AFTERWORD

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I wish to thank Deborah Osberg (editor-in-chief) and Donna Trueit (associate editor) for allowing me to bring forth this Special Issue of *Complicity*. Without their help this issue would not be. Particular thanks go to Deborah for her labor in formatting this issue. Technological skills are not ones I possess and as Donna has helped me so many times in the past, Deborah now does the same. I am grateful.

I also wish to thank Ton Jörg for his provocative essay which is "pregnant with possibilities," and all the respondents, who, like myself, were excited by the essay and used it "enlarge the space of the possible." Indeed at times the respondents, scaffolding on Jörg's essay, ventured into the unknown, bringing forth the possibility of that notyet-seen, or as Osberg says, drawing on Derrida, experiencing and experimenting with "the possibility of the impossible." This is not to say, though, that I found flights of fancy in the respondent's comments; rather I found elaborations of and struggles with the Programmatic view Jörg puts forward. In Trueit's sense, the respondents "conversed" with Jörg's ideas and in so doing brought forth issues for all complexity-oriented educators to grapple with in a complexity paradigm (if I may call complexity thinking such) appropriate for teaching, learning, educating.

The first issue that strikes me is that of programming the emergent, the dynamic, the ever changing. Is this possible? Can we program movement into "that which cannot currently be conceived as a possibility"? The presently impossible. And if we could, does not such a programmatic act limit the very possibility we wish to bring forth?

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My own view, and I believe that of some respondents, is that we neither can nor should wish to programme the emergent, dynamic, yet-to-be. Such a statement, though, does not mean I wish to negate what Jörg has offered us – far from it. There is much in his essay I, as a curricularist with complexivist leanings, find heuristic. I say heuristic here for I believe all readers of this journal realize the "map is not the territory" (Bateson, 1979). As Osberg, Biesta, and Cilliers (2008) point out clearly, all models are abstractions, simplifications. Nor can we, with any hope of success, template a model in one field (here the natural sciences) onto the structure of another field (here education). We can though, with good fortune, and fortunate insight, find issues, ways of operation etc., in one field heuristic for creative work in another field. Jörg's essay, and the attendant responses, I find extremely heuristic for my thinking about curriculum design.

Before I go into some of the curriculum and instructional ideas I have developed, or hope to develop, as a complexivist curriculum theorizer, designer, and teacher, I wish to pay attention to Gert Biesta's call or us to define what it is we mean by that of which we speak: here, particularly, education and learning. Too often, I fear, we educationists assume that since education and learning are *per se* "good," they need no definition, no good analysis. Biesta asks though, just what are we educating for? What is our purpose here? Which types of learning do we wish to espouse, bring forth? How we answer these questions will have a strong impact on the sorts of curricula we design and ways in which we teach. Personally, I advocate educating for the purpose of helping students be creative individuals and responsible citizens. My challenge is to design curricula to help this occur.

David Kirshner and David Kellogg point out that one of the features that stands out in Jörg's programmatic view is his "reliance on Vygotsky's sociogenetic theories of learning and development as an interpretative lens." They go on to expand on Jörg's use of Vygotsky, giving all readers a deeper insight into Vygotsky and his theories. Of particular importance for me will be Vygotsky's comments on creativity (Vol. 4 of his *Collected Works*), as I (with help from Donna Trueit and Sarah Pratt, 2006) wrestle with the issue of developing a "conversational curriculum," one which moves beyond our current linear frame, appropriately labeled "teaching-as-telling."

Bernard (Barney) Ricca also picks up on Vygotsky, especially his Vol II, "Fundamentals of Defectology." In our linear, reductionist episteme we have focused on the presumed "defects" (or wrong answers/approaches) in a learners actions. Vygotsky's insistence that we focus on the whole child (or learner) embedded in a social situation gives guidance to me in developing a conversational curriculum. Such a focus leads me to appreciate and utilize Jörg's notion of "bootstrapping," building a curriculum not only from the bottom up that emergence might emerge, but also utilizing person-toperson interaction as the key to such development. Here I believe we can find a *foundationless foundation*, to use Davis' delicious phrase. It is common in our linear curriculum (or syllabus) to start building with a solid foundation (the basic "facts") or the first, most general principles (those Ramus, in Ong, [1958] loved so well). Historically we know that both are cultural artifacts.

A foundationless curriculum builds its "foundation" not from solid blocks, or indestructible atoms of knowledge but upon relations. Fleener's development of a logic of relations, drawing on A. N. Whitehead is most generative for me. The really real then becomes not objects or facts, but relations between/among things and facts. Following this notion of relationality (also developed by Trueit [2005] drawing on C. S Peirce), Fleener's support of transdisciplinarity, bringing in recent empirical research on the human brain's nonlinear operations, encourages me in my belief that a curriculum design where "all are on the same page" is creatively *deadening* and productively *inefficient*. I thank Jorg for the emphasis he places on bootstrapping as a key element in his "new vision for education" (which I take to be schooling), and Davis, Fleener and Kirshner/Kellogg for their extension and deepening of this concept.

I would like to close these observations, partial at best, and well in the shadow of both Jorg's essay and the exceptional responses to it, with comments on the first and last responses by Klaus Mainzer and Michel Alhadeff-Jones. Each brings a complexivist perspective to curriculum thought that is new to many curricularists. Mainzer is a towering figure in the modeling of complex, dynamic (nonlinear) systems. His curriculum contributions to this journal arising from his work as Director of the Carl von Linde-Academy, the educational division of the Technical University of Munich are much appreciated. His seminal book, Thinking in Complexity (2007) is now in its 5th edition. Alhadeff-Jones (2008), an excellent historian of complexity, introduces us to the French scholar on complexity, Edgar Morin. Morin in his four decades of work on a "complex way of thinking" (pensée complexe) brings forth epistemological, psycho-socioanthropological and ethical issues we need to focus on as we move into a complexivist paradigm, one designed to elicit transformative change. It is Morin who states that our educational system is "perverted" with its blind focus on ends-a point Davis picks up nicely. The two responses, one German, the other French, bracket nicely the other response to a programme set forth by one of Dutch extraction.

I would like to conclude my words with an address to Ton. I have had the pleasure of knowing Ton for a good decade. I have always found his work provocative and I thank him for sharing such with me over that time. While I find his sense of programme to restrictive for me—a point well developed by Alhadeff-Jones—I also find continual excitement in the challenges and heuristics he presents to my own curricular thoughts.

Again, I say, thank you, Ton.

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