

Chapter 2

Cultural Evolution: Past, Present and Futures

2.1 Introduction

In this chapter I offer a big picture overview of cultural history as a context for understanding our present situation in relation to education. Ever since human beings first appeared as *Homo sapiens* around 200,000 years ago, human life on earth has been in a state of continual change and gradual development. The way that human cultures and societies have evolved over macro time periods is intimately connected with individual psychological development, including degrees of consciousness and ways of knowing about the world. Furthermore, the evolution of human consciousness is deeply interwoven with the development of speech, language and art. The aesthetic sensibility of early humans, once expressed in bodily ornamentation, cave paintings, carvings and pictograms, gradually evolved over several millennia into more abstract forms of writing and, more recently, digital technology (see Chapter 4). In a similar manner, the enculturation of children was for millennia purely about cultural transmission—that is, passing on the values and traditions of the tribe or community to the next generation. I refer to this broad enculturation of children into the myths, mores and laws of their societies as pre-formal education. It is only in the last two to three hundred years that pre-formal enculturation of children by their families and tribes has been replaced by formal school education for the majority. But before we go into formal education in Chapter 4, I want to trace this fascinating story of cultural evolution for its relevance to understanding the background from which school education emerged.

After introducing the concept of evolution of consciousness and discussing the research challenges, I take a transdisciplinary approach to evolution, to overcome some of the limitations of Darwinian biological evolution. Three theorists of cultural evolution are chosen—Rudolf Steiner, Jean Gebser and Ken Wilber—with the structural framework being provided by Gebser’s model. An overview of five major transitions of culture and consciousness are presented, the most recent being integral, which is emerging today.

This chapter challenges the dominant evolution narrative by integrating perspectives beyond classical evolutionary biology. The purpose of the chapter is to lay the groundwork for creating conceptual bridges between cultural evolution and education as the book unfolds.

2.2 Evolution of Consciousness: The Cultural Dimension (Phylogeny)

Without renewing our culture and consciousness we will be unable to transform today's dominant civilization and overcome the problems generated by its shortsighted mechanistic and manipulative thinking. . . The shift to a new civilization—depends on the evolution of our consciousness . . . a precondition of our collective survival. (László 2006, pp. 39, 77)

Hungarian-born systems scientist, Ervin László, prefaces his comments with a nod to Einstein and his famous words of a century ago. Like many researchers from psychology, philosophy, physics and cultural history, László claims that the challenges of our times require that we *consciously* evolve our consciousness. The diverse features of the emerging new consciousness are being articulated in the literature on postformal reasoning, integral studies and planetary consciousness, which I gather under the term *evolution of consciousness*.

The interconnectedness between cultural evolution of our species as a whole and individual psychological development needs to be teased apart before it can be fully appreciated. This chapter will focus on cultural evolution, known as phylogeny, and the next chapter will focus on individual psychological development, known as ontogeny. The interrelationships between the two areas will be developed in Chapter 7.

2.2.1 What is Cultural Evolution?

To put it simply, cultural evolution is the idea that human cultures develop and evolve in much the same way that species evolve. In very broad terms, most of the cultures around the planet today are much more complex and multi-faceted than the cultures of early hunters and gatherers or agriculturalists. Some may argue that the dominant culture of today is not an improvement on early cultures, in light of the environmental damage being committed in the name of development. On the other hand, we cannot deny that human creativity and ingenuity has led to some remarkable cultural products in terms of language, art, music, architecture, science and technology and much more. We are in the midst of a new human cultural renaissance that is emerging out of the damaging impacts of hyper-industrialisation, to give birth to an infinitely creative post-industrial, postformal, integral, planetary culture.

I will begin by briefly explaining how I am using the key terms *culture* and *evolution*, before discussing more theoretical issues.

By *culture* I mean all that constitutes societies including the myths, mores, rules and laws that develop over time across the whole of humanity and yet can be quite diverse geographically at any given point in time.

My use of the term *evolution* not only refers to Darwinian biological evolution but also includes socio-cultural, philosophical and spiritual perspectives.

2.2.2 *What is Evolution of Consciousness?*

The idea of the *evolution of consciousness* is not new. Towards the end of the 18th century, it was a core topic of interest among those philosophers who were later referred to collectively as the German idealists and romantics. Almost a century before Charles Darwin published his *Origin of Species* (Darwin 1859/1998), Johann Gottfried von Herder published *This Too a Philosophy of History for the Formation of Humanity* (Herder 1774/2002). In it Herder claimed that “there exist radical mental differences between historical periods, that people’s concepts, beliefs, sensations, etc. differ in important ways from one period to another” (Forster 2001).

Herder’s seminal ideas on the evolution of consciousness were extended in many ways by Johann Wolfgang von Goethe, Georg Wilhelm Friedrich Hegel, Friedrich Wilhelm Joseph Schelling, the Schlegel brothers and Novalis. These philosopher-poets were attempting to re-unite philosophy, art, science and Spirit and were also influenced by the push to democracy and individual freedom of the synchronously occurring French Revolution. The pre-Enlightenment idea of a unity of knowledge had been superseded during the European Enlightenment, especially by Immanuel Kant’s three-part theory of knowledge, expressed in his three major philosophical works: *The Critique of Pure Reason* (Plato’s Truth), *The Critique of Practical Reason* (Plato’s Goodness) and *The Critique of Judgment* (Plato’s Beauty).

Schelling was a central figure in the conscious re-integration of knowledge. In particular, Schelling’s contribution foreshadowed current notions of conscious evolution (Teichmann 2005). Although inspired by *earlier* unitive worldviews, these integral philosophers also pointed *forward*, beyond the limitations of both pre-modern (pre-Enlightenment) mythic consciousness and formal, modernist (Enlightenment) rationality, towards a more conscious awakening of a postformal, integral consciousness. Contemporary philosophers David Ray Griffin and Arran Gare refer to this as constructive or reconstructive postmodernism, which Gare traces to Schelling (Gare 2002; Keller and Daniell 2002).

Yet the world was not ready for these r/evolutionary ideas. It would take two hundred years for the integrative philosophical movement pioneered by the German idealists and romantics to begin to make its mark on the world through the contemporary integral movement. Following close on the heels of the European Enlightenment, and in parallel with the dawning of integral evolutionary thinking in the German States, the Industrial Revolution was brewing in Britain. This key

marker of early modernity was advancing its technological powers with tremendous socio-cultural force: both progressive and disruptive. Supported by the positivist worldview of scientific materialism and analytic philosophy, mechanistic notions of human nature cast a shadow on idealist and spiritual notions of human consciousness and culture, including education. Furthermore, since Darwin—and in spite of his under-appreciated writings on love and moral evolution (Loye 1998, 2004)—the dominant evolution discourse has emphasised materialistic biomechanical views of humanity, at the expense of more philosophical and spiritual views.

However, the evolution of consciousness is not just a biological concern. Swiss cultural philosopher Gebser wrote extensively about the shifts occurring in many disciplines in the first half of the 20th century, describing it as an indication of what he called a “mutation” to a new structure of consciousness (Gebser 1949/1985). Gebser’s detailed examples of the features of the new consciousness—based on almost two decades of transdisciplinary research—provide a significant “academic footnote” to the extensive research on the evolution of consciousness undertaken by Steiner and Sri Aurobindo some decades earlier (Aurobindo 1914/2000; Steiner 1904/1959, 1926/1966). Steiner’s research combined the history of ideas (across diverse cultures) with the evolutionary concepts of the German idealists and romantics. Sri Aurobindo’s research was grounded in ancient Indian texts—contemporised by his study of German idealists (Gidley 2007; Kapoor 2007).

2.2.3 *Challenges of Researching Evolution of Consciousness—Culturally*

A major theoretical issue in researching cultural evolution last century was its perceived links with Auguste Comte and Herbert Spencer’s contentious 19th-century models of social engineering (Comte 1855/2003; Spencer 1857). These ideologies were used to rationalise many racist and ethnocentric social abuses—including slavery, colonialism and ethnocide—and became known as *social Darwinism*.

Cultural anthropologists developed powerful critiques of these models, particularly following on from the early 20th-century shift to ethnographic field research. Their critiques include claims that cultural evolution models are ethnocentric, unilineal, too oriented towards technological materialism, privileging progress rather than preservation and speculative rather than evidence based.

For a few decades, the notion of evolution itself came under critique from anthropologists and critical social scientists. However, there has been a revival of interest as new, more integrative anthropological theories began to emerge, such as Marshall Sahlins’ theory that there is both evolution of human culture in general—characterised by “growing complexity and unilinearity, with culture apparently leaping from one societal form to another”, and specific evolution, “to account

for the great variety in historical developments” of particular societies (Barnard and Spencer 1996/1998).

These challenging theoretical issues are discussed elsewhere in my doctoral research, in particular how Steiner, Gebser and Wilber dealt with these challenges (Gidley 2007).

2.2.4 *Why Darwinian Biological Evolution is Incomplete: A Cultural Diagnostic*

By the end of the 19th century, the entire evolution discourse had become dominated by the biologically based Darwinian evolution theory. Many contemporary evolutionary psychologists and anthropologists still base their research on what systems theorist/psychologist David Loye calls the “narrow version” of Darwinian evolutionary theory grounded in classical biology. According to Loye, Darwin’s position with regard to human evolution, and particularly moral development, is more fully addressed in *Descent of Man*, which is relatively marginalised compared to *On the Origin of Species* (Darwin 1871/2004, 1872/2005; Loye 1998, 2004; Richards 1992).

