Exploring Alternatives to the Traditional Conference Format

Introduction to the Special Issue on Composing Conferences

Ben Sweeting • University of Brighton, UK • r.b.sweeting/at/brighton.ac.uk Michael Hohl • Anhalt University of Applied Sciences, Germany • m.hohl/at/design.hs-anhalt.de

> Context • The design of academic conferences, in which settings ideas are shared and created, is, we suggest, of more than passing interest in constructivism, where epistemology is considered in terms of knowing rather than knowledge. **> Problem** • The passivity and predominantly one-way structure of the typical paper presentation format of academic conferences has a number of serious limitations from a constructivist perspective. These limits are both practical and epistemological. While alternative formats abound, there is nevertheless increasing pressure reinforcing this format due to delegates' funding typically being linked to reading a paper. > Method • In this special issue, authors reflect on conferences that they have organized and participated in that have used alternative formats, such as conversational structures or other constructivist inspired approaches, in whole or in part. We review and contextualize their contributions, understanding them in terms of their connections to constructivism and to each other. > Results • While this issue is of relevance across disciplinary boundaries, contributions focus on two fields: that of cybernetics/systems, and that of design. We identify the way that conference organization is of particular importance to these fields, being in self-reflexive relationship to them: the environment of a design conference is something that we design; while a conference regarding systems or cybernetics is itself an instance of the sorts of process with which these fields are concerned. > Implications . Building on this self-reflexivity and, also, the close connection of design and cybernetics / systems to constructivism, we suggest that conference organization is an area in which constructivism may itself be understood in terms of practice (and so knowing) rather than theory (and so knowledge). This in turn helps connect ideas in constructivism with pragmatic fields, such as knowledge management, and recent discussions in this journal regarding second-order science. > Constructivist content • As a setting for the creation of new ideas, the design of conferences is of importance where we understand epistemology in constructivist terms as a process of knowing. Moreover, the particular fields focused on – design and cybernetics/systems – have close connections to constructivism, as can be seen, for instance, in the work of Ranulph Glanville, on which we draw here. > Key Words · Conference, knowing, design, cybernetics, systems, tacit knowledge, reflection, double-loop learning, feedback, knowledge management, communication, second-order science, second-order cybernetics.

Introduction

«1» The design of academic conferences is, we suggest, of more than passing interest in constructivism. A conference is a setting explicitly intended for sharing ideas and in which to form new thoughts and questions. Where we understand epistemology in terms of *knowing* rather than knowledge, as suggested by Ernst von Glasersfeld (1990: 19), then processes and settings for creating and sharing un-

derstanding, such as in a conference, are of epistemological and not just practical concern. Given this, many of constructivism's concerns coincide with those of pragmatic fields such as knowledge management (KM), despite the largely realist and technocratic orientation of the latter. The processes on which KM focuses – those of "capturing, distributing, and effectively using knowledge" (Thomas Davenport cited in Koenig 2003: 351), such as occur in a conference – are, from a constructiv-

ist perspective, not something that is done *to* knowledge but part of what it means to know.¹ The exploration of conference de-

^{1 |} As Jeremy Aarons has pointed out, traditional epistemology, concentrating on arguments against skepticism, is limited in its applicability to KM (Aarons 2011: 270). His comment that "for KM, knowledge must be far more than just personal certainty about the world – it must involve practical ability as well as conceptual understanding" (ibid: 272) resonates with the constructiv-

sign therefore offers constructivism the opportunity not only to engage with applied fields (such as KM) but also to continue to explore its own epistemological concerns through practice.

« 2 » To a large extent, attending a conference can be a passive experience. Conventionally, conference participants take it in turns to present their research findings by "reading" their paper, followed by a short period of questions. This format was established by the Royal Society of London in the 1660s, where papers of absent authors were read out loud to present members. If the paper described an experiment, this was repeated and the result compared to that of the description. Debate followed and notes were taken, documented and published in Philosophical Transactions (see e.g., Shapin & Schaffer 1985). While in this original format the reading of the paper was accompanied by active participation and knowledge exchange, today's conferences are typically much more passive. We listen to colleagues presenting papers and perhaps also present one ourselves. The presentations are followed by discussions that are often too short to allow topics or methods to be explored in much depth. Some debates may be continued in the hallway and valuable knowledge sharing and discussions often take place by chance in the coffee breaks or during meals. Often it is here, in the margins of the event, that new ideas emerge, learning happens, new collaborations are forged and intellectual debate unfolds.

