

Purposes

Prose

The authors of our presentations were asked to present a brief description of what they hope to accomplish and why they believe it valuable.

The intent is to help us look beyond the content and the methods involved, on which a full paper necessarily focuses, and toward the meaning of the work. It should give us more to talk about!

Wednesday, 3:05, Sessions 31.09-31.13 Paper Discussions

Place: Sheraton, 816-828, 6th floor Time: 3:05:pm--4:35 pm

Re: Butterfly Power and the Mentoring Process

The research study which will be presented uses chaos theory as a metaphor and looks at the possible positive results coming from small-but-significant events in the lives of college students with special needs, hence the title, Butterfly Power. In chaos theory the butterfly effect refers to the phenomena whereby small, initial causes may produce large, unpredicted effects. The “butterfly” may produce either positive or negative effects depending on circumstances and the response of the individuals involved.

Research literature regarding the mentoring process underscores the importance of both challenge to and support for students during critical times in their academic careers. This study asked faculty mentors to define their own concept of mentoring and to reflect on the experiences of students whom they have guided through the rigors of the programs at RIT. While doing so they were encouraged to identify significant incidents, experiences or events that may have brought the student to an important career or life changing decision. The mentors’ perceptions of these events, how they and the students handled them, and the effect on the students’ lives after college were of interest to the study.

It is hoped that the knowledge gained from this study will be of benefit to all persons who work in a mentoring capacity with college students, especially those students who have special needs.

Rosemary Saur, Ph.D.

Sharon Rasmussen, MS

Rochester Institute of Technology

Re: Text Analysis and Complexity: Methodological Considerations.

How is it possible to gain information that is not too vague or arbitrary from qualitative interviews ? That is what I'm going to tell about. The problem concerns the question of complexity because interviews usually produce an overwhelmingly great amount of text (transcribed interviews).

My idea is to bring the difference logic of George Spencer Brown into play. This logic provides an imperative for observing, which makes it possible to overcome ontological presuppositions of language and meaning in hermeneutics. To that purpose I have invented a method consisting of three steps.

Step one is about the organizing of the interview. I use rather open questions because I think it is more interesting in a qualitative interview to experience what the other has to tell about a specific issue than hearing his opinion on a closed question. In step two differences that crop up in the interview are observed in a comprehending description, which I call an empirical construction. The third and last step involves a determination of how the empirical construction is to be designated.

Observation at step one constitutes a first order observation, which serves the purpose of selecting data concerning the selection of information. This data belongs to the class of "what"-utterances in the sense of 'what does the text tell us in relation to the previously selected guiding differences'. At step two, this data, in the form of empirical construction, is examined in a new observation. This observation facilitates a reduction of the data's complexity to an accessible interpretation of the text through the attribution of differences. The attributed differences should thus be conceived as the researcher's interpretation of the constructed empiricism, that is to say observation of the differences employed in transcribed interviews.

Jens Rasmussen

The Danish University of Education

Thursday, 10:35, Session 39.78 Symposium

Place: Le Meridien, Frontenac, 3rd floor Time: 10:35am--12:05am

Re: Constructing a Framework to Simplify Teaching and Learning with Complexity Theory for Teacher Training:

For accomplishments:

We make education and evaluation fun, relevant, and the methods of evaluation reliable, valid, and transparent.

In the paper, the question is asked, " can we take credit for student learning, or are we just gate keepers for opportunity and entitlement?"

I am focusing my article on methods of evaluation and complexity theory as a cognitive framework; proposing that perspective and methods from Complexity Theory can help us to answer questions that were unapproachable in the past, because, you guessed it, they were too complex!

Why? Perhaps because we are not taught that interaction, diversity, and interdependence are the bases for education; and tracking and measuring it has been a messy proposal and undertaking (maybe this idea should be buried!); But through offering perspectives and methods to explore these ideas, and promoting the methods to make evaluation processes transparent, reliable, and valid are of great importance if we are to begin viewing institutionalized education as open, tolerant, constructive, and fair, rather than as a reflection of the factory conditions that traditional methods

have created.

So, I am looking forward to the opportunity to share ideas with you all on Thursday. I think Sherry and I will have a lot to talk about regarding approaches to learning and what new perspectives and methods chaos and complexity may offer. I hope that many of you decide to come and take part in the symposium. My goal is that many of you take part in conversation with insights and ideas to share, and that we have fun talking about what complexity and chaos add to education.

Brock R. Dubbels, University of Minnesota,

Re: Modernism's Devastating Impact on Learning Theory: Is There a Way Out?

Piaget once said that "until we know what is possible, what is appears necessary." A corollary to that might be that until we know where ideas came from, it is difficult to change them or entertain new ones. What I hope to do in this paper is to take you with me on a journey to examine the impact of modernism on some of our ideas about learning. Then I will suggest some of the ideas emerging in the postmodern age that hold hope for thinking about these things in ways that might better serve us.