Classical Darwinian evolution theory is also contested¹ from several other academic sources, which include:

- New biological approaches—such as self-organisation and emergentism—arising from chaos and complexity science (Deacon 2003; Goodenough and Deacon 2006; Swimme and Tucker 2006; Clayton 2006; Braxton 2006; Jantsch 1980; Russell 2000; Thompson 1991);
- Integral theoretic approaches that propose a dialectic between biological *evolution* and spiritual *involution* (Aurobindo 1914/2000; Combs 2002; Davidson 1992; Gebser 1970/2005; Hocks; Murphy 1992; Steiner 1971b; Wilber 2001; Gidley 2008);
- Integrative approaches that work towards an integration of evolutionary science and theology/spirituality (Clayton 2007; Esbjörn-Hargens and Wilber 2006; Cousins 1999; Stein 2006; Rolston III 2005, 1997; DeLashmutt 2005; Carr 2005; Clayton 2006; Scott 2007; Conway Morris 2007);
- Postmodern philosophical evolution theories (Rolston III 1997; Richards 1992, 2002);
- Systems theory approaches to evolution (Bocchi and Ceruti 2002; László 2006; Loye 1998, 2004);

¹Proponents of the religious doctrine of *creationism* clearly also contest the Darwinian evolution theory. I do not enter the *evolution versus creationism* debate that still rages in schools in the USA. This is beyond the scope of my research, which builds on the well-established scientific and philosophical basis of evolutionary theory.

- Theological and religious literature, which includes intelligent design (Grace and Moreland 2002; Boivin 2001; Moreland 2001), theistic evolution (Carr 2005; DeLashmutt 2005; Teilhard de Chardin 1959/2002, 1959/2004) and *natural* theology (Conway Morris 2007; Rolston III 1997).

It is clear that classical biology is not the most comprehensive discipline for researching the richness and complexity of the evolution of culture and consciousness. The full range of human sciences needs to be involved to develop authentically *human* epistemologies. Tensions remain today within the cultural evolution discourse between the dominance of biology and the small but significant counterthread of philosophical and spiritual approaches that have been active throughout the last century.

2.3 A Transdisciplinary Perspective on Human Culture

Cultural evolutionary work involves deep philosophical questions of far-reaching existential import. To deal with this requires a transdisciplinary approach drawing on a range of contemporary discourses including: consciousness studies, philosophy, cultural history, futures studies, psychology, spiritual studies and education. In this book I draw from diverse disciplinary fields to inform my research on the evolution of consciousness. Notwithstanding that biological notions of human nature are an advance on mechanistic notions, the complexity of human consciousness needs to be tackled in a transdisciplinary manner.

The transition from the 20th to 21st century heralded remarkable developments in our understanding of the nature of the universe. As Newtonian physics became overshadowed by the “new sciences”, several pioneering thinkers took up the challenge to reconceptualise human nature in light of these radical paradigmatic shifts (Aurobindo 1909, 1914/2000; Bergson 1911/1944; Gebser 1949/1985, 1970/2005; Steiner 1926/1966; Teilhard de Chardin 1959/2004). I explore these developments in Chapter 3 as *megatrends of the mind*.

Researchers struggled to find suitable concepts to express what they saw as emergent changes in human consciousness, while minimising association with 19th-century social Darwinism. New concepts emerged such as evolution of consciousness (Steiner 1926/1966), creative evolution (Bergson 1911/1944), integral consciousness (Aurobindo 1909, 1914/2000), structures and mutations of consciousness (Gebser 1949/1985, 1970/2005) and noosphere (Teilhard de Chardin 1959/2004). Most of this work was overlooked in the social sciences, which seemed trapped in outmoded imitations of “old sciences”. Ironically, social scientists have been slow to reframe human nature and its relationship to such a radically complex and mobile universe.

In spite of the challenges involved, outstanding early 20th-century thinkers have pointed to the increasing complexity of consciousness as an evolutionary quality (Aurobindo 1914/2000; Bergson 1911/1944; Gebser 1949/1985; Steiner 1926/

1966; Lovejoy 1936; Neumann 1954/1995; Teilhard de Chardin 1959/2004). Late 20th-century research lends support to Schelling's idea that we are now reaching a stage of development where we can consciously participate in evolution (Bamford 2003; Gidley 2006; Lachman 2003; Russell 2000; Thompson 1998). Several contemporary theorists have written on the evolution of consciousness, from a variety of perspectives (Combs 2002; Elgin and LeDrew 1997; Gidley 2007; László 2006; Thompson 1998; Wade 1996; Russell 2000; Jantsch 1980; Gangadean 2006a; Wilber 1981/1996).

In my research on megatrends of the mind (Gidley 2010), I attempt to cohere a number of these disparate discourses, many of which operate in isolation from each other, in contradiction to each other and even in competition with each other (See Chapter 3).

2.4 Selected Theorists of Cultural Evolution

From my analysis of the literature, I conclude that the three most important 20th-century theorists of the evolution of consciousness were Steiner, Gebser and Wilber. At first glance the integral approaches of Steiner, Gebser and Wilber discussed below may give an impression that they are simply modernist, unilinear, socio-evolution models packaged as something more. This is not the case (Gidley 2007, p. 31).

In this section I draw from an in-depth study of the writings of these three—each of whom point to the emergence of new stages, structures or movements of culture and consciousness that can be referred to as *integral* (Gidley 2007). Integral consciousness is another term for what developmental psychologists call *postformal reasoning* (Chapter 5).

2.4.1 Comparative Models: Steiner, Gebser and Wilber

There are periods in human and cultural evolution when humanity passes through such fundamental transformations that our reality shifts and new patterns of thought are required to make sense of the unfolding human drama. . . The profound transformation we are now witnessing has been emerging on a global scale over millennia and has matured to a tipping point and rate of acceleration that has radically altered and will continue to alter our human condition in every aspect. We must therefore expand our perspective and call forth unprecedented narrative powers to name, diagnose, and articulate this shift (Gangadean 2006b, p. 382).

The notion that human consciousness *has* evolved is a largely undisputed claim. However, the idea that human culture and consciousness *are currently evolving* in such a way that we can *consciously participate* in this process is novel in academic circles. Integral philosopher Ashok Gangadean in the opening quotation

encapsulates what many integral theorists have been voicing over the past decade. This research points to the emergence of a new type of consciousness that has been referred to by various terms, most notably, *postformal*, *integral* and/or *planetary*.

The major focus of this chapter is to broaden and deepen the readers' understanding of the significance of cultural evolution for education. What follows is an interpretive analysis and integration of the evolutionary writings of Steiner, Gebser and Wilber. My selection of these three was influenced by their comprehensiveness and how they complement each other. While Wilber's content is comprehensive—and his theory elegant—his areas of weakness are the areas of strength of Steiner and Gebser: participatory engagement and aesthetic sensibility. By contrast, Wilber's embrace of contemporary research and his accessible text complement the more historical nature of Steiner's and Gebser's contribution. More information on my rationale for choosing these three is published elsewhere (Gidley 2007).

Steiner's major contributions were that he was the first to write about an emergent new consciousness (Steiner 1904/1959). He wrote and lectured *extensively* on the evolution of consciousness, building on ancient Indian, Greek and particularly, German idealist and romantic lineages. Secondly, Steiner developed and published a comprehensive series of practices designed to awaken the new consciousness in humanity—particularly through education, contemplative practices and the arts (Steiner 1950, 1904/1959, 1964, 1909/1965, 1926/1966, 1966, 1986, 1971a, 1930/1983, 1904/1993, 1905/1981, 1982).

Wilber's major contributions so far have been: firstly, to synthesise, contemporise and popularise much of the earlier research²; and secondly, to theorise a framework designed to assist with the application of his integral theory to a range of disciplinary fields (Wilber 1981/1996, 1980/1996, 2000a, 2000b, 1995/2000, 2004, 2006). The most recent form of Wilber's framework is called AQAL—which refers to all quadrants, all levels, all lines, all states and all types, these being the five major dimensions of his theoretical framework (Wilber 2004). Thirdly, Wilber has popularised the need for *integral life practices*, already emphasised by Steiner and Sri Aurobindo and more recently in the USA by George Leonard and Michael Murphy, somewhat balancing his cognicentrism.

Gebser's major contributions were: firstly, to begin to academically formalise the emergent integral structure of consciousness; and secondly, to observe and note its emergence in the world in various disciplines and discourses in the first half of the 20th century (Gebser 1970/2005, 1949/1985, 1956/1996).

These three approaches provide very important perspectives on human development. In my analysis they are complementary peers, each stronger in one or another aspect. To be more precise, Gebser's model is very good in terms of cultural history and also in its rich and detailed descriptions of all the major structures including integral. Although Steiner's approach is inherently integrative, he rarely

²Wilber's omission of any substantial consideration of Steiner's extensive research on evolution of consciousness, other than a few brief comments, was a primary impetus for my inclusion of Steiner.

use the word *integral* explicitly to characterise his work. A major strength is the education system he founded which prepares children to develop new ways of thinking. Wilber's AQAL system is a comprehensive integral conceptual framework and may be used as a framework for analysis and design.