« 3 » While there are significant precedents for more discursive formats – for instance: the Macy Cybernetics Conferences (Pias 2003–2004) or the conference organised by Gregory Bateson, of which Mary Catherine Bateson has written so engaging an account (Bateson 2004) – the paper presentation format nevertheless remains dominant. Indeed, there is, if anything, in-

ist principle of viability. Constructivism can be considered, along with the other epistemological approaches he mentions (ibid: 272f), as suggesting the possibility of a more intimate relationship between epistemology and the pragmatic issues raised in KM. We are grateful to Alexander Riegler for encouraging us to explore these connections.

creasing pressure towards a packed presentation schedule as delegates' funding, and so the ability of a conference to attract participants, is now usually directly linked to them reading a paper.

- « 4 » This traditional conference design has many practical shortcomings, as second-order cyberneticians and constructivists such as Ranulph Glanville (2011) and Gordon Pask (1979) have pointed out. These include the following:
 - The conference timetable is tightly constrained and there is little room for flexibility or improvisation in response to questions raised.
 - Discussions are minimised and formalised, meaning that the most significant moments of exchange are often squeezed into the margins.
 - The formality of presentation, and the necessity to often submit papers to proceedings in advance (so that they are more like "precedings" than proceedings), means that much of the opportunity to learn from feedback on the paper during the presentation is missed.
 - Papers are often presented in parallel sessions, meaning that each participant misses more than they attend, with little opportunity to communicate between sessions. Some participants do little more than attend the session in which they present.
- **« 5 »** From a constructivist point of view, these shortcomings are not just practical but also epistemological, constraining the possibilities for knowledge construction and so, in turn, for practice:²
 - The predominantly one-way and predetermined format of the paper presentation is in contrast with constructivist approaches in other contexts, such as

- education, which are oriented towards an environment conducive to conversation (Glasersfeld 1992).
- The possibilities for exchange and collaboration between participants and also between disciplines are obstructed by minimising the sort of conversations that help each to learn about and from the other.
- The traditional conference reports findings that are not questionable and so does not, in itself, move the subject forward. It is not about learning or exploring but reporting on research already conducted and affirming already established knowledge.
- «6» As well as limitations such as these, the lecture type format can imply a realist epistemology, treating knowledge as a commodity to be passed on to, rather than constructed by, those listening. This can be thought of in similar terms to Peter Medawar's (1996) criticisms of the scientific paper as giving a fraudulent account of the nature of the process of scientific research. This is even reinforced in the period of questions that typically follow a presentation because of the authority this format gives to the speaker (and session chair) to whom the questions are directed. As Gregory Bateson has pointed out, formats such as this, and even the layout of a room, can suggest misleading epistemological relationships that in turn generate wider difficulties. Speaking in a conference paper titled "Pathologies of Epistemology," in which he connects erroneous epistemological premises to the environmental crisis, Bateson refers to the setting of his own delivery:
- 66 The very fact I am monologuing to you this is a norm of our academic subculture, but the idea that I can teach you, *unilaterally*, is derivative from the premise that the mind controls the body. And whenever a psychotherapist lapses into unilateral therapy, he is obeying the same premise. I, in fact, standing up in front of you, am performing a subversive act by reinforcing in your minds a piece of thinking which is really nonsense. We all do it all the time because it's built into the detail of our behavior. Notice how I stand while you sit. 99 (Bateson 2000: 493f)

^{2 |} Here we prefer to avoid phrasing the relation between theory/knowledge and practice/action as one of the application of the former to the latter, a phrasing that can obscure the interactive relationship between the two. This is part of already understanding epistemological concerns in terms of practice rather than as something to be applied to action, as is suggested by both the idea of viability in constructivism and also, as is especially emphasized in second-order cybernetics, seeing theory as something we make and so itself a form of practice.

Exploring alternatives

«7» Understanding a conference in constructivist terms invites us to understand it as an active part of research and to consider formats that help us in doing so. How might, for instance, we compose a conference in such a way that, in turn, it helps us in composing new ideas and research questions rather than in passively reporting on and listening to the results of research already conducted?3 In what ways can a format help interdisciplinary exchange between researchers or practitioners from different backgrounds, and how may exploratory conversations be central rather than peripheral to the programme? Can alternative conference formats be not just reconciled with the need for peer review and publication but also an enrichment and enhancement of them?