Sherrie Reynolds, Ph.D., Texas Christian University

Re: The Use of Complexity Theories for Building a 'Theory' of Education. Just a Metaphor or More?

I shall address the seemingly simple questions: what kind of complexity theory will be relevant for education? It is really clear what we mean by complexity? How complex should that complexity be for educational purposes? Is Chaos Theory a good candidate, or do we need other complexity theories? One of my goals is to show that even simple things can be very complex, as Nietzsche already was aware of; he was very much surprised about the complexity of what he called 'simple things' (conclusion of Thought 6 from his work *Morgenröthe*, first book).

Complexity theories have a lot to offer for education but complex thinking can make you blind as well, in the same way that paradigms may do. It is my intention for the AERA to explain the dynamics of learning together showing the potential of unusual large effects of interactive learning. Such an explanation seems possible with a complexity theory I developed the last five years focusing on the dynamic processes in interaction. To understand this theory you 'simply' need to think differently, along a different line, extending the language we use. Yet it is basically very simple, using the notion of reciprocal causation (Bandura, 1978, 1997) or reciprocal causality within a reciprocal causal framework. I shall address the question how my complexity theory can be used for educational purposes, by showing the dynamics of learning together, as a process of amplification, magnifying each other's learning and development, possibly leading to reciprocal transformation of the participants involved. Connecting this theory with the paradigms of social constructivism and social constructionism may lead to a shoring up of the foundations of a Theory of Education based on the generative processes and the powerful notion of generativity (Sassone, 1996).

Bandura, A. (1978). The Self System in Reciprocal Determinism. *American Psychologist*, April 1978.

Bandura, A. (1997). *Self-efficacy. The exercise of Control*. New York. Freeman and Company.

Nietzsche, F. (1905). *Morgenröthe*. Leipzig. Naumann Verlag.

Sassone, L.A. (1996). *Philosophy across the curriculum: A Democratic Nietzschean Pedagogy*. *Educational Theory*, Vol. 46, nr.4, 511-524.

Ton G. Jörg, IVLOS Institute of Education

Thursday, 12:25, Session 41.9, Symposium, book session

Place: Marriott, Bonaparte, 3rd floor Time: 12:25 pm--1:55 pm

Re: *Curriculum Visions, Ghosts and the Curriculum*

I will begin by saying that: My vision is that of curriculum as a process, bringing together scientific, storied, and spirit-ful modes of knowing in a dynamic, playful, and constantly evolving manner. For me learning emerges from this dynamic interplay.

To use or misuse Wittgenstein: Let the games begin !

Bill Doll, Louisiana State University

Re: *Curriculum Visions, Dewey's Logic and Complexity Sciences*

I would like to engage in a bit of curricular envisioning that accounts for the difficulty of capturing the essence of an ecological curriculum imagined by Dewey and offers insights into how curricular transformation from product to process-oriented schooling may be possible. Dewey's logic will be used to provide the framework for an organocentric curriculum. The relationship between Dewey's theory of inquiry and the sciences of complexity will provide the basis for connecting Dewey's logic with an organocentric curriculum.

Jayne Fleener, University of Oklahoma

Re: *Curriculum Visions, Haunting Curriculum*

"Haunting Curriculum" focuses much of its energy on the idea that the way that we think about learning and knowledge has ethical implications. Culturally and historically specific ideas about learning and knowledge necessarily shape education and schooling. I use the metaphor of Dickens's Scrooge and especially Scrooges "counting house" mentality to critique current school practices and to illustrate their basis in deeply held, long-standing cultural values. Against this backdrop I suggest an alternate worldview, based largely in complexity theories, which I believe holds less potential to cause the kind of grief that flows from the banking metaphor that orders both Scrooge's life and much educational practice. For the books audience, a particular audience committed to humanistic ideals and often hostile to "scientific" ideas, I hoped to show the possible benefits for schools and school children of considering a range of ideas about human understanding drawn from the new sciences. In the context of our SIG meeting I hope to encourage us to discuss the ethical implications of the alternative we are advocating. While the dangers (and

successes) of the current regime are well-charted what are the benefits and dangers of adopting a viewpoint on education based in complexity theories?

John St. Julien, University of Delaware

Re: Curriculum as a Spiritual Journey

My vision of curriculum as a spiritual journey starts with the metaphor of the stranger who embodies new possibilities of life. To understand spirituality in a broad sense of opening up to unfamiliar landscapes of life, the call from the stranger asks both teacher and student to be engaged in a journey of creating and co-creating new subjectivities. Curriculum as a fractal journey is in constant movement across multiple layers of self into the distant &Mac183;.

Hongyu Wang, Oklahoma State University