disseminates rather than merely adding any critical commentary.

09.00–09.30: Welcome by conference committee

"2" In the light of not approaching the design of a conference with the idea of creating the ideal one ($\S20$), the design of this conference will be a one-time event, not meant to be ideal in any generic sense, but ideal from the perspective of advancing general conference design. The importance of "design by constraint" ($\S21$), for me, is perhaps his most crucial principle. If I have learned anything, as an artist, as an educator, as a researcher, it is that narrowing things down, if done well, will actually open up productive potential. A "constraint" for me, would be an act or intervention that limits, or places a parameter. For me, the creation of an effective constraint is an art form in itself; this could be seen as the art of conference design (or would it be the science of conference design?). Among the first steps of constraint in a conference is that it could be seen to exist within the limitations of its main topic. When the topic of a conference is too wide, it dwindles in quality, is too narrow, and might not be able to reach the quota needed to be sustainable. As not "anything goes" ($\S20$), the topic of this fictional conference should ensure that it "[…] opens up a space in which new ideas, new thinking and new intellectual friends have the opportunity to emerge" ($\S21$). So, how to find a topic that will ensure this?

"3" As an artist, I would have to say that to ensure this, one actually needs to state the opposite; I think that "anything goes," but its quality or value depends on the context in which the "anything" is presented in. It also depends on the people behind that "anything": "not everyone goes with anything," in the sense that not everyone holds the skill to design a conference. It requires a vision, a desire that drives it, and this desire comes from the individuals organizing it. Furthermore, designing a conference requires organizational, social, and educational skills as well the skills of a designer (or other creative background). A conference should strive for aesthetics in its design, it should make conceptual connections. Von Foerster emphasizes in his article that the construction of a reality is a social activity. As a conference designer one creates conditions for a temporary shared reality. During the introduction, while the coffee and tea wakes the brain and the chocolate biscuit munching makes everyone friendly, the conference committee will update the participants on any urgent matters, but also explain how to make the most of the next few days.

10.00: Show and tell

"4" The American Society for Cybernetics’s (ASC’s) 2010 Troy and 2013 Bolton conferences began with homework. In 2010, we were requested to bring a banner of one’s own design, one that represents oneself. The 2013 conference requested that one brings a musical instrument of one’s own design. The function of these little assignments forced participants to design what I saw as alternative self-portraits. Instead of simply introducing one’s name and profession, the small results revealed much more about a person than any verbal description could. Participants would instantly learn more about ones character, skills, and or other abilities, as well as one’s motivation or potential role in surrendering to the conversational design of these conferences. For this conference, I would therefore also like to provide similar homework to the participants, by instructing them to bring something that relates to their interest in reality construction. This may consist of a drawing, an image, or other, as long as it represents, in some way, how the participant relates to the conference. Some might bring a fictional mathematical equation; some might bring a picture of a brain, while others might come with more enticing metaphors or texts. This type of homework assignment acts as a catalyst of connection, which is crucial in getting people to form productive conversational think tanks, in a minimal time frame. It is can also be quite humorous.

"5" As stated above, I find aesthetics when context and content intertwine, when the method embraces the topic, and vice versa. I feel that an opportunity arises to understand the topic through the real time experience of it. If one wants to understand better the quality or contribution of conversation in a conference, then one should indeed converse. If one wants to design a conference with the aim of improving con-

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ference design, then one should consider conference design as an integral part of the conference. Involving participants in the design may do this. For instance, in my fictional conference, I will request participants to design the results of the conference in advance. Before they even begin, participants will be asked to write a statement on the effect that this conference will have on them, the desired knowledge, and the achieved results, in a sense constructing their own future reality, capitalizing on the concept of self-fulfilling prophhecies, or self-organization. I have seen this method used in education, and its effects are astounding. A student, who declares that they will successfully finish a course, will achieve this with the support of their own declaration. One should embrace individual motivations. For some it might be related specifically to the topic, for instance, to understand better the role of metaphors in relation to the topic of the conference, whatever it may be. For another, it might be the simple practical desire that at the end of the conference, two connections will be made that will lead to concrete invitations that will advance that person’s career. This preserves the individual participants’ needs.