Because of my primary focus on these three major sources, my coverage of many significant theorists is of necessity brief. Wilber has quoted extensively from many other sources, but I have not in all cases been able to analyse his interpretation as I have done with his writings on Gebser.

2.4.2 *Gebser's Structures of Consciousness*

Gebser's view of cultural evolution is that the human species has undergone a number of transformations of our structures or modes of consciousness from the archaic, to the magic, to the mythical, to the mental/rational mode and is now in transition from the mental mode to the integral-aperspectival mode of consciousness. The five structures of consciousness that he identified are differentiated by "differing degrees or intensity of awareness" (Gebser 1949/1985). Gebser briefly summarised them as follows:

- *Archaic*—It is antecedent to any awareness of time and space and prior to magic consciousness and inhabits a zero-dimensional world. It is spiritually embedded in nature;
- *Magic*—It corresponds to deep sleep, does not know of time and space and has its domain in a one-dimensional world. It is vegetative, instinctual and vitalistic in nature;
- *Mythical*—It corresponds to dream states, knows time but not space and inhabits a two-dimensional world. It is psychic in nature;
- *Mental*—It corresponds to wakefulness, to life in time and space in a three-dimensional world. It is essentially rational in nature;
- *Integral*—It corresponds to aperspectival consciousness, comprising a world of four dimensions. It is essentially spiritual in nature (Gebser 1949/1985, p. 84).

Elsewhere, Gebser spoke about the integral-aperspectival consciousness as follows: "This space-time freedom...is spiritual; and in this sense the fourth dimension in all its plenitude is the initial expression of a concretion of the spiritual" (Gebser 1949/1985, p. 387).

For a rich understanding of the potential of integral consciousness to better understand how education needs to change today to foster the new consciousness, Gebser's *Ever-Present Origin* is a seminal text (Gebser 1949/1985). The remainder of this chapter is organised according to Gebser's five structures of consciousness—archaic, magic, mythical, mental and integral.

While it is impossible to know how archaic humans actually enculturated their children and young people, as we move through the different cultural-historical periods, we can begin to sense how enculturation began to crystallise into more

Table 2.1 Relationships among Approaches of Gebser, Steiner and Wilber

Time	Gebser Structures	Steiner Macrohistory	Wilber Synthesis
P A S T	Archaic (pre-history)	Pre-Diluvian, pre-history Spiritually embedded	Archaic-uroboric
	Magic (includes Ice Age)	Ancient Indian cultural era (7,000–5,000 BCE approx.) Ancient Persian cultural era (5,000–3,000 BCE approx.)	Magic-typhonic
	Mythical (pre-800 BCE)	Mythic and pictorial cultures Egyptian cultural era (3,000–800 BCE approx.)	Myth-membership
F U T U R E	Mental-perspectival (800 BCE–1,500 CE)	Rational intellectual ego development Greco-Roman cultural era (800 BCE–1,500 CE)	Ego-rational
	Integral-aperspectival (1,500 CE–future)	Consciousness soul/mind Current and future cultural era (1,500 CE–3,500+)	Vision-logic

Source: Gidley (2008)

definite and formal structures as our ways of thinking became more formalised (see Chapter 4). It will become obvious as the book unfolds that if we are to facilitate the awaking of new integral, postformal ways of thinking, we need to radically postformalise our education systems.

Some of the correspondences between Gebser’s, Steiner’s and Wilber’s taxonomies and terminologies of cultural evolution are shown in Table 2.1.

2.5 Cultural Evolution from an Integrated Lens

A cultural taxonomy derived from art is vastly superior to one derived from tools. After all, tools do not designate cultures; art does. (Bednarik 2003, p. 2)

The significance of *art*—rather than *tools*—as a basis for a new approach to cultural evolution has been proposed by Robert Bednarik, director of the *International Federation of Rock Art Organizations* (IFRAO) (Bednarik 2003). Bednarik proposes that instead of terms such as *Palaeolithic* and *Neolithic*—referring to the development of use of stone tools—the term *Palaeolithic* could be replaced by the term *Palaeoaesthetic*.

Surprisingly, the domain of *art*—or *aesthetic sensibility*—may be a more fruitful starting point for the creation of a new *panhuman*³ narrative about the evolution of culture and consciousness. For a guide to the aesthetic development of humanity from two and a half million years ago until the classical period around 3,000 years

³The term *panhuman* comes from the Greek *pananthropinon*. It has been used in recent academic literature, particularly in reference to world art (Kimball 2004) and Greek poetry (Stathatou 2007).

ago, see Table 2.2. The importance of aesthetics in cultural evolution informs my speculations on early forms of education, to be further pursued in Chapter 4.

The study and application of *aesthetics* has been a relatively minor—but continuous—philosophical thread that stretches from at least the Platonic beginnings of Western philosophy up to the present time (Bosanquet 1892/2005). Educational philosopher and poet, Sir Herbert Read (1893–1968), proposed that aesthetic appreciation is fundamental to higher cognition. On the basis of the significance of art in developmental and evolutionary theory and following in the footsteps of German philosopher Friedrich Schiller (1759–1805), Read claimed that art/aesthetics should be the very *basis* of education (Read 1943; Schiller 1954/1977). Read’s evolutionary pedagogy begs the question: Why has art/aesthetics remained—at best—a tangential thread in educational philosophy in the light of its apparent significance as an evolutionary catalyst?

Table 2.2 The Aesthetic Genealogy of *Pre-literate* Humanity

Gebser’s Structures of Consciousness ^a	Human Creative Abilities	Human Aesthetic Development	Broad Time Periods BP (and BCE)
Pre-Homo hominins (pedestrian, manual)	Becoming gradually human. . .	Walking, hunting Collecting objects Migrating, use of fire Tools, dancing	2.5 mya ^b → 800,000 →
Archaic humans (aural, vocal) <i>(Homo sapiens)</i>	Whole body rhythmic, vital Aesthetic enactment	Chorusing, cooking Colouring, shaping Beading, burials Skin/fur clothing	500,000 → 200,000 → 100,000 →
Magic connectionism (visual, musical, manual)	Emotional Visual Musical Manual Aesthetic enactment	Singing, sculpting, Petroglyphs, painting Musical instruments Speech Buildings, pottery, metal craft Linen, cotton, silk ^c Early pictograms	40,000 → 30,000 → 15,000 → 7,000 BCE → 3,500 BCE →
Mythical (oral, poetic, narrative, cosmetic)	Oratory narrative Poetic linguistic Manual Aesthetic enactment Literary	Stories/myths Logograms, poetry Architecture, painting Weaving, sculpture High art Proto-alphabets	3,000 BCE → 2,000 BCE → 1,400 BCE →

Source: Gidley (2008)

^aGebser does not distinguish what time period is referred to by his term *Archaic* consciousness, but it is likely that it includes pre-human hominins. He only gives chronologies from mythical onwards.

^b“mya” refers to *million years ago*.

^cThe art of spinning and weaving flax into linen developed in Egypt c. 3,400 BCE; in India the spinning of cotton traces back to c. 3,000 BCE; in China, sericulture and silk spinning methods were initiated c. 2,640 BCE. <http://www.india-crafts.com/textile/textile-history.html>

The following fragments of the evolutionary narrative are primarily drawn from Gebser's approach, but also integrate insights from Steiner, Wilber, Bednarik and others. In Chapter 4, I discuss the aesthetic sensibilities of these early hominins and humans and speculate on how they may have enculturated their young.

It is clear from Table 2.2 that the invention and use of stone tools is only a very minor, albeit significant, part of the cultural evolution of early humans. Dancing, singing, colouring and shaping were all part of the activities of Gebser's Archaic humans, during the Palaeolithic (Old Stone Age) period, prior to *Homo sapiens*. This picture lends a good deal of support to Bednarik's proposal to change our terminology from *Palaeolithic* to *Palaeoaesthetic*.

Furthermore, during the period 7,000 to 3,000 BCE, referred to as Neolithic (New Stone Age), humans were already engaged in sculpting, painting, pottery, metal craft and building and were wearing linen, cotton and silk. Perhaps we could continue Bednarik's aesthetic reframing by replacing *Neolithic* with *Neoaesthetic*. In Gebser's model this is an era of transition between magical consciousness and mythical consciousness. For transdisciplinary contextual framing, see Table 2.3.

2.5.1 *The Dawn of Humans: The Culture of Survival*

That original wisdom was an actually inspired wisdom, one that came to man from without, arising from divine worlds. (Steiner 1971a, p. 114)

Dreamlessly the true men of earlier times slept. Chaung-tzu ca. 350 BCE. (cited in (Gebser 1949/1985, p. 44))

Scientific knowledge regarding the emergence of human beings on earth is fragmentary, somewhat incoherent, and still being uncovered.⁴ To add to the challenge of transdisciplinary research in this area, there appears to be different nomenclature and timelines to classify the various geological and archaeological periods both between and within disciplines (see Table 2.3 for a rough guide to this territory).