« 8 » The authors of the target articles in this issue reflect on conferences that they have organised and participated in that have used alternative formats, such as conversational structures or other constructivist inspired approaches, in whole or in part. While the ideas explored in this issue have relevance across disciplinary boundaries, there is a focus on two fields in particular: that of, firstly, cybernetics/systems (Gordon Dyer, Jed Jones, Gordon Rowland and Silvia Zweifel; Larry Richards); and, secondly, of design (Abigail Durrant, John Vines, Jayne Wallace and Joyce Yee; Johan Verbeke).

"9" Cybernetics/systems and design both have close relationships to constructivist epistemology and to each other. This can be seen, for instance, in the work of Glanville (2006a, 2006b, 2009, 2013), whose ideas regarding conferences have motivated this publication, as discussed briefly below, but who sadly passed away in the period during which we were working on this issue. The balance of papers between both design

and cybernetics/systems seems fitting, in line with the way Glanville's own work has bridged between the two. Furthermore, both cybernetics/systems and design are examples of fields where the issues of conference organisation are especially relevant. In each case, the form of the conference itself is in a self-reflexive relationship to its content: the environment of a design conference is something that we design, as prominent design theorist John Christopher Jones (1984) reminds us, while a conference regarding systems or cybernetics is itself an instance of the sorts of process with which these fields are concerned.

« 10 » Indeed, the development of second-order cybernetics (SOC), a field explicitly concerned with self-reflexivities such as this and one closely related to radical constructivism (Glanville 2013), was in part motivated by these concerns. Margaret Mead (1968), in her address to the inaugural conference of the American Society for Cybernetics (ASC), proposed that the society operate according to its own (cybernetic) principles.4 Mead's remarks were part of the germination of the epistemological concerns of SOC, as developed by Heinz von Foerster (2003) and others, where cybernetics is applied to itself and in so doing addresses the participation of the observer in their observations (and so constructivism). In recent years, under Glanville's presidency, the ASC has returned to the original context of Mead's paper, that of its own organisation and activities, understanding Mead's point in terms of how cybernetics is to be practiced (Glanville 2011).

«11» It is from these ASC conferences, and, in particular, from the post-conference session of the 2013 conference hosted by the University of Bolton, UK, that the idea for this special issue grew. During the post-conference session, we reflected not just on the 2013 conference but also on those of previous years, on what had been special about them and the difficulties that we had encountered.⁵ These ASC conferences

(which, with others, form the basis for Richards's target article) took various aspects of cybernetics' relation to practice as their themes: its longstanding relation to art and design (Glanville 2012; Glanville & Sweeting 2011); central cybernetic activities such as listening (van Ditmar & Glanville 2013) and the interaction between acting, learning and understanding (Glanville, Griffiths & Baron 2014); and, finally, the "Living in Cybernetics" theme of the 2014 conference (Baron et al. 2015). The design of these conferences has reflected this content, taking on conversational, and so cybernetic, form, influenced by the ideas of Pask (1976) and precedents such as that of Bela Banathy (discussed at length in the target article by Dyer et al.). The point is not that a conversational, or other alternative, format is necessarily better but that it offers different possibilities.6 For instance, the explicitly cybernetic (conversational) format adopted by the ASC allowed the activities of conference sessions to model that which is discussed in them, with participants therefore able to explore ideas through acting them out.

"12 " We trusted that other conference organisers must have had similar experiences and reflected on the very same issues before, and that it would be valuable to bring these reflections together. We are grateful to Alexander Riegler for offering us the opportunity to edit this special issue of Constructivist Foundations. This is especially

^{3 |} The choice of "composing" was suggested to us by Glanville, who came to favor this word over "observing" in order to move away from the passivity associated with the latter term (Glanville 2015: 81). It is also more strongly suggestive of the interactivity of radical constructivism and second-order cybernetics than "constructing," which can be read as implying independence in the sense of isolation.

⁴ Mead had, earlier, made a similar suggestion to the Society for General Systems Research; see Brand, Bateson & Mead (1976).

⁵ We would like to thank Astrid and Mark Johnson in particular for their contributions to the early stages of this project.