12.30–13.30: Lunch + formation of sub-groups

Richard’s main expectation of a (cybernetic) conference is to meet or run into people with whom, at some point during the conference, he will have a conversation that will advance or replace or inspire his existing ideas (§2). In order to achieve this, he describes, one needs to downplay the role of paper presentations, as was done in the 2010 and 2013 ASC conferences, where the centrality of paper presentations was replaced by conversation. My experience of these conversation groups was very positive, they allowed me to spar my own ideas productively, learning much more from other perspectives, than that I would from traditional paper presentations. They provided for me an arena to learn how to share thoughts in a non-hierarchical way, they taught me to be open to differing opinions, and they taught me the value of active inclusion. Instead of being bombarded with information, I was engulfed in transformative thinking in which renowned thinkers took my thoughts seriously; it was enlightening. As the experiences of these conversations were so profound to me, this fictional conference will also implement the method of conversation as a key design feature (§25). By forming smaller conversation groups, the more introverted participants are able to find their voices (§26). Group-forming brings its own challenges.

7 The ability to bring a group of strangers together and engage in active conversation may be seen, along with conference design, as another art form. To circumvent awkwardness in the group-formations, this conference will experiment in group-formation methods. Having experienced various forms of group forming, I found that an element of the unknown, in combination with an element of creative or active influence, enhances the likelihood of participants surrendering to group dynamics. At the end of the lunch, the people behind the assigned numbers will be revealed and the groups of the day will have been formed. Now that the bellies are satisfied, participants can get down to business.

13.30–14.30: Conversation groups

The groups embark upon an unknown path of conversation, but one is not unprepared, one does not start from scratch. Having written expectations, and having heard the ones of others, a group dynamic can begin in which participants are aware of the needs of others, as well as their own needs, investigating group thoughts on reality constructions. The aim of the conversation groups is to form questions, share, and explore forming new questions as a group. The individuals of the groups determine the topics discussed.

14.30–14.45: Coffee break

14.45–16.00: Conversations continue — stepping up the game

In the second half of the afternoon, the groups will continue discussions, but also prepare and discuss a way to communicate a summary of their conversation to the other groups. To facilitate this, the conference committee will infiltrate the conversation in the last 20 minutes, providing ludic materials and methods for this. Why ludic?

von Foerster emphasizes in his article that: “The way in which a question is asked determines the way in which an answer may be found.” This is perhaps why it is so important to deviate from traditional conference formats. This is where “moments of art” may occur (§§30f). The crucial factor of the 2010 and 2013 conferences, which made the experience so successful for me, was the underlying performative nature. In the Troy conference, groups would sometimes literally take the stage, making a choice of location an element to consider. In that sense, a conference designer should not underestimate the effects of location architecture on the conversations. The design of 2010 and 2013 cybernetic conferences allowed for a form of professional ludicroussness, to explore ideas. How rarely does the adult mind have the permission to engage academically in a form of serious play? In spite of play being crucial to new paths of development and new perspectives, a method used in youth to understand the world, the method of play is abandoned as we climb the adult ladder of the academic world, its importance neglected, belittled even. Yet, to form new perspectives, one needs actively to seek alternative neural pathways. And by play, I mean more than just “playing or experimenting with dynamics” (§§24, 42). Play, as a method, may be experienced as a catalyst to the birth of these new synaptic paths, but what is play and how to play?

Play is a method we use in childhood to help deal with our experiences. As an adult, play may be seen as a return to magical thinking, the ability to let go, and to be taken on an imaginative journey. The ability to play might be an embarrassing skill to master (or re-master) for many. In order to achieve this, one needs to be in a safe environment in which one is challenged by example and led by encouragement. A method to remember gently how to play may be created by returning to the concept of constraint, limiting the conversation groups of the conference by adding “rules.” In practice, a rule could be as simple as experiencing a conversation in a different body position. Having a conversation about how the human mind constructs a reality while lying down in total darkness, instead of sitting in a circle of chairs in daylight, is a significantly different sensorial experience that could trigger conversational tangents that would
otherwise not be ventured, and as such is valuable to explore as a method in conference design. Inspiration for how to play may be found in the “groundcourse” developed by the artist and cybernetician Roy Ascott at Ealing College in Ipswich:

“Instead of working towards the production of finished objects, the students engaged in ludic group exercises that were aimed at fomenting counterintuitive thinking, cooperative strategies and generative systems, as well as dismantling hierarchies and eschewing virtue in any particular medium.”