2.5.1.1 Key Features of Archaic Consciousness

The archaic-uroboric period...presents in a very global fashion the great transition from mammals in general to man in particular, and stands further as the great subconscious ground out of which the figure of the ego would eventually emerge... (Wilber 1981/1996, p. 33)

⁴Radiocarbon dating is only accurate back to c. 60,000 years BP. Fossils older than ~100,000 years do not yield measurable DNA samples. http://www.tufts.edu/as/wright_center/cosmic_evolution/docs/fr_1/fr_1_cult1.html

Table 2.3 Cultural Evolution: Geology, Biology, Archaeology, Anthropology and History

Geological ^a Epochs	Evolution of <i>Homo sapiens</i> : Biology		Archaeology Anthropology and History ^d	Gebser's Structures of Consciousness
Pliocene 5.3–1.8 million years BP ^b	<i>Homo habilis</i> 2.5–1.5 m BP <i>Homo erectus/ergaster</i> 2 million–250,000 BP		Palaeolithic (Old Stone Age) Lower 2.5 million–120,000 BP	Archaic Hunter-gatherer Nomadic Tribal palaeo-art Song and speech Spiritual connection Embedded in nature and cosmos Natural dwellings
Pleistocene (Ice Age) 2 million–12,000 BP	<i>Homo neanderthalensis</i> 250,000–30,000 BP	<i>Homo sapiens</i> 200,000 BP –present	Middle Palaeolithic 300,000–30,000 BP	Natural dwellings
	Cro-Magnon 40,000–12,000 BP		Upper Palaeolithic 30,000–12,000 BP	
Geo-climatic catastrophe: Younger Dryas, abrupt climate change^c 13,000–11,500BP (9,500 BCE)		Pre-modern	Ice melt global floods: sea level rise 120 m 13,000–11,500 BP (9,500 BCE)	Magic Ice Age cave dwellers Tribal cave art and carving Warming enabled agriculture and horticulture
Holocene 9,500 BCE–late 18th century			Mesolithic (Middle Stone Age) 10,000–8,000 BCE	Farming communities Early settlements Stone and copper work Housing
			Neolithic (New Stone Age) 7,000–3,000 BCE and Copper Age 5,000–3,000 BCE	
			Bronze Age 3,000–1,200 BCE	Mythical Feudal Early city-states Bronze and iron work Early pictographic writing Hieroglyphic writing
			Iron Age 1,200 BCE–700 BCE	
			Classical and medieval history 700 BCE–14th century	Mental/Rational Civic life in cities Egos, heroes, empires Alphabets Formal thinking Philosophy
	Modern	Renaissance to Modern Industrial Period 15th century–19th century	Integral Renaissance Enlightenment values Democratic rights Nation-states to planetary Industrial to post-industrial	
Anthropocene Late 18th century to present		Post-modern	Post-Industrial Postmodern 20th–21st century and beyond	

Source: Gidley (2008)

^aGeological data *University of California Museum of Paleontology* <http://www.ucmp.berkeley.edu/help/timeform.html>

^bArchaeological and anthropological data *Handbook of Human Symbolic Evolution* (Lock and Peters 1996/1999) and *Encyclopedia of Social and Cultural Anthropology* (Barnard and Spencer 1996/1998). Mesolithic, Bronze and Iron Ages (Schriek et al. 2007; Seger 2006; Zong et al. 2007). Historico-philosophical periods (Tamas 1991, 2006).

^c“BP” refers to “before 1950” in geological time scales up to and including 10,000 BP (8,000 BCE).

^dGeoclimatic upheavals (Ambrose 1998, 2003; Carlson et al. 2007; Colman 2007; Tarasov and Peltier 2005; Kay 1977; Wood and Collard 1999).

As far as we can discover from the evolutionary narratives of Steiner, Gebser, Wilber and others, several features are associated with early humans—including pre-human hominins.

- It is almost universally agreed that early humans lived in a way that was embedded in nature. What is also posited by integral evolutionary theorists is that they were also embedded in their sense of a cosmos;

- There are two conflicting views in terms of the primitiveness versus innate spiritual wisdom of early humans. Wilber tends to subscribe more to the biologically primitive notion, whereas Gebser and Steiner refer to their spiritual wisdom—albeit not with the kind of consciousness we have today (Gidley 2008, pp. 55–56);
- Our main theorists describe this most primal of human cultures as a matriarchal culture, and this is supported by other theorists (Eisler 1987);
- There is also a general sense from the evolution of consciousness theorists that the earliest of humans lived in a kind of unconscious Eden/Paradise;
- The palaeoaesthetic sensibility and expression will be discussed in more detail in Chapter 4, as it provides some grounding for speculations on pre-formal education among early humans.

It is beyond the scope of this volume to expand on these features. Interested readers will find a more detailed coverage published elsewhere (Gidley 2007, pp. 52–58).

2.5.2 *The Age of Magic: The Culture of Art*

‘Art’ has always been associated with the early cultural ‘success’ of anatomically modern humans, and with the establishment of what appears to be a ‘fully human’ cultural pattern (Lock and Peters 1996/1999, p. 289).

This conventional archaeological statement has become outmoded with the increasing body of evidence of aesthetic development in early *Homo* species, such as *H. heidelbergensis* and *H. neanderthalensis*, and the growing interest in palaeoart outside of Europe. The last glacial age (c. 70,000–10,000 BCE) was a period of great development of culture and human consciousness. This is within the late Pleistocene age and up to the beginning of the current geological epoch—the Holocene that began c. 10,000 BCE (see Table 2.3).

2.5.2.1 Key Features of Magic Consciousness

The magic “epoch” as we see it, not only encompasses an extended “era” but also a variety of modes of manifestation and unfolding that are only imprecisely distinguishable from one another. [Yet]...we shall consider all such modes to be manifestations of magic [consciousness]. (Gebser, 1949/1985, p. 46)

The evolutionary narratives of Steiner, Gebser, Wilber and others, identify the following features as being associated with what Gebser called magic consciousness.

- Spacelessness, timelessness, unitive interconnectedness, merging with nature. Gebser expands on these features with the following description: “The spaceless

and timeless phenomena arise from the vegetative intertwining of all living things [as] realities in the egoless magic sphere” (Gebser 1970/2005, p. 49, 51);

- All three narratives characterise the social groupings as being based on kinship ties, for example of the hunter-gatherers and nomadic peoples. Gebser explained that it was the “animal breeders as well as the hunting and nomadic cultures [that were] predominantly rooted in the magic culture” (Gebser 1949/1985, p. 305). The embeddedness in the tribe was linked to the egolessness of magic human;
- The humans of this era enacted a magic response to Nature, by “standing up to Nature” and becoming a “Maker” (Gebser 1949/1985, p. 48). As Wilber put it: “the more advanced individuals had magical powers related to what we would now call *shamanism*” (Wilber 1981/1996, p. 75, 339);
- The flourishing of art—music, song and painting. This aesthetic aspect is expanded in Chapter 4 as a basis for speculation on educational processes at the time.

These features cannot be expanded in a volume of this scope. A more detailed coverage has been published elsewhere (Gidley 2007, pp. 62–69).

2.5.2.2 Transition from Magic to Mythical

Farming was the most obvious effect, or perhaps vehicle, of a deeper transformation in structures of consciousness: it was the earliest expression, that is, of a shift from magical-typhonic to what we call mythic-membership consciousness. (Wilber 1981/1996, p. 93)

Something of a cultural hiatus occurred between approximately 9,500 BCE (the end of the abrupt climate event—the Younger Dryas) and 8,000 BCE (the beginning of the Neolithic). This is not surprising considering the dramatic environmental change occurring, during which “most of the final (warming) transition may have occurred in just a few years” (Colman 2007, Abstract). Between the height of the cultural activity of the glacial period and the establishment of agricultural settlements in the fertile crescent of Mesopotamia—China’s Yellow River and the Indus and Nile valleys—the sea level rose approximately 120 metres, with much of this occurring between 12,000 BCE and 8,000 BCE.⁵ As the geo-climatic conditions began to stabilise, the climatic changes associated with the end of glaciation actually facilitated the development of farming of cereals and the domestication of sheep, goats, pigs and cattle through the warmer climate and flooding of river basins. This enabled the formation of farming communities and more settled living conditions for the next few thousand years. Further research is published elsewhere (Gidley 2008, pp. 70–80).

In Steiner’s narrative about this transition period, he focused on the pre-history of Asia—particularly India—and Mesopotamia—Persia-Sumeria. He pointed to

⁵This dramatic sea level data is sourced from the Goddard Institute for Space Studies, NASA, New York. http://www.giss.nasa.gov/research/briefs/gornitz_09/

the significance of what he referred to as the ancient Indian and ancient Persian cultures of that time based on his claims that: (a) they provided continuous, genealogical links to a cultural tradition of ancient spiritual wisdom; (b) their philosophical and scientific traditions were foundational to later European philosophical, scientific and cultural developments; and (c) they were significant in enabling the refining and consolidating of important subtle aspects of human biological and psycho-spiritual development (Gidley 2008, pp. 70–80).