⁶ The relation between cybernetics and practice that is at stake here is not as straightforward as cybernetic theory leading to cybernetic forms of practice. As one of the present authors (Sweeting 2015) has argued, drawing on von Foerster's (2003: 229-246) argument regarding the relationship between cybernetics and epistemology, the relationship between cybernetics and practice is best thought of not in terms of there being some forms of practice that are cybernetic and some that are not. Rather, a cybernetic relation between understanding and acting is what distinguishes all practice from mere action. As such, the consequences of cybernetics for practice are not those of a theory to be applied in practice but follow from the way that adopting a cybernetic theory of the relation between theory and practice has consequences in practice because such a theory is (at least according to itself) in cybernetic relation to how we act.

so as the journal's own structure, with open

- within cybernetics/systems, and in the approach to conference design of Banathy, Glanville and others, connects these concerns to design, which has been characterised by Donald Schön (1991) as a "reflective conversation with the situation," on which the other two target articles focus. While prominent design research authors such as Schön or Nigel Cross (2007) are constructivist in outlook, Glanville (2006a, 2006b, 2007, 2009, 2013) has built a more explicit connection, drawing on Pask's (1976) conversation theory as well as ideas from Jean Piaget, George Kelly and others. Building on analogies between cybernetics and design in terms of conversation, he has proposed understanding design as an essentially constructivist activity that can even be thought of as the basic cognitive act, where we design both our concepts and how we compose these together.7 It follows that design conferences reflect their own content in a similar way to that which we have noted above regarding cybernetics/systems. Design processes can, therefore, also be explored by being played out in face-to-face conversations, as, indeed, is often done in the traditional conversational modes of design education.
- «14.» Jones understands the design of academic conferences as part of what he calls "context design," the design of the processes and environments in which we work, and in which we design. This is something that we often neglect:
- 66 All such 'softwares' as conferences, courses, computer systems, legal systems, political systems, public services, societies, groups, communications and the like are more contexts than products and all suffer the marks of neglect, total neglect, by the imagination, the artistic mind, the impulse to make life beautiful. [...] Is it possible

to design, to make pleasant, beautiful, not only the results of industrial and human processes but the conditions in which these processes occur? (Jones 1984: 279)

- **«15 »** Wondering why so many conferences are poorly designed, Jones speculates that this is especially difficult because it involves us in it, connecting his remarks to the concern with the inclusion of the observer in SOC and radical constructivism noted above:
- 66 'Why [...] can't designers design a conference?' [...] I have what feels like an answer: 'Because they are IN IT' [...] Is it that design skills and methods as we know them are suited only to the designing of objects outside of ourselves and that a new kind of design method is needed if the level of designing is raised from that of object to activities? [...] To design an event of which one is a part, an activity one is going to live oneself, sounds exactly like deciding what to do in life anyway. [...] So designing becomes a way of ordering life, or remaking a culture while living in it. "(ibid: 284f)
- **«16»** Fields such as art, design and architecture, which are relatively new to academic research, are under pressure to be taken seriously as academic disciplines. As a result, they have often adopted formats common in more established disciplines without questioning their appropriateness to sharing the design process and its outcomes. With some delay, this is now being addressed and this publication contributes to this emerging discussion.
- «17» One aspect of this is the role of physical artefacts. These play an important part in much design research, but their inclusion in a conference raises design questions itself (as discussed in the target articles by Durrant et al. and Verbeke). Presenting artefacts or events such as an art performance through other media, such as photographs in a slideshow, will often lose qualities that their actual presence itself may have, together with opportunities for reflection or interaction that are particularly important from a constructivist perspective (although even presentation in an exhibition or similar event involves a shift in context). As Sophie Read (2015) has noted, these questions have a history: in his lectures at the Royal Institution, architect Sir John Soane incor-

porated large scale models and drawings. These stood in place of the experimental demonstrations incorporated in the scientific lectures at the same venue, an intriguing example of the parallels between design and scientific research.