12 In my limited experience as an educator in using this method, the more bizarre a rule is (for instance: there always has to be a sheep involved, or: it as to be 30 x 60 x 60), the higher the level of innovation becomes, in particular when the rule is imposed by another group (I first witnessed this method being applied by the artist and cybernetician Roy Ascott at Ealing College in Ipswich and times of Brian Eno reviewed, “ by Wilson Neate Melzer, with great effect).

16.00–17.30: Group reports

13 In order to reconnect all participants as a whole, each group will report back what they discussed and learned, what was considered valuable and worthy of sharing to the other groups, using the provided ludic methods by the committee. The idea is to learn from these moments, and further develop them as the conversations progress during following days. This is the most precious moment of the day, as one witnesses the thought patterns and becomes acquainted with conversational pathways of others, new perspectives are born that stimulate the birth of new neural pathways, perhaps advancing creative abilities that are so often left underdeveloped, and underestimated in academic research.

17.30–19.30: Dinner break and evening programme

14 The design of a single day, not even an evening programme, is all that this OPC has room for. Those readers who have been to the 2010 and 2013 conferences will see a strong similarity with this fictional conference. The two conferences were close to my own ideals, and thus this design is indeed inspired by their structure, and should continue to grow using Richards’s design principles. Coming to the end of this OPC, is there anything I would like to add to Richard’s principles? In my own experience of conferences, I have often felt a sense of lost knowledge. Conferences often lack sufficient attention to capturing the knowledge developed during the conference. In the 2010 conference, we had a wonderful video publication filmed by Judy Lombardi, and further developed in collaboration with other participants during the workshops after the conference. A method of capturing epistemology of a conference should, in my opinion, be added as a design principle. That is why for this conference, I would like to explore methods of capturing the embedded end product, by aiming for an open-ended product in the form of a one-day-publication.

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Author’s Response
Design for Participation: Culture, Structure, Facilitation
Laurence D. Richards

> Upshot • Conversational conferences are difficult to design in a way that avoids the consequences that arise when participants are not experienced with or fully value the conversational mode of interaction. So, the designers of such conferences must experiment with ways to build a culture, use a structure, and facilitate participation that might mitigate some of these consequences. The potential of the experimental conference designed in the light of second-order cybernetics lies, in part, in the prospect of identifying and acquiring the conversational abilities and appreciations necessary to support a participative-dialogic society.

Introduction

1 Conversation is a human activity at which we humans are not particularly adept, at least not all of the time. Current society simply does not encourage the development of the aptitudes or attitudes required for conversation to flow in the way we might prefer, if it flows at all. The open peer commentaries (OPCs) on my target article offer some thoughts on cultural, structural, and facilitative matters, to which I respond. However, I am not ready to draw connections between these aspects of conference design and second-order cybernetics (SOC), even if I have my preferences – hence, the call for experimentation. I like all their ideas and would participate in conferences that experiment with these ideas. The stakes in identifying and acquiring the conversational abilities and appreciations necessary for a participative-dialogic society are huge, and I do not want to trivialize the demands this puts on our behaviors – our thinking, caring for others, and patience – as participants in such conferences.

2 In my target article, I tried to connect themes from SOC with principles for designing an academic conference. I use as a point of departure the stereotypical traditional conference (although Christiane Herr prefers the term “conventional conference” (§1), which I also like). This stereotype is composed from my own experiences at a variety of conferences, and I recognize that it may not resonate with the experiences that some readers may have had. I have also attended academic conferences that I would describe as traditional, yet were different in significant ways from this stereotype, and I have certainly enjoyed some parts of some of these con-
The principles of design that I suggest are certainly not complete. I made the connections between SOC and the design of conferences that I thought could be justified and left the remainder to experimentation – in particular, conference culture, structure, and process facilitation. I think SOC supports an experimental approach, not with an eye toward progressing toward an ideal or “always successful” design, but rather toward trying out new ideas and learning what does not work so that it can then be avoided. 