2.5.3 *The Age of the Great Myths: The Culture of Stories*

Whereas the distinguishing characteristic of the magic structure was the emergent awareness of nature, the essential characteristic of the mythical structure is the emergent awareness of soul. (Gebser 1949/1985, p. 61)

As the transition from magic to mythical consciousness reached its climax, the cultural shift took place from increasingly settled and complex agricultural villages to what are regarded as the world's first cities. Archaeologically, the period to be considered here straddles the Bronze Age (3,000–1,200 BCE) and the Iron Age (1,200–700 BCE). A major cultural flourishing occurred in North Africa and the Middle East among the Chaldean, Babylonian, Assyrian and Egyptian people—the thirty dynasties of the high culture of dynastic Egypt spanned 2,400 years of this period (c. 3,000–600 BCE) (Shaw 2000, pp. 479–483). Gebser locates the emergence and development of the mythic structure of consciousness across this span (c. 3,000–800 BCE), which is almost identical to the timing of Steiner's third cultural period—the Egypto-Chaldean (c. 3,000–750 BCE). So, unlike the earlier developments, there is a great deal of consensus on the age of mythical consciousness.

2.5.3.1 **Key Features of Mythical Consciousness**

The ancient Chaldean priests. . . were the custodians of profound wisdom, but for them these laws of nature were not merely abstract, nor were the stars merely physical globes. They looked on each planet as ensouled by a Being. . . a divine Being who gave it life. Thus the Egyptians and Chaldeans discerned that they were spirits living among spirits in a world of spirits. (Steiner 1986, p. 101)

Most of the following key features are identified in the narratives of Steiner, Gebser and Wilber. Since this period is approaching the time of oral history, which eventually became recorded history, there is a greater body of supportive literature.

- The development of complex mythology, requiring imagination and a new degree of cognitive coherence;
- The development of astronomy, calendars and other complex mathematical systems;

- A new relationship to death and burial, reflecting the beginnings of disconnectedness;
- The development of language systems including the first pictographic and logographic writing systems;
- The strengthening of a sense of cyclical temporality;
- Membership of large organised social groupings, resembling cities. Wilber also emphasises sociological factors, such as changing gender roles and relationships, and the impact of agricultural surplus on the development of new, more specialised, social roles, e.g., priests, administrators, educators (Wilber 1981/1996, p. 97, 102);
- Temple structures, especially pyramids, were appearing. Although Egypt is most renowned for pyramids, this was also the primary form of temple architecture of the later Meso-American and South American Incan civilisations and South-East Asia;
- The culmination of primarily matriarchal societies prior to the beginnings of patriarchy with the Greco-Roman civilisation (Eisler 2001).

More information on how these features became embedded in human culture between 3,000 BCE and 700 BCE has been published elsewhere (Gidley 2007, pp. 81–90).

2.5.4 *The Age of Philosophy: The Culture of Reason*

The Greek subjective conscious mind, quite apart from its pseudostructure of soul, has been born out of song and poetry. From here it moves out into its own history, into the narratizing introspections of a Socrates and the specialized classifications and analyses of an Aristotle, and from there into Hebrew, Alexandrian and Roman thought. And then into the history of a world, which, because of it, will never be the same again. (Jaynes 1976, p. 292)

Between 800 BCE and 700 BCE, another major transformation of consciousness began to take place, with its most explicit and most articulated expression in Athenian Greece. From a formal academic perspective, this is the beginning of classical history in the west when literate cultures began to record their own histories. Historian of consciousness Julian Jaynes (1976) firmly placed the emergence of rationality and history within the ancient Greek culture. Although from a Western perspective Greece is almost universally credited with the development of philosophy *per se*, this is a Eurocentric stance. In China, India and elsewhere, major philosophical developments, indicating a shift in consciousness, were also occurring during this period.

Steiner, Gebser and Wilber identified the birth of Western philosophy in ancient Greece as a turning point between mythical consciousness and mental-rational consciousness.

What I am calling here mental-rational consciousness, the epitome of which is Aristotle’s formal logic, is closely aligned to what Piaget calls “formal operations” to be discussed in Chapter 3.

2.5.4.1 Key Features of Intellectual-Mental-Rational Consciousness

The irruption of the mental structure. . .it divides and thus destroys the image of the world, which is replaced by a conception of the world. (Gebser 1949/1985, p. 176)

Because of the temporal and spatial convergence of various events, this new consciousness became hybridised with several characteristics:

- The awakening of the independent ego, or individualism—the heroes;
- The birth of rational philosophy in Greece, through Thales, Socrates, Plato, Aristotle;
- The conceptualisation of the laws of formal logic by Aristotle (Aristotle 350 BCE);
- Beginnings of formal mathematics with Pythagoras;
- The inner-directness towards self-knowledge: “Know Thyself” (Delphi Oracle);
- The beginnings of the Axial Age (a term coined by German philosopher Karl Jaspers) with the birth of Confucianism, Taoism, Buddhism and Christianity;
- The development of the world’s first democratic city-state in Athens in 500 BCE, followed by the formalisation of politics and legislation;
- The shift from picture-based writing to the more abstract writing using the Greek alphabet followed by the Roman alphabet;
- The origins of formal elite education in the 4th century BCE with Plato’s *Academy* and Aristotle’s *Lyceum* sowing the first seeds of higher education.

More information on how the above features which emerged in human culture between 800 BCE and the modern era can be read elsewhere (Gidley 2007, pp. 91–101).

Because the narrative is now dealing with the period of formal history, there is much material available for each of the points above, but it is beyond the scope of this chapter to cover this in detail. There is a general consensus in the history of Western ideas that a major transition began around 800 BCE from mythical consciousness to intellectual-mental-rational consciousness—primarily in Greece and later in ancient Rome (Gangadean 2006a; Habermas 1979; Jaynes 1976; Tarnas 1991, 2006). The present narrative points to prior influences from surrounding regions such as Egypt and Mesopotamia. In spite of this flourishing of rational thinking in southern Europe, Gebser claimed that the mythic consciousness continued to operate in most of northern Europe for a much longer period of time than in southern Europe and indeed that the new intellectual consciousness took another 2,000 years to be fully developed. Wilber agrees with Gebser (and Habermas) that rationality emerged “in the middle of the first millennium BCE, but it reaches its fruition with the rise of the modern state, roughly the sixteenth century in Europe”

(Wilber 1995/2000, p. 184). Wilber is referring to the European Enlightenment in the 16th century.

The European Enlightenment consolidated in northern Europe the development of the formal, logical processes of thinking initiated in ancient Greece by Aristotle. A notable feature of the emergence of the formal-mental-rational mode of thinking is that it led to the splitting apart of earlier more unitive modes of consciousness into what we take for granted now as more or less separate faculties—speech, writing, visual arts and music. Prior to the 1st millennium BCE, these faculties were much more closely interwoven than they are in most 20th- and 21st-century *modernised* humans. Arguably, they will re-integrate in times to come.

The extensive developments that took place during the long period that the rational intellect was being developed in human culture have been published in more detail (Gidley 2007, pp. 91–101).

2.5.4.2 The Birth of Formal Logic: The Cultural Context

The most indisputable of all beliefs is that contradictory statements are not at the same time true. (Aristotle 350 BCE, Book IV, Part 6 Para 3)

This proposition from Aristotle is the second of three principle Laws of Thought and is generally referred to as the *Law of Non-Contradiction*. Another of Aristotle’s principles—referred to as the *Law of the Excluded Middle*—relates to the *either/or* notion and is also a fundamental principle of formal operations. These two Aristotelian principles, when taken together, represent a 2,000-year-old encapsulation of key tenets of Piaget’s formal operations, which are based on an inherently binary mode of thought. Piaget’s developmental psychology theories will be discussed in Chapter 3.

The post-Enlightenment dominance of formal reasoning over the pre-formal, mythic and pictorial forms of thinking became the trademark of Western scientific and academic thinking. Increasingly with globalisation formal reasoning has become the aspirational aim of mainstream education around the world. The Enlightenment values of rationality and empiricism led on to the Industrial Revolution in Britain and later continental Europe, which laid down an intellectual-cultural template for the next three hundred years—known as *modernism*.

From a socio-cultural and geo-political perspective, binary logic also served the development of nation-states. Such questions as “Who is a National?” and “Who is a foreigner?” are based on formal logic and have supported the cultural evolutionary formation of nation-states. But nation-states, like agricultural settlements and tribes before them, are mere phases in a much bigger-picture human cultural evolution, and we—as a species—are arguably right in the middle of a major transition to a planetary imaginary. Gebser (1949/1985) proposed that instead of being fixed conceptions, nations could be “dynamic efflorescences of a larger cultural context” (Gebser 1949/1985) (p. 291). What type of thinking might we need to cultivate if we are to build a non-hegemonic, richly pluralistic and

sustainable planetary culture that celebrates such “dynamic efflorescences” rather than homogenising diversity? This question is addressed in Chapter 5.

2.5.4.3 A Word about Hyper-Rationality and Hyper-Modernism

From the perspective of cultural evolution, we have come to the end of the cultural period during which the abstract rational intellect was the highest form of consciousness. Since the Renaissance new forms of consciousness have been breaking through, as evidenced by the accomplishments of the most mature and advanced thinkers on earth. As always in the process of major cultural transition, those who resist the new developments struggle to hold on to the dying past. It is often the case that those individuals and groups who are most successful and powerful in the old paradigm, and thus have the most to lose, are the ones who vehemently resist all signs of a new paradigm breaking through. Fear of change provides the context for the powers-that-be to dominate with deformed and reduced forms of “the old ways of thinking” while at the same time stifling initiatives that usher in the new paradigm. A good example of this today is the great lengths that the powerful coal and oil lobbies will go to in their collusion with the climate change deniers.