« 18 » This is further complicated by the way that artefacts can have more than one role in design research, as indeed they do in science: being sometimes part of a process (and so research method and environment) leading to insight communicated in other media such as a written paper; sometimes an output of such a process (in terms of embedded knowledge, demonstration or application); sometimes the focus of a study that itself uses different methods; and sometimes combinations of these. The multiple possible relations of artefact and designer have been extensively debated in design research in recent years, as is summarised here in Durrant et al.'s article and Wolfgang Jonas's open peer commentary. These discussions are, we suggest, of wider import to constructivism, and indeed to the discipline of knowledge management, and are one area in which ideas from design research may have impact in other fields.

Contributions

- "19" Rather than in a curated sequence, we have arranged these contributions in alphabetical order (by first author surname). We encourage readers to chart their own way through this material, which we summarise briefly here.
- « 20 » The first article is written from a design background and is titled "Developing a Dialogical Platform for Disseminating Research through Design" by Abigail Durrant, John Vines, Jayne Wallace and Joyce Yee. The authors describe how they experimented with different conference formats in organising a series of conferences and how this format evolved, guided by participant feedback and observations made during sessions and workshops. They describe in detail the design of a three-day conference, including their approach to often hidden processes, such as peer review, that went into this. The conference involved discussions around physical artefacts and presentations of these conversations to a main assembly. An im-

⁷ On the relation between cybernetics and design, see also, for instance, Thomas Fischer (2014), Fischer & Richards (2015), Wolfgang Jonas (2007), Klaus Krippendorff (2007) and Hugh Dubberly & Paul Pangaro (2015).

portant, reflective element of this process was trying to raise awareness of designing as a knowledge-generating activity, including the tacit knowledge that may be made explicit in discussions around artefacts. In these discussions, they reflect on their reflections, thus adding a double-loop layer of learning, making the implicit explicit. As such, it is at the heart of our call for papers on enquiring into alternative conference formats, on other ways of sharing and generating new knowledge.

« 21 » Our second article, "The Banathy Conversation Methodology" by Gordon Dyer, Jed Jones, Gordon Rowland and Silvia Zweifel, presents the rich history of a series of over thirty conversational conferences the conference design methodology that evolved from those. Their conversational conferences are structured in three distinct phases: pre-conference, conference and post-conference. The format includes early team-formation, the sharing of initial ideas and learning resources via papers online, followed by a week of conversations without an agenda. The event concludes with critical reflections and reports after the conference has ended. Team members have roles such as "guardian" or "guarantor" to keep conversations focussed and discussions moving, but also to establish a common ground and to honour diversity. The format results in a culture of mutual respect and generous listening with a shared goal in mind. The extended history of the Banathy Conversations provides not only clear practical advice on how to facilitate effective conversations, but also a strong framework informing the creation of a culture of respect and generosity.

« 22 » The third article is by Larry Richards and is titled "Designing Academic Conferences in the Light of Second-Order Cybernetics." It is a reflection on his experiences gathered at different conferences he has participated in and concludes with a number of recommendations for successful academic conferences. In his discussion, he emphasises that the traditional format for academic conferences was counterproductive and reaffirmed the status-quo, while potentially conferences could function as models of facilitating societal learning and change, with implications for society as a whole. Richards suggests a re-orientation of the values that inform conferencing and

presents a framework around the concepts of desires and constraints. Among his suggestions is the idea, drawing on Mead as discussed above, that cybernetic conferences should themselves be organised in the light of their own ideas, without hierarchy. Organisers should not strive to create the ideal conference but, rather, continually experiment within a framework of creating nonhierarchical structures that support dialog, foster compatibility and opposing ideas among thinking and caring people and encourage the taking of responsibility and the creation of opportunities for learning, understanding and developing new ideas.

« 23 » Finally, Johan Verbeke's article "Designing Academic Conferences as a Learning Environment" presents and critically discusses the planning and design of a number of conferences conducted between 2000 and 2014. The conferences have a background in the fields of architecture, arts and design and the author explores how conferencing may become a process in which knowledge is generated, captured and exchanged, drawing on constructivist approaches to learning environments. The conference formats presented here involved interacting in small groups, performances and plenary discussions, as well as exhibit presentations where physical design objects have functioned as triggers and catalysts for discussion, in which interaction, exploration, reflection and articulation among participating group members lead to deep learning experiences. As such, the text suggests a set of tools and strategies to develop more stimulating and active conference de-