SOC treats knowledge as in constant flux and change in knowledge as essential to the retardation of human variety. Participants in experimental conferences, therefore, must be ready for the chaos and disorientation that necessarily accompanies social experimentation. I will be the first to admit that I did not want to participate, and sometimes I did not know so until I arrived at the conference. It was not the personal discomfort I was feeling that turned me away as much as it was an intellectual aversion to the types of interaction that I saw unfolding. Sometimes I made an effort to stay and see if the direction of the interactions might shift or if they could be shifted, and sometimes I simply walked away. Another challenge of conference design, then, is how to describe the experiment in such a way that people can opt in or out prior to committing to attend. Paul Schroeder (§3) used the term “successful academic meeting” to describe the desired outcome of the principles of design. If SOC is not about achievement, however, it is not about success in that sense. A conference designed in the light of SOC is one from whence there is a possibility of new ideas emerging – a reconfiguration of concepts and resources – and therefore of the retardation of our decay. There is no guarantee, just the possibility.

Culture

I use the word “culture” when I wish to speak of a set of collectively lived constraints on human behavior that distinguish one group, organization, or society from another. These constraints take the form of laws, rules, values, ways of thinking (and acting, as Judith Lombardi insists (§16), and I accept), and limitations imposed by language, environment, and technology, among others. The word is also used to characterize the traces left (artifacts, histories) by the processes (social, political, artistic, economic, religious, technological, and so on) operating within a particular culture and its constraints. The traces are said to reflect the characteristics of the particular culture, their features distinguished from those of other cultures. The principles of conference design that I offer do, then, provide the rudiments of a culture, although the details are left to the designers. A number of the OPCs discussed experiences the authors have had with conversational conferences that were not pleasant. Andrew Brightman (§4) observes that the participation of some attendees at conferences he has attended was stifled by participants’ “confusion, fears, and/or lack of confidence,” often resulting in “violent behaviors or disengagement.” He asks “how much preparation is needed to achieve a common ground or culture” (§9) and suggests an additional “design principle or practice of creating a common ground of conference culture early” (§11), preferably well before the start of the conference. I agree. While conference requires differences among participants, it also requires that participants have some commonalities – shared interests and language, for example. I am not ready to be specific about how to ensure some common ground in a conference or what it should be, and I also want to leave open the possibility of participation in some conferences from a wide range of people and cultures with little common ground to start with. However, a principle that states consider what common ground is desired and how to encourage it among the participants who attend, would be an addition that I would welcome.

Design by constraint provides some structure to a conference. However, as a number of the OPCs observed, the principles of design are not sufficient; more structure is needed to keep the conference on track and attendees engaged. There were a number of suggestions for further structure, all of which I liked, and I would participate in conferences using them. Schroeder (§17) suggests the tensegrity organization approach of Anthony Judge as an alternative to the team syntegrity approach of Stafford Beer.
parages the use of the bell as a time-keeping device at the ASC syntegration conference in 1999. As it turned out, one of the teams in its final presentation at that conference had the facilitator turn away from the presentation and ring the bell at random times as a way of expressing displeasure with respect to this manifestation of the tyranny of the clock. Lombardi (§24–28) also suggests the Direct Democratic Consensus model and its gestural language as an approach that could be adapted for conference structure. Scholte ($4) offers an outline of an approach that would use the entailment mesh developed by Gordon Pask as a way to structure conversations. The entailment mesh is a graphic of the unfolding of concepts in a conversation and could perhaps be adapted as a facilitative tool that would leave a record of the conversation for future reference.

