

Chapter 20

From Zero to Infinity: A Story of Everything

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ABSTRACT

*Art, science, and spirituality comprise a triumvirate of conceptual and process-oriented contexts founded on different philosophical tenets, but all serving to help interpret human experience with the universe. This chapter examines the potential value in leveraging a generalist perspective as a counterbalance against deconstruction to perceived elemental units so as to avoid becoming bound by paradigm. Art and science are addressed as related observational methods that engage hand and mind to explore hypotheses about and represent the varied aspects of existence. A practicing artist and a practicing artist/scientist present examples of artworks that evolved from their collaborative project, entitled *From Zero to Infinity*, to illustrate the commonalities that art and science share with respect to pragmatic and creative processes, while not equating art with science as similar cognitive domains.*

INTRODUCTION: MAKING SENSE OF REALITY

*There is no science without fancy and no art without facts. (Vladimir Nabokov, from *Appel*, 1967:141)*

What happens to us as human beings when we face the immense vastness and uncontrollable chaos of nature? In his *The Critique of Judgement* Kant (1790) wrote,

The mind feels itself set in motion in representation of the sublime in nature; whereas in the aesthetic judgement upon what is beautiful therein it is in restful contemplation. This movement may (especially in its beginnings) be compared to a vibration, i.e., with a rapidly alternating repulsion and attraction produced by one and the same object. (Kant, 1790: Section 27).

Since the beginning of human communication – first with drawing and speech, then followed much later by written language – humankind has tried to understand and represent the world and its

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role in it (Botha & Knight, 2009). A concern with the nature of reality has been a central question that has compelled every culture to invent stories explaining the origins, structure, and eventual fate of the universe. These include oral histories and scriptures that describe the labors of a single omnipotent god or a pantheon of deities or the powers of ineffable forces in shaping the fabric of existence. Some traditions hold that nothing is real and everything is in constant flux through infinite space and time, while others envision a giant serpent floating in nothingness, swallowing its own tail to encircle the heavens and the world supported on the back of a giant creature, such as an elephant or turtle (Aveni, 1994; Barber & Barber, 2004). This quest for understanding continues unabated, as scientists hunt for elusive subatomic particles they hypothesize will tell them whether the universe will expand forever or continually cycle between expansion and contraction. There is even hope that science may be on the verge of bringing together the four principal forces (gravity, electromagnetism, the nuclear strong force, and the nuclear weak force) into a Grand Unified Theory that will reveal a more sublime level of causality (Gleiser, 1997).

The largest questions often lure the sharpest minds into the narrowest corridors. Faced with the ostensible starkness of simply being, some thinkers turn to the godly in search of a more remote explanation for why things are as they are. Confronted with the transience of their lives set within the context of an apparently indeterminate cosmos, they opt to invoke some model of a continued sentient existence as solace against the prospect of oblivion (Polyani, 1946). Others reject any arguments for a higher order of meaning or directed intent, pointing instead to pure chance as the prime driver. Challenged by evidence suggesting an overarching rational structure that governs even chaos (Gleick, 1987), these minds plumb ever deeper into reductive compartmentalization of the highly integrated system that comprises physical nature.

Despite the widely held perception that the science and spirituality are in opposition, scientific and metaphysical perspectives have integrated well throughout history. The ancient Egyptians directed their advanced architectural, medical and metallurgic technologies to theistic ends. Logic and mathematics flourished under Hinduism and Buddhism. Muslim *hakeems* (polymath scholars) contributed to many fields of both religious and secular learning during the Islamic Golden Age (circa 750–1258 CE), and 19th Century Christian communities welcomed scientists who claimed that they were not concerned with discovering and explaining the ultimate nature of reality (Habgood, 1964; Margenau & Varghese, 1991; Turner 1997). Given that science is deeply rooted in philosophy, it is ironic that the quarter between science and the spiritual continues to be widely perceived largely as an empty void, traversed here and there by lonely explorers navigating well outside the norms of either tradition.

Ancient Chinese, Greek, and Islamic thinkers clearly recognized that investigating ‘how’ and ‘why’ demanded distinctly different methodological approaches, but they did not discriminate these forms of reasoning as strictly segregated “fields” (Boorstin, 1983; Freely, 2010). From its roots in ancient Greece through the Enlightenment and Colonial periods, science was conducted as ontological investigation designed to reveal “truths” concerning physical reality. Indeed, even while the architects of the Age of Enlightenment attempted to avoid metaphysics, they were compelled to practice it to effectively counter the flaws and gaps in their explanations (Miller, 1996; Staguhn, 1992; Wilson, 1998). The decline of logical empiricism and the rise of linguistic and sociological conceptions in science during the early 20th Century led to a philosophical paradigm shift that de-emphasized the establishment of universal or ontological truth—relegated today by most modern scientists to the realm of philosophy—and more inclined towards pragmatic, functional modeling of physical systems (Devlin, 1997; Polyani, 1946).

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