Conclusion

« 24 » In providing a context for the articles in this special issue, we have, in this introduction, drawn on constructivist approaches to frame criticisms of the traditional structure of academic conferences in both practical and epistemological terms. Many of the issues raised are especially relevant for disciplines such as cybernetics/systems, art, architecture and design, on which the articles in this issue focus. Here, tacit knowledge, reflection, double-loop learning, feedback, interaction and the inclusion

of observers as part of their acts of observing play crucial roles in knowledge-creation yet sit in contrast with the predominantly one-way paper presentation format. Yet while these fields bring these issues into particular focus, they are of relevance more generally. We hope that this publication will contribute to discussion around conference design and be a resource supporting new conference formats, helping make them more explorative, enjoyable and creative.⁸

« 25 » One aspect of this is to emphasise those aspects of the traditional paper presentation model that are valuable and important. As noted above, the point of establishing alternative conference formats is not that they are necessarily better but that they offer different possibilities to those offered by the traditional paper presentation structure. It follows that the traditional structure, in turn, offers possibilities different to, say, a conversational format, and so has its own distinct value and place.9 For instance, the predictability of the traditional design, especially in a regular series of conferences, allows advance planning and a familiarity with structure and roles that can help participants orient themselves in order to contribute. The paper presentation format also helps participants, especially those less well established in a field, to introduce themselves by presenting the results of substantial research relatively quickly (whether face to face or by circulating papers in advance). This provides a substantive basis for discussion and is part of what often makes the informal aspects of conferences so productive, as well helping to generate written proceedings with which to communicate with nonparticipants.

« 26 » The ASC conferences discussed above were notable for combining a conversational format with written papers. Full papers or extended abstracts were circulated

⁸ We would like to thank Alan Boldon, Peter Lloyd and Sabine Thalmann for their assistance in funding the print copies of this issue, and Filippo Salustri for his help in publicising the original call for papers.

⁹ On this point we are grateful to Stuart Umpleby for his comments, drawing on the example of the European Meetings on Cybernetics and Systems Research (EMCSR) organized by Robert Trappl.



BEN SWEETING

is a senior lecturer at the University of Brighton where he is the course leader for the undergraduate degree in architecture. He studied architecture at the University of Cambridge and the Bartlett, UCL. In his Ph.D, supervised by Neil Spiller and Ranulph Glanville and funded by the Arts and Humanities Research Council, Ben explored epistemological and ethical questions in relation to architecture and design, drawing on second-order cybernetics and radical constructivism as well as on practice-based research methods. He is a member of the American Society for Cybernetics and was awarded the Heinz von Foerster Award in 2014. He is currently working on a collaborative research project at the Canadian Centre for Architecture in Montreal, funded by the Andrew W. Mellon Foundation, in which he is focusing on the collaborations between cybernetician Gordon Pask and architect Cedric Price.



MICHAEL HOHL

is a designer, academic and researcher, and professor of design theory at Anhalt University of Applied Sciences Dessau, Germany. He likes making things and thinking about things, how we do them and how this changes us. He enjoys working with first-year students, and supervises and mentors Ph.D. research students from art, design and architecture. He also conducts Research Training Seminars at the Royal College of Art — in innovation design engineering — in London, and at Bauhaus University, Weimar. He has organized and co-organized conferences, research seminars and guest lectures, and has a keen interest in learning how to transform such experiences into compelling conversations.

and commented on in advance through a web forum. These were then revised after the conference, given its discussions, for blind peer review and publication (the process therefore combined different forms of blind and open peer review). Those who wished to present their paper in person did so in the evenings of the conference in an emergent program. This resulted in an atmosphere that sometimes felt a little like a festival.

« 27 » As well as contributing to conference design, discussions in this issue also reflect back on constructivism itself. As noted above, conference design has particular importance in design and cybernetics/systems, fields where the subject matter of a conference session may also be implicit in our experience of the event and in its organisation. Given this self-reflexivity, and the close connection of design and cybernetics/systems to constructivism, we suggest that conference design is an area of focus that helps us to understand constructivism in terms of practice (and so knowing) rather than theory (and so knowledge). This in turn connects constructivism with areas of practice such as KM, which can benefit from the epistemological reflection

that constructivism can bring. While mainstream KM has tended towards technocratic or realist approaches, some developments in the field recognize the importance of the dynamic aspects of knowing in ways that resonate with constructivism. See for instance: Aarons (2011), Claire McInerney (2002), McInerney and Ronald Day (2007), Khairiltitov Zainuddin (2007).