« 8 » Jennifer Kanary Nikolov(a) devoted her OPC to the actual design of a conference. Her design is oriented around the idea of “play” – in the sense of child’s play, yet for adults. By introducing “professional ludicrousness” into conversations, “new synaptic paths” may be activated, and conversations can move in new directions. People are given license for moments of silliness, possible “moments of art,” so that they can then settle into new conversations. (I can also imagine play that might appeal to those more kinesthetically inclined.) She gives special attention to reframing how questions are asked as an alternative to focusing on how current questions are answered (§§9–11). Schroeder (§16) also expounds on the importance of the “questions that people share,” rather than on “their competing facts and knowledge bases” in finding common ground, and cites his own “question-centered learning environment” as an approach. This again brings to mind von Foerster’s undecidable question: questions only we can decide – that is, questions of desire. So, Martin (§7) is correct in pointing out the centrality of the concept of desire in my article (where he counted it occurring 25 times). Kanary Nikolov(a) (§14) also suggests another design principle: select a method for capturing the epistemology of a conference. While I am not sure it is always necessary, I do regard such a product as desirable; and if the product indeed captures the “epistemology” of the conference, the principle would align with SOC, with its focus on epistemology.

Facilitation

« 9 » With new structure often comes a need for facilitation of process. At the 1999 ASC syntegration conference, professional facilitators were used to remind participants of the guidelines and to intervene when conversations got off track. Since a primary intent of the conference was to learn the syntegration process, the facilitators were essential. They were also useful in assisting teams that were struggling to move their conversations along (and I might add, they took a lot of grief at times). Griffiths & Baron ($7) suggest that the experienced participants in a conference can sometimes serve in lieu of facilitators. I would take it a step further and suggest that a desirable state of affairs would be when all participants are sufficiently experienced in conversational processes to negate the need for professional facilitators, as would be a condition for a participative-dialogic society. Of course, we do not live in such a society, so conference organizers must address the need for facilitation. This is the dilemma of conversational conferences designed in the light of SOC – they do not always go well for all participants; this is what makes them interesting, but it is also what makes them hard work for the organizers and the attendees, as Hohl ($7) reports from personal experience. Facilitative processes, then, are another aspect of conference design where experimental approaches are needed.

Conclusion

« 10 » I have tried to make the case that all the confusion, discomfort, and hard work that go into designing and organizing experimental conferences, and especially conversational conferences, is worth it. I have relied, in making that case, on my own experiences and those of others with whom I have talked. I cannot say that I enjoyed all the conferences, but I can say that I learned something from all of them (even if it was learning what to avoid next time), and that I do not regret attending any of them. SOC and its ideas are not a part of the culture of current science or society; it is not a part of everyday thinking and acting; as a way of thinking, I claim that it is actually discouraged. So, when Herr (§6) asks of conversational conferences, “…can they be designed at all?” I take the question seriously. I like what she then says:

“If conventional conferences are devices to maintain the status quo, conversational conferences are devices to engage in conversation to create the new collectively … conversational conferences can be seen to lie in rich personal experiences and the individual changes participants go through as a result of learning to resonate with others and to see through the others’ eyes.” (§8)

Quoting Krippendorff, Schroeder (§10) adds that conversation should not be taken as an “unattainable ideal,” or a “luxury of the leisure class,” but as the “ultimate reference point for being human.”

« 11 » Finally, I would like to comment on Lombardi’s desire for a first, second, third and maybe more cybernetics, without the word “order” (§12). This could be useful as a way to categorize subsets of concepts within cybernetics where the numbers are labels for the categories, perhaps along a timeline. I am okay with this, although I am reluctant to assign more value to the more recent categories or eras of cybernetics as though we are necessarily on a trajectory of progress. Cybernetics is about change, and it changes as well. Different categories will be more or less useful to different people at different times. As such, labels other than numbers could be used, although numbers are fine as long as everyone understands that they are labels. Radical constructivism might represent one of those categories (Martin (§11)). Conversation theory might be another (Herr (§2)). However, I do not treat SOC as a category. Rather, it is embedded in all cybernetics, making the observer and observing explicit in the formulation of the recursive relations and dynamics that is cybernetics. There is no cybernetics without circularity/recursion, process/dynamics, variety/relations/constraints and observing/listening/participating.

« 12 » Preparing this response took me longer than I anticipated. I liked all the OPCs and learned something from all of them. So, creating a response that would be additive was a challenge. I enjoyed the attempt and want to thank all the peer reviewers for their thoughtful and contributive pieces. I hope we can discuss these topics further at another time, and preferably in person.

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