There is a widespread critique today that Western culture has become dominated by an increasingly reduced form of rationality—which has led to growing fragmentation, siloism, and the separation of intellect from ethics. An example of this is the dominant global economic model—economic rationalism—which privileges profits over people and planet.

Given the intimate relationship we have already discussed between the dawn of rationality in Europe, modernism and industrialism, it is perhaps not surprising that in the more recently industrialising regions of China, India, Latin America and Africa, the rush to “modernise” to catch up with the global north is associated with a kind of frenzied hyper-modernism, hyper-industrialisation and associated hyper-urbanisation. The rapid rate of China’s hyper-urbanisation, and the socio-cultural challenges it produces, is a classic example.⁶

2.5.5 *The Age of Integration: The Integral Cultural Era*

The aperspectival consciousness structure is a consciousness of the whole, an integral consciousness encompassing all time and embracing both man’s distant past and his approaching future as a living present. (Gebser 1949/1985, p. 6)

⁶Kaiman, Jonathan (2014) “China’s ‘eco-cities’: empty of hospitals, shopping centres and people”, The Guardian, 14 April 2014. <http://www.theguardian.com/cities/2014/apr/14/china-tianjin-eco-city-empty-hospitals-people>

Paradoxically, the first glimmerings of the integral culture and consciousness structure can be observed with the flourishing of the Renaissance even prior to the consolidation of formal thinking with the European Enlightenment (Gebser 1949/1985). Steiner and Wilber both refer to a new movement of consciousness in the cultural phenomena of 15th–16th-century Western Europe. For Steiner, the early 15th century marks the beginning of the current cultural period during which we could consciously evolve new, more self-reflective thinking that he called *consciousness soul*.

The next cultural flourish of integral thinking emerged a century after the Enlightenment when the rational scientific worldview as a sole way of knowing began to be challenged by German philosophers and English poets. As noted earlier, the German idealist and romantic philosopher-poets paved the way for resurgence of interest in the ideals of Platonic (pre-Aristotelian) ancient Greece and more spiritually integrated cultures such as ancient India. During this period, Goethe was instrumental in developing an integral philosophy known as Weimar Classicism. During the late 18th century and early 19th century, philosophical seeds were sown whereby what Gebser called “deficient rationality” could be transcended by more integral, postformal reasoning. In particular, Hegel and Schelling were developing notions of the evolution of consciousness in their philosophical writings, while Goethe, Schiller and Novalis were doing so in their literary works.

In the last two hundred years, individuals who express an integration of their intellects with art, music and spirituality are regarded as exceptions and are often referred to as “Renaissance men/women”. The structure of consciousness that is currently emerging reflects a re-integration of human faculties. Futures indicated would see language again become artistic, yet also rich with the conceptual content, organisation and clarity that may arise from the integration of postformal, complex, aesthetic creativity *and* formal conceptualisation.

Further support for the notion of an emerging change in culture and consciousness comes from a ten-year study undertaken in the USA, reporting on the rise of integral culture and identifying almost a quarter of Americans as *cultural creatives* (Ray 1996). In addition, a forty-three-nation World Values Survey, including Scandinavia, Switzerland, Britain, Canada and the USA, concluded that: “a new global culture and consciousness have taken root and are beginning to grow in the world”—the postmodern shift (Elgin and LeDrew 1997).

2.5.5.1 Key Features of Integral Consciousness

Integrality must by its nature be complex, many-sided and intricate; only some main lines can be laid down in writing, for an excess of detail would confuse the picture. (Aurobindo 1997, 152, p. 359)

This new movement of consciousness is highly complex—with *complexity* itself being one of its most significant features. The following qualities have arisen from the three narratives and will be further developed in Chapter 5.

- Re-integration of the whole person—originary spiritual presence, magic vitality, mytho-poetic imagination, mental directedness—embodied/enacted through integral transparency;
- Integration of dualisms, such as spirituality and science, imagination and logic, heart and mind, female and male;
- Transcending of egotism;
- Transcending linear, mechanical, clock-time through concretion of time-awareness;
- Planetisation of culture and consciousness;
- Linguistic self-reflection and the re-enlivening of the word.

In Chapter 7 the above features of emergent integral consciousness will be shown in relationship to the key qualities of postformal reasoning (see Table 7.4). *Re-integration of the whole person* is a core theoretical focus of this research. Humans have become *brain-bound* during the establishment of the intellectual-mental-rational mode. An integrative imperative to awaken artistic and participatory modes of consciousness comes through strongly in both the content and style of Steiner's and Gebser's writings—and in Wilber's conceptual notion of the *Big Three* (Truth, Beauty, Goodness). The emergence of integral consciousness and culture has been discussed in depth in another publication (Gidley 2007, pp. 102–121). Its growing impact on education will be discussed in several subsequent chapters.

2.6 Pointing to Megatrends of the Mind

We have seen above that the type of thinking that led to the dominant, modernist worldview is formal operations or formal reasoning (Piaget 1955). As part of the emergence of the integral cultural era, throughout the 20th century, disruption to the dominant worldview has been arising across the knowledge spectrum from quantum physics, postmodern philosophy, humanist psychology to innovative pedagogies. These evolving mindsets have transformed science, philosophy, education and knowledge as a whole. What I call *megatrends of the mind* are signs of evolutionary change in human thinking that parallel many of the exponential trends in the external world, and this movement is now undeniable (Gidley 2010). Most academic disciplines have undergone major transformation, while knowledge categorisation is moving beyond disciplinary specialisation towards transdisciplinarity (Klein 2004; Nicolescu 2002).

Such thinking affects all domains of life through the growing awareness of quantum possibilities for sudden unexpected change, win-win dialogue instead of win-lose debate, collaborative leadership instead of top-down hierarchy, cultural pluralism, self-reflection and higher purpose. These megatrends of the mind are arising from the intersection between the emerging integral culture, discussed above, and the appearance of postformal reasoning in growing numbers of mature

adults. The megatrends of the mind will be introduced and discussed in the next chapter.

2.7 Concluding Remarks

In this chapter I have taken a very long-term view of human culture and shown how humans as a whole have evolved in many ways over millennia, though not in a monocultural way. The significant shifts in culture and ways of thinking that we have observed took place across thousands of years. For example, the shift from mythic to mental-rational thinking began to emerge in Greece between 800 BCE and 600 BCE but did not reach its culmination until 2,000 years later in Europe.

The evidence from cultural evolution indicates that the new integral culture began to emerge in the European Renaissance and has been gradually emerging within leading individuals for five hundred years. Compared to its longer-term potential, we see it is only in its relative infancy. An analogy would be to compare what mental-rational thinking was like just five hundred years after Aristotle compared to what it became in Hegel.

A unique aspect of the new cultural consciousness is its multifaceted nature. Integral culture is pluralistic, interconnected, multiperspectival—indeed planetary—in its scope. While the mental mode in ancient Greece began with a few leading-edge philosophers discussing ideas in Plato’s Academy in Athens, the new consciousness will be pluralistic and planetary in reach—aided by the interconnectedness created through advances in technology.

If indeed we are in the midst of the emergence of a new complex mode of reasoning, then how should we educate to assist this process? This is the core question of the book and it is hoped that by the end, the reader will at least have some tentative answers, and more importantly some radical new questions. If we can educate for postformal reasoning and integral culture, imagine how much more wise, loving and creative might our consciousness be across the planet in another 1,000 years?

References

- Ambrose, S. (1998). Late Pleistocene human population bottlenecks, volcanic winter, and differentiation of modern humans. *Journal of Human Evolution*, 34(6), 623–651.
- Ambrose, S. (2003). Did the super-eruption of Toba cause a human population bottleneck? Reply to Gathorne-Hardy and Harcourt-Smith. *Journal of Human Evolution*, 45(3), 231–237.
- Aristotle. (350 BCE). *Book IV* (W. D. Ross, Trans.). *Metaphysics* (W. D. Ross, Trans.): The Internet Classics Archive.
- Aurobindo, S. (1909). *Yoga and human evolution. In essays in philosophy and yoga: Shorter works – 1910–1950* (Vol. 16). http://www.aurobindo.ru/workings/sa/16/0004_e.htm. Accessed 8 July 2007.