«28» The concerns of this issue also sit in the context of the discussions regarding second-order science (SOS), which have been a recent focus of this journal (Riegler & Müller 2014). In one sense, this is a case of seeing the articles here as examples of researching research, through their reflections on its processes and outcomes during conferences. More significantly, the issues raised also point to the event of the conference itself as coinciding with the two motivations for SOS that Karl Müller and Riegler (2014) point out, that of self-reflexivity and that of the inclusion of the observer. As noted above, the difficulty of designing a conference follows in part from its inclusion of us within it (as Jones 1984 points out), while fields such as design and cybernetics/systems suggest ways in which the activities of a conference may be used, given an appropriate format, to reflect on its content in a self-reflexive manner (the same self reference would occur in different ways in many other disciplines). As such, and perhaps not surprisingly given the influence of Mead's (1968) comments on the development of SOS, the reflections on conference design in this issue suggest a possible avenue of exploration for SOS through understanding the organisation of conferences in terms of the design of the research that is to occur in them.

References

Aarons J. (2011) Epistemology and knowledge management. In: David S. & Te'eni D. (eds) Encyclopedia of knowledge management. Second edition. IGI Global, Hershey PA: 270–279.

Baron P., Glanville R., Griffiths D. & Sweeting B. (eds.) (2015) Special issue "Living in cybernetics: Papers from the 50th Anniversary Conference of the American Society for Cybernetics." Kybernetes 44(8/9).

Bateson G. (2000) Steps to an ecology of mind. University of Chicago Press, Chicago IL. Originally published in 1972.

- Bateson M. C. (2004) Our own metaphor: A personal account of a conference on the effects of conscious purpose on human adaptation. Hampton Press, Cresskill NJ. Originally published in 1972.
- Brand S., Bateson G. & Mead M. (1976) For God's sake, Margaret: Conversation with Gregory Bateson and Margaret Mead. Co-Evolutionary Quarterly 10: 32–44. Available at http://www.oikos.org/forgod.htm
- Cross N. (2007) Designerly ways of knowing. Birkhäuser, Basel.
- Dubberly H. & Pangaro P. (2015) How cybernetics connects computing, counterculture, and design. In: Hippie modernism: The struggle for utopia. Walker Art Center, Minneapolis MN: 1–12. Available at http://www.dubberly.com/articles/cybernetics-and-counterculture.html
- Fischer T. (2014) Wiener's refiguring of a cybernetic design theory. In: 2014 IEEE Conference on Norbert Wiener in the 21st Century. IEEE Press, Piscataway NJ: 392–398.
- Fischer T. & Richards L. D. (2015) From goaloriented to constraint-oriented design: The cybernetic intersection of design theory and systems theory. Leonardo, in press.
- Foerster H. von (2003) Understanding understanding: Essays on cybernetics and cognition. Springer, New York.
- Glanville R. (2006a) Construction and design.

 Constructivist Foundations 1(3): 103–110.

 Available at http://www.univie.ac.at/constructivism/journal/1/3/103.glanville
- Glanville R. (2006b) Design and mentation:
 Piaget's constant objects. The Radical
 Designist 0. Available at http://www.iade.pt/
 designist/pdfs/000_05.pdf
- Glanville R. (2007) Try again. Fail again. Fail better: The cybernetics in design and the design in cybernetics. Kybernetes 36(9/10): 1173–1206.
- Glanville R. (2009) A (cybernetic) musing:

 Design and cybernetics. In: Glanville R., The black boox. Volume III: 39 steps. Edition Echoraum, Vienna: 423–425.
- Glanville R. (2011) Introduction: A conference doing the cybernetics of cybernetics. Kybernetes 40(7/8): 952–963.
- Glanville R. (ed.) (2012) Trojan horses: A rattle bag from the "Cybernetics: Art, design, mathematic A meta-disciplinary conversation" post-conference workshop. Edition echoraum, Vienna.

