

## Truth, Complexity and Constructivism

Guba (1987) put forward the following assertions about constructivism, and in particular about **responsive constructivist evaluation**:

- *“Truth” is a matter of consensus among informed and sophisticated constructors, not of correspondence with an objective reality.*
- *“Facts” have no meaning except within some value framework; hence there cannot be an “objective” assessment of any proposition.*
- *“Causes” and “effects” do not exist except by imputation; hence accountability is a relative matter and implicates all interacting parties (entities) equally.*
- *Phenomena can be understood only within the context in which they are studied; findings from one context cannot be generalised to another; neither problems nor their solutions can be generalised from one setting to another.*
- *Interventions are not stable; when they are introduced into a particular context they will be at least as much affected (changed) by that context as they are likely to affect the context.*
- *Change cannot be engineered; it is a non-linear process that involves the introduction of new information, and increased sophistication in its use, into the constructions of the involved humans.*
- *Evaluation produces data in which the facts and values are inextricably linked. Valuing is an essential part of the evaluation process, providing the basis for an attributed meaning.*
- *Accountability is a characteristic of a conglomerate of mutual and simultaneous shapers, not one of which nor one subset of which can be uniquely singled out for praise or blame.*
- *Evaluators are subjective partners with stakeholders in the literal creation of data.*
- *Evaluators are orchestrators of a negotiation process that attempts to culminate in consensus on better informed and more sophisticated constructions.*
- *Evaluation data derived from constructivist enquiry have neither special status nor legitimation; they represent simply another construction to be taken into account in the move towards consensus.*

The constructivist paradigm and the nature of complex adaptive systems work very well together. Putting the argument in favour of moving away from a positivist scientific approach to solving the problems in society, Guba and Lincoln (1989) state:

*“... all these fears – about the loss of absolutes on which to pin our hopes, about intolerable ambiguity, about the loss of experimental and political control, about our inability to find widely useful solutions to our pressing problems – are themselves only *constructions* in which their constructors are trapped because of their rigid adherence to assumptions that have patently outlived their utility and their credibility. It is precisely because of our preoccupation with finding universal solutions that we fail to see how to devise solutions with local meaning and utility. It is precisely because of our preoccupation with control that we fail to empower the very people whom we are putatively trying to serve.”*

This (not surprisingly) sounds very like a description of a complex adaptive system: “intolerable ambiguity”; “loss of control”; “local solutions”. I am interested in how the epistemology of constructivism can inform my understanding of complexity theory, and

through this understanding, might make the ideas of complexity science more accessible and applicable in my day to day actions.

There is a distinct humility in taking a relativist (anti-positivist) approach to reality and truth. In place of the arrogance of seeking (and claiming to find) absolutes, we have a meek, courteous questioning; an attempt to constantly revise what one believes in the face of reasonable challenge. This constantly evolving, context-specific view of reality matches well with my understanding of complex adaptive systems:

A complex adaptive system is a collection of individual agents with freedom to act in ways that are not always totally predictable, and whose actions are interconnected so that one agent's actions changes the context for other agents

In their discussion about causality, Guba and Lincoln cite a range of opinions backing up the idea that the "billiard ball" notion of causality should be consigned to "pre-Newtonian" primitive thinking.

Instead, they propose the notion of "mutual simultaneous shaping". This is a construction which recognises:

- All elements in a situation are in mutual and continual interaction
- Each element is activated in its own way by virtue of the particular configuration of all other elements – potential shapers – that is assumed at that time and place
- Judgments about which of the shapers may most plausibly be implicated in explaining and/or managing whatever it is that the investigator wishes to explain or manage is a matter both of the circumstances that exist *and* of the investigator's purpose; the investigator asks him- or herself, "What is the most plausible to invoke given that purpose?"
- The peculiar web or pattern of circumstances that characterizes a given situation may never occur in just that way again, so that explanations and management actions are in a real sense unique and cannot be understood as implying either predictability or control.
- Explanations are at best "here and now" accounts that represent a "photographic slice of life" of a dynamic process that, in the next instant, might present a very different aspect

Guba, E. (1987) *Naturalistic Evaluation* in Cordray, D., et al. *Evaluation practice in review (New Directions for Programme Evaluation)*. San Francisco, Jossey-Bass

Guba, E. G. and Lincoln, Y. S. (1989) *Fourth Generation Evaluation*. London, Sage Publications

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