- Aurobindo, S. (1914/2000). *The life divine. 2nd American edition*. (Originally published in the monthly review *Arya* 1914–1920). Twin Lakes: Lotus Press.
- Aurobindo, S. (1997). *Essays divine and human with thoughts and aphorisms: Writings from manuscripts 1910–1950*. Volume 12: The complete works of Sri Aurobindo. <http://www.aurobindo.ru>. Accessed 7 July 2007.
- Bamford, C. (2003). *An endless trace; the passionate pursuit of wisdom in the west*. New York: Codhill Press.
- Barnard, A., & Spencer, J. (Eds.). (1996/1998). *Encyclopaedia of social and cultural anthropology*. London: Routledge.
- Bednarik, R. G. (2003). A global perspective of Indian Palaeoart. <http://www.ifrao.com/wpcontent/uploads/2014/06/reddy3.pdf>. Accessed 9 April 2016.
- Bergson, H. (1911/1944). *Creative evolution* (A. Mitchell, Trans.). New York: Macmillan & Co.
- Bocchi, G., & Ceruti, M. (2002). *The narrative universe* (Advances in systems theory, complexity, and the human sciences). Cresskill: Hampton Press.
- Boivin, M. J. (2001). Feeling humans and social animals: Theological considerations for an evolutionary account of human emotion. *Journal of Psychology and Theology*, 29(4), 314–329.
- Bosanquet, B. (1892/2005). *A history of aesthetic* (Original work published 1892). New York: Cosimo Books, Inc.
- Braxton, D. M. (2006). Naturalizing transcendence in the new cosmologies of emergence. *Zygon: Journal of Religion and Science*, 41(2), 347–364.
- Carlson, A. E., Clark, P., U., Haley, B. A., Klinkhammer, G. P., Simmons, K., Brook, E. J. et al. (2007). Geochemical proxies of North American freshwater routing during the Younger Dryas cold event. *Proceedings of the National Academy of Sciences of the United States of America*, 104(16), 6493–6494.
- Carr, P. H. (2005). A theology for evolution: Haught, Teilhard, and Tillich. *Zygon: Journal of Religion and Science*, 40(3), 733–738.
- Clayton, P. (2006). The emergence of spirit: From complexity to anthropology to theology [Boyle lecture 2006]. *Theology and Science*, 4(3), 291–307.
- Clayton, P. (2007). In review: Required reading: A complex brighter horizon. *Harvard Divinity Bulletin*, 35(1). <http://bulletin.hds.harvard.edu/articles/winter2007/complex-brighter-horizon>. Accessed 9 Apr 2016.
- Colman, S. M. (2007). Conventional wisdom and climate history. *Proceedings of the National Academy of Sciences of the United States of America*, 1104(16), 6500–6501.
- Combs, A. (2002). *The radiance of being: Understanding the grand integral vision: Living the integral life*. St. Paul: Paragon House.
- Comte, A. (1855/2003). *Positive philosophy of Auguste Comte* (H. Martineau, Trans.) (Original work published, 1855). Whitefish: Kessinger Publishing.
- Conway Morris, S. (2007). Darwin's compass: How evolution discovers the song of creation. In *Gifford lectures, 2007, The University of Edinburgh, February 19th to 27th 2007*.
- Cousins, E. (1999). The convergence of cultures and religions in light of the evolution of consciousness. *Zygon: Journal of Religion and Science*, 34(2), 209–219.
- Darwin, C. (1859/1998). *On the origin of species by means of natural selection or the preservation of favoured races in the struggle for life* (Original work published 1859). Hertfordshire: Wordsworth Editions Limited.
- Darwin, C. (1871/2004). *The descent of man and selection in relation to sex*. Whitefish: Kessinger Publishing.
- Darwin, C. (1872/2005). *The expression of the emotions in man and animals*. Whitefish: Kessinger Publishing.
- Davidson, J. (1992). *Natural creation or natural selection: A complete new theory of evolution*. Rockport: Element.
- Deacon, T. W. (2003). The hierarchic logic of emergence: Untangling the interdependence of evolution and self-organisation. In B. Weber & D. Depew (Eds.), *Evolution and learning: The Baldwin effect reconsidered* (pp. 273–308). Cambridge, MA: MIT Press.

- DeLashmutt, M., W. (2005). Syncretism or correlation: Teilhard and Tillich's contrasting methodological approaches to science and theology. *Zygon: Journal of Religion and Science*, 40(3), 739–750.
- Eisler, R. (1987). *The Chalice and the Blade: Our history, our future*. New York: HarperCollins.
- Eisler, R. (2001). Partnership education in the 21st century. *Journal of Futures Studies*, 5(3), 143–156.
- Elgin, D., & LeDrew, C. (1997). Global consciousness change: indicators or an emerging paradigm. San Anselmo: Millennium Project.
- Esbjörn-Hargens, S., & Wilber, K. (2006). Toward a comprehensive integration of science and religion: A postmetaphysical approach. In P. Clayton, & Z. Simpson (Eds.), *The Oxford handbook of religion and science* (pp. 523–546). Oxford: Oxford University Press.
- Forster, M. (2001). Johann Gottfried von Herder. In E. N. Zalta (Ed.), *The Stanford encyclopedia of philosophy*: Stanford: Stanford University Press.
- Gangadean, A. (2006a). A planetary crisis of consciousness: From ego-based cultures to a sustainable global world. *Kosmos: An Integral Approach to Global Awakening*, 5, 37–39.
- Gangadean, A. (2006b). Spiritual transformation as the awakening of global consciousness: A dimensional shift in the technology of mind. *Zygon: Journal of Religion and Science*, 41(2), 381–392.
- Gare, A. (2002). The roots of postmodernism: Schelling, process philosophy, and poststructuralism. In C. Keller & A. Daniell (Eds.), *Process and difference: Between cosmological and poststructuralist postmodernisms*. New York: SUNY Press.
- Gebser, J. (1949/1985). *The ever-present origin*. Athens: Ohio University Press.
- Gebser, J. (1956/1996). Cultural philosophy as method and venture (G. Feurstein, Trans.) (Original work published 1956). *Integrative Explorations Journal*, 3, 77–84.
- Gebser, J. (1970/2005). *The invisible origin: Evolution as a supplementary process* (Translated from “Der unsichtbare Ursprung”, 1970). <http://www.cejournal.org/GRD/JeanGebser.htm-edn64>. Accessed 6 May 2007.
- Gidley, J. (2006). Spiritual epistemologies and integral cosmologies: Transforming thinking and culture. In S. Awbrey, D. Dana, V. Miller, P. Robinson, M. M. Ryan, & D. K. Scott (Eds.), *Integrative learning and action: A call to wholeness* (Studies in education and spirituality, Vol. 3, pp. 29–55). New York: Peter Lang Publishing.
- Gidley, J. (2007). The evolution of consciousness as a planetary imperative: An integration of integral views. *Integral Review: A Transdisciplinary and Transcultural Journal for New Thought, Research and Praxis*, 5, 4–226.
- Gidley, J. (2008). *Evolving education: A postformal-integral-planetary gaze at the evolution of consciousness and the educational imperatives*. PhD dissertation Southern Cross University, Lismore.
- Gidley, J. (2010). Globally scanning for megatrends of the mind: Potential futures of “Futures Thinking”. *Futures: The Journal of Policy, Planning and Futures Studies*, 42(10), 1040–1048.
- Goodenough, U., & Deacon, T. W. (2006). The sacred emergence of nature. In P. Clayton (Ed.), *Oxford handbook of science and religion* (pp. 853–871). Oxford: Oxford University Press.
- Grace, C. R., & Moreland, J. P. (2002). Intelligent design psychology and evolutionary psychology on consciousness: Turning water to wine. *Journal of Psychology and Theology*, 30(1), 51.
- Habermas, J. (1979). *Communication and the evolution of society* (T. McCarthy, Trans.). Boston: Beacon Press.
- Herder, J. G. v. (1774/2002). This too a philosophy of history for the formation of humanity (M. N. Forster, Trans.) (Original work published 1774). In M. N. Forster (Ed.), *Herder: Philosophical writings* (Cambridge texts in the history of philosophy). Cambridge: Cambridge University Press.
- Hocks, R. (n.d.). The ‘Other’ postmodern theorist: Owen Barfield’s concept of the evolution of consciousness. <http://www.missouriwestern.edu/orgs/polanyi/TADWEBARCHIVE/TAD18-1/TAD18-1-fnl-pg27-38-pdf.pdf>. Accessed 9 Sept 2006.