- Glanville R. (2013) Radical constructivism = second order cybernetics. Cybernetics and Human Knowing 19(4): 27–42.
- Glanville R. (2015) A (cybernetic) musing: Wholes and parts. Chapter 1. Cybernetics & Human Knowing 22(1): 81–92.
- Glanville R., Griffiths D. & Baron P. (eds.) (2014) Special issue "A circularity in learning." Kybernetes 43(9/10).
- Glanville R. & Sweeting B. (eds.) (2011) Special issue "Cybernetics: Art, design, mathematics
 A meta-disciplinary conversation: Papers from the 2010 conference of the American Society for Cybernetics." Kybernetes 40(7/8).
- Glasersfeld E. von (1990) An exposition of constructivism: Why some like it radical. In: Davis R. B., Maher C. A. & Noddings N. (eds.) Constructivist views on the teaching and learning of mathematics. Journal for Research in Mathematics Education Monograph 4: 19–30. Available at http://www.vonglasersfeld.com/127
- Glasersfeld E. von (1992) Guest editorial. Educational Studies in Mathematics 23(3): 443–444.
- Jonas W. (2007) Research through DESIGN through research: A cybernetic model of designing design foundations. Kybernetes 36(9/10): 1362–1380.
- Jones J. C. (1984) Voices at the conference conference. In: Jones J. C., Essays in design. Wiley, Chichester: 77–301. Originally published in 1982.
- Koenig M. R. (2003) Knowledge management.
 In: Feather J. & Sturges P. (eds.) International encyclopedia of information and library science. Second revised edition. Taylor & Francis, London: 351–359.
- Krippendorff K. (2007) The cybernetics of design and the design of cybernetics. Kybernetes 36(9/10): 1381–1392.
- McInerney C. (2002) Knowledge management and the dynamic nature of knowledge. Journal of the American Society for Information Science and Technology 53(12): 1009–1018.
- McInerney C. R. & Day R. E. (2007) Rethinking knowledge management. Springer, Berlin.
- Mead M. (1968) The cybernetics of cybernetics. In: Foerster H. von, White J. D., Peterson L. J. & Russell J. K. (eds.) Purposive systems. Spartan Books, New York: 1–11.
- Medawar P. (1996) Is the scientific paper a fraud? In: Medawar P., The strange case of the spotted mice and other classic essays on science.

- Oxford University Press. Oxford: 33–39. Originally published in 1963.
- Müller K. H. & Riegler A. (2014) A new course of action. Construcivist Foundations 10(1): 1–6. Available at http://www.univie.ac.at/constructivism/journal/10/1/001.editorial
- Pask G. (1976) Conversation theory: Applications in education and epistemology. Elsevier, Amsterdam. Available at http://pangaro.com/pask/ConversationTheory.zip
- Pask G. (1979) Against conferences: The poverty of reduction in SOP-science and POP-systems. In: Proceedings of the Silver Anniversary International Meeting of Society for General Systems Research, London, August 1979. SGSR, Washington: xii–xxv. Available at http://pangaro.com/pask/pask against conferences + sop science.pdf
- Pias C. (ed.) (2003–2004) Cybernetics Kybernetik: The Macy conferences 1946–1953. 2 volumes. Diaphanes, Zurich.
- Read S. (2015) Making architectural history. In:
 Making research | researching making. In:
 Proceedings of the Creative Practice Conference. Arkitektskolen Aarhus, Aarhus (DK):
 464–473.
- Riegler A. & Müller K. H. (eds.) (2014) Special issue "Second-order Science." Construcivist Foundations 10(1): 1–6. Available at http://www.univie.ac.at/constructivism/journal/10/1/001.editorial
- Schön D. A. (1991) The reflective practitioner: How professionals think in action. Farnham: Arena. Originally published in 1983.
- Shapin S. & Schaffer S. (1985) Leviathan and the air-pump: Hobbes, Boyle, and the experimental life. Princeton University Press, Princeton NJ.
- Sweeting B. (2015) Cybernetics of practice. Kybernetes 44(8/9): 1397–1405.
- van Ditmar D. F. & Glanville R. (eds.) (2013) Special issue "Listening: Proceedings of ASC conference 2011." Cybernetics and Human Knowing 20(1–2).
- Zainuddin K. M. (2007) A constructivist perspective of knowledge management theory: A KM solution to online teachers professional development. In: Atkinson R., McBeath C., Soong Swee Kit A. & Cheers C. (eds.) ICT: Providing choices for learners and learning. Proceedings ascilite Singapore 2007: 526–527. Available at www.ascilite.org. au/conferences/singapore07/procs/khairiltotov-poster.pdf