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Waking Up in the Anthropocene: Big History and the Biosphere

by

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Waking Up In The Anthropocene: Big History and the Biosphere

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December 30, 2015

R. Blundell

Date

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To the bluefin tuna of Stellwagen Bank

and the oak trees of Red Hill

With gratitude

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Dissertation Summary

As humanity enters an uncertain time known as the Anthropocene, proponents of an emerging subject called Big History claim it provides a promising educational framework capable of eliciting transformative learning. Yet no one has empirically examined the cognitive elements of that transformation or articulated how it may propagate systemically into broader domains of culture, society or the biosphere; which are issues central to the Anthropocene. This thesis takes a highly reflexive approach to explore how Big History education and the Anthropocene may be meaningfully linked and how such linkages may inform better pedagogical and cultural communication of Big History in the Anthropocene.

Much of this research is built on a centrally positioned and empirical qualitative study that revealed several cognitive elements of Big History transformative learning. These included *narrative awareness and disruption, urgency and amelioration, reflexivity, causal thinking, empowerment and participation, gratitude and appreciation, transcalar-fractal thinking, and emergent-future thinking*. A secondary analysis then revealed how these experiential elements correlate with fundamental perceptual and behavioral changes that experts suggest may form an appropriate response to the Anthropocene. These data and the concepts that emerged over the research were constructed into a general framework that integrates: *phenomenology, narrative, tacit knowledge, transformative learning, emergence, transcalar-fractals, enactivism, cybernetics, and systemic reflexivity*. This framework may be the first such attempt to explain, with sufficiently broad reflexivity, how the naturalized cosmology of Big History can propagate systemically from personal experience to culture and the biosphere and thus suggest how Big History education can provide an appropriately foundational (i.e. cognitive) response to the Anthropocene.

Preface

This dissertation investigates the proposal that the Anthropocene and Big History may be more than merely coincidental; that there could instead be deeper, systemic, and complex dynamical relationships at play. Such a subject, and research agenda, has required an investigation that crosses a necessarily wide and inclusive intellectual landscape. Yet, I am not a historian, nor a philosopher, a physicist, mathematician, sociologist, psychologist, nor a cultural theorist (I am a geologist by training, a naturalist, and a science educator). While such interdisciplinarity is probably a requisite to any endeavor that claims to fall under the very large umbrella of Big History, the primary fields to which this thesis seeks to make a contribution are the overlapping subjects of Big History education and communication. Secondly, the research may also be useful to the emerging fields of Anthropocene Studies and methodology in Creative Practice research.

The research is divided into nine chapters across multiple phases of research as they unfolded iteratively over the course of the dissertation. Chapter 1 (CONTEXT) introduces the problem of the Anthropocene and proposes the potential of Big History education as an opportunity to address it. The literature review is an attempt to draw out specific dimensions within each of these subjects that might reflect one within the other in order to reveal any potentially meaningful connections.¹ Based on the contexts and findings of Chapter 1, Chapter 2 (DESIGN) develops a dissertation structure designed to facilitate the larger, complex-systems and cultural-level research agenda. Chapter 3 (EMPIRICAL) generates qualitative data on the cognitive transformative learning aspects of engaging with Big History. Chapter 4 (CORRELATION) then draws conceptual connections between those cognitive shifts and the currently degraded biosphere. Chapter

¹ This exercise in critical reflection between subjects is the essential capacity of *reflexivity*. In a general sense, reflexivity refers to bidirectional and transactional relationships between, objects and subjects, causes and effects. A reflexive relationship is necessarily circular with both the cause and the effect affecting one another in a relationship in which neither is independent of the other. A capacity for self-system reflexivity will itself become an important finding of the research overall.

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5 bolsters the research findings by re-examining a number of established learning and communication theories and integrating them into a general framework for Big History transformative learning. Chapter 6 (PRAXIS) transitions the thesis from theory to practice by developing a metaphorical model of communication practice that I call *Cosmosis*. Chapters 7 (PRACTICE 1) and 8 (PRACTICE 2) present detailed explanations on how the creative projects implement the findings of the previous thesis research in practice. Chapter 9 (CONCLUSION) summarizes my proposal of the overall research outcomes and contributions.