- Jantsch, E. (1980). *The self-organising universe: Scientific and human implications of the emerging paradigm of evolution*. New York: Pergamon Press.
- Jaynes, J. (1976). *The origin of consciousness in the breakdown of the bicameral mind*. Boston: Houghton Mifflin Company.
- Kapoor, R. (2007). Auroville: A spiritual-social experiment in human unity and evolution. *Futures: The Journal of Policy, Planning and Futures Studies*, 39, 632–643.
- Kay, P. (1977). Language evolution and speech style. In B. G. Blount & M. Sanches (Eds.), *Sociocultural dimensions of language change*. London: Academic.
- Keller, C., & Daniell, A. (2002). *Process and difference: Between cosmological and poststructuralist postmodernisms* (SUNY series in constructive postmodern thought). New York: SUNY Press.
- Kimball. (2004). *Four quarters of the Earth: A heuristic-hermeneutic inquiry into world art*. Graduate College of Union Institute and University, Cincinnati, OH.
- Klein, J. T. (2004). Prospects for transdisciplinarity. *Futures*, 36(4), 515–526.
- Lachman, G. (2003). *A secret history of consciousness*. Great Barrington: Lindesfarne Books.
- László, E. (2006). *The Chaos point: The world at the crossroads*. Charlottesville: Hampton Roads Publishing Company, Inc.
- Lock, A., & Peters, C. R. (Eds.). (1996/1999). *Handbook of human symbolic evolution*. Oxford: Blackwell Publishers.
- Lovejoy, A. O. (1936). *The great chain of being: A study of the history of an idea* (William James lectures series, 1933). Cambridge, MA: Harvard University Press.
- Loye, D. (1998). *Darwin's lost theory of love: A healing vision for the new century*. Lincoln: iUniverse Inc.
- Loye, D. (Ed.). (2004). *The great adventure: Toward a fully human theory of evolution* (SUNY series in transpersonal and humanistic). Albany: SUNY Press.
- Moreland, J. P. (2001). Intelligent design psychology and evolutionary psychology: A comparison of rival paradigms. *Journal of Psychology and Theology*, 29(4), 361–377.
- Murphy, M. (1992). *The future of the body*. Los Angeles: Jeremy P. Tarcher.
- Neumann, E. (1954/1995). *The origins and history of consciousness* (Translated from the German by R. F. C. Hull). Princeton: Bollingen Series XLVII, Princeton University Press.
- Nicolescu, B. (2002). *Manifesto of transdisciplinarity* (Translated by Karen-Claire Voss) (SUNY series in Western Esoteric Traditions). New York: SUNY Press.
- Piaget, J. (1955). *The child's construction of reality*. London: Routledge.
- Ray, P. (1996). The rise of integral culture. *Noetic Sciences Review*, 37(Spring), 4.
- Read, H. (1943). *Education through art*. London: Faber and Faber.
- Richards, R. J. (1992). *The meaning of evolution: The morphological construction and ideological reconstruction of Darwin's theory*. Chicago: University of Chicago Press.
- Richards, R. J. (2002). *The romantic conception of life: Science and philosophy in the Age of Goethe*. Chicago: University of Chicago Press.
- Rolston III, H. (1997). Genes, genesis and God. *Gifford Lectures 1997*.
- Rolston III, H. (2005). Inevitable humans: Simon Conway Morris's evolutionary paleontology. *Zygon: Journal of Religion and Science*, 40(1), 221–230.
- Russell, P. (2000). *The global brain awakens: Our next evolutionary step*. Melbourne: Element Books.
- Schiller, F. (1954/1977). *On the aesthetic education of man – In a series of letters* (First published in 1795). New York: Frederick Ungar Publishing.
- Schriek, T. v. d., Passmore, D. G., Stevenson, A. c., & Rolao, J. (2007). The Paleography of Mesolithic settlement-subsistence and shell midden formation in the Muge valley, Lower Tagus Basin, Portugal. *Holocene*, 17(3), 369–385.
- Scott, D. (2007). The nature of ultimate reality: The convergence of science and spirituality. In *5th international philosophy, science and theology festival, Grafton, Australia, 23rd June, 2007*.
- Seger, J. D. (2006). Bronze and Iron Age Tombs at Tell Beit Mirsim (book review). *Bulletin of the American Schools of Oriental Research*, 342, 114–116.

- Shaw, I. (2000). *Oxford history of ancient Egypt*. Oxford: Oxford University Press.
- Spencer, H. (1857). Progress: Its law and causes. *The Westminster Review*, 67(April), 445–465.
- Stathatou, X. (2007). The “Pananthropinon” Panhuman in the Poems Proino Astro (Morning Star) by Giannis Ritsos and the Last Supper by Nikiforos Vrettakos. *The International Journal of the Humanities*, 5(2), 121–128.
- Stein, R. (2006). An inquiry into the origins of life on earth—A synthesis of process thought in science and theology. *Zygon: Journal of Religion and Science*, 41(1), 995–1016.
- Steiner, R. (1904/1959). *Cosmic memory: Prehistory of earth and man (GA 11)* (1st English ed.) (K. E. Zimmer, Trans.) (Original work published 1904) San Francisco: Harper & Row.
- Steiner, R. (1904/1993). *Knowledge of the higher worlds: How is it achieved? (GA 10)* (6th ed.) (D. S. Osmond, & C. Davy, Trans.) (Original German work published 1904) London: Rudolf Steiner Press.
- Steiner, R. (1905/1981). *The stages of higher knowledge (GA 12)* (L. Monges, & F. McKnight, Trans. 1967) (Original work published 1905). Spring Valley: Anthroposophic Press.
- Steiner, R. (1909/1965). *The education of the child in the light of anthroposophy (GA 34)* (2nd ed.) (G. & M. Adams, Trans.) (Original work published 1909). London: Rudolf Steiner Press.
- Steiner, R. (1926/1966). *The evolution of consciousness as revealed through initiation knowledge (GA 227)* (2nd ed.) (V. E. W. & C. D., Trans.). [13 Lectures: Penmaenmawr, N. Wales, August 19–31, 1923] (Original published work 1926). London: Rudolf Steiner Press.
- Steiner, R. (1930/1983). *Metamorphoses of the soul: Paths of experience: Vol. 1 (GA 58)* (2nd ed.) (C. Davy & C. von Arnim, Trans.) [9 Lectures, Berlin and Munich, March 14 to December 9, 1909] (Original work published 1930). London: Rudolf Steiner Press.
- Steiner, R. (1950). *World history in the light of anthroposophy and as a foundation for knowledge of the human spirit (GA 233)* [8 Lectures, Dornach, Switzerland, December 24–31, 1923]. London: Anthroposophical Publishing Company.
- Steiner, R. (1964). *The arts and their mission (GA 276)* (L. D. Monges & V. Moore, Trans.) [8 Lectures, Dornach, Switzerland and Oslo, Norway, May 18 to June 9, 1923]. Spring Valley: The Anthroposophic Press.
- Steiner, R. (1966). *Man's being, his destiny and world evolution (GA 226)* (2nd ed.) (E. McArthur, Trans.) [6 Lectures, Christiania [Oslo], Norway, May 16 to 21, 1923]. New York: Anthroposophic Press.
- Steiner, R. (1971a). *Ancient myths: Their meaning and connection with evolution (GA 180)* (1st English ed.) (M. Cotterell, Trans.) [7 Lectures, Dornach, Switzerland, Jan 4 to 13, 1918]. Toronto: Steiner Book Centre.
- Steiner, R. (1971b). Evolution, involution and creation out of nothingness (GA 107) [Lecture, Berlin, June 17, 1909]. *Anthroposophical Quarterly*, 16(1, Spring), 2–10.
- Steiner, R. (1982). *Meditatively acquired knowledge of man (GA 302a)* (T. van Vliet & P. Wehrle, Trans.) [4 Lectures, Stuttgart, Germany, Sept 15 to 22, 1920]. Forest Row: Steiner School Fellowship Publications.
- Steiner, R. (1986). *At the gates of spiritual science (GA 95)* (2nd ed.) (E. H. G. & C. D., Trans.) [14 Lectures, Stuttgart, Germany, Aug 22 to Sept 4, 1906]. London: Rudolf Steiner Press.
- Swimme, B., & Tucker, M. E. (2006). The evolutionary context of an emerging planetary civilization. *Kosmos: An Integral Approach to Global Awakening*, 5, 7–8.
- Tarasov, L., & Peltier, W. R. (2005). Arctic freshwater forcing of the Younger Dryas cold reversal. *Nature*, 435, 662–665.
- Tarnas, R. (1991). *The passions of the western mind*. New York: Random House.
- Tarnas, R. (2006). *Cosmos and psyche: Intimations of a new world view*. New York: Viking.
- Teichmann, F. (2005). The emergence of the idea of evolution in the time of Goethe. *Research Bulletin*, 11(1), 1–9.
- Teilhard de Chardin, P. (1959/2002). *The phenomenon of man*. New York: Perennial.
- Teilhard de Chardin, P. (1959/2004). *The future of man*. New York: Image Books, Doubleday.
- Thompson, W. I. (Ed.). (1991). *Gaia 2: Emergence, the new science of becoming*. New York: Lindesfame Press.

- Thompson, W. I. (1998). *Coming into being: Artifacts and texts in the evolution of consciousness*. London: MacMillan Press Ltd.
- Wade, J. (1996). *Changes of mind: A holonomic theory of the evolution of consciousness*. New York: SUNY Press.
- Wilber, K. (1980/1996). *The Atman project: A transpersonal view of human development* (2nd ed.). Wheaton: Quest Books.
- Wilber, K. (1981/1996). *Up from Eden: A transpersonal view of human evolution* (2nd ed.). Wheaton: Quest Books.
- Wilber, K. (1995/2000). *Sex, ecology, spirituality: The spirit of evolution* (2nd ed., Rev.). Boston: Shambhala.
- Wilber, K. (2000a). *Integral psychology: Consciousness, spirit, psychology, therapy*. Boston: Shambhala.
- Wilber, K. (2000b). *A theory of everything: An integral vision for business, politics, science and spirituality*. Boulder: Shambhala.
- Wilber, K. (2001). *Appendix 2: The nature of involution*. http://www.kenwilber.com/Writings/PDF/ResponsetoHabermasandWeis_CRITICS_2003.pdf. Accessed 28 Apr 2016.
- Wilber, K. (2004). *Introduction to integral theory and practice: IOS basic and the AQAL map*. <http://www.humanemergence.nl/uploads/2011/03/IOS-Basic-Intro-to-Integral.pdf>
- Wilber, K. (2006). *Integral spirituality: A startling new role for religion in the modern and postmodern world*. Boston: Shambhala Publications.
- Wood, B., & Collard, M. (1999). The human genus. *Science*, 284(5411), 65–71.
- Zong, Y., Chen, Z., Innes, J. B., & Chen, C. (2007). Fire and flood management of coastal swamp enabled first rice paddy cultivation in east China. *Nature*, 449(7161), 459–463.



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