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Wise education for complex futures

EDUCACIÓN DE LA SABIDURÍA PARA FUTUROS COMPLEJOS

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Abstract

The dominant 21st century worldview is replete with stupid, rather than wise values, signified by corporate greed, climate crises, environmental degradation and huge economic disparity. Is this what we want for our children and their grandchildren? Wisdom requires the head as well as the heart. Yet paradoxically, even a brilliant intellect—if it lacks heart and ethics—is not always wise. Wisdom is integrative, it is complex and it is creative. Wisdom does not follow the straight and narrow, but meanders, pauses, and looks around corners seeing what surprises. So how do we educate for wisdom? That is what I hope you will discover in this article. The work begins with the distinction between old and new thinking, then explores the philosophical importance of wisdom, educational approaches that encourage and support it, and practical examples from educators who know how to cultivate wisdom.

Key-words: consciousness, future studies, postformal pedagogies, wisdom education.

Resumen

La visión del mundo dominante del siglo XXI está repleta de valores estúpidos, más que sabios, que se manifiestan en la avaricia corporativa, las crisis climáticas, la degradación ambiental y la enorme disparidad económica. ¿Es esto lo que queremos para nuestros hijos y sus nietos? La sabiduría requiere tanto la cabeza como el corazón. Sin embargo, paradójicamente, incluso un intelecto brillante -si carece de corazón y ética- no siempre es sabio. La sabiduría es integradora, es compleja y es creativa. La sabiduría no sigue el camino recto y angosto, sino que serpentea, hace una pausa y mira alrededor de las esquinas para ver si hay sorpresas. Entonces, ¿cómo educamos para la sabiduría? Eso es lo que espero que descubras en este artículo. El trabajo comienza con la distinción entre el pensamiento antiguo y el nuevo, luego explora la importancia filosófica de la sabiduría, los enfoques educativos que la fomentan y la respaldan, y ejemplos prácticos de educadores que saben cómo cultivar la sabiduría.

Palabras clave: conciencia, estudios futuros, pedagogías postformales, educación de la sabiduría.

Introduction

Many of us know only too well that the current education model, which was developed in the 19th century to meet the needs of industrial expansion, is obsolete. The overwhelming issues of global climate crisis, growing economic disparity, mass migration and the youth mental health epidemic reveal how dramatically the current education model has failed students, educators and global society as a whole, in that education is the bedrock of society and culture.

We are still educating our children as if we were living in the 19th century, except that the exponential rise of technology-assisted living means that children today acquire more information from their mobile phones than from school. But is an overload of information really learning? And does it lead to developing wisdom? Arguably, there is very little relationship between information acquisition and the development of wisdom.

Before we can change our ways of educating children and young people we must fundamentally change our ways of thinking. One of the problems we face is that we are still educating for old redundant ways of thinking. The old thinking will not provide the creative, out-of-the-box, innovative paths to alternative futures that we urgently need in the 21st century (Gidley, 2017).

I begin this work introducing what I mean by 'old' and 'new' ways of thinking before approaching my central idea that we need to educate with and for wisdom if we are to deal with the complex futures we face this century.

'Old' (formal) and 'new' (postformal) ways of thinking

> *The significant problems we have cannot be solved at the same level of thinking with which we created them.*
> Einstein

A key feature of the level of thinking that has led the dominant worldview for the last few centuries—and thus contributed to the many challenges of our times—was identified and described early this century by developmental psychologist, Jean Piaget. He called it "formal operations" (Piaget,

1955). One of its fundamental premises is propositional logic—the notion that "every statement is either true or false and not both" (Klement, 2005). If our dominant mode of thinking is formal operations, based on binary logic, we may have a lot of trouble dealing with the tensions created by a complex, multiperspectival world—we may feel overwhelmed by chaos, complexity and contradiction.

What was Einstein hinting at with these words? Did he have insight into higher stages of reasoning? Arguably the answer is yes. Perhaps best known for his theory of relativity, Einstein was a redoubtable postformal thinker who engaged not just formal logic, but a range of postformal qualities such as creativity, complexity, paradox, imagination, inspiration, intuition and many others that find their way into the psychology literature on postformal reasoning. So what is postformal reasoning?

The term *postformal* is the most widely used psychological term to denote higher developmental stages beyond Piaget's *formal operations*. Adult developmental psychologists have been researching postformal thinking for several decades. They identify numerous features of postformal reasoning—including complexity, creativity, dialectics, dialogue, holism, imagination, paradox, pluralism, reflexivity, spirituality, and wisdom. In my own research on postformal reasoning and why we need to educate for it, I distil the adult developmental psychology research down into twelve postformal qualities. I then align them with a wide range of innovative and evolutionary educational approaches that I call 'postformal pedagogies' (See Table 1).

Table 1: Aligning Postformal Reasoning Qualities with Postformal Pedagogies

Theorised postformal reasoning qualities (gidley)	**Postformal pedagogies re-ordered to align with postformal reasoning qualities**
*Complexity	*Complexity in Education
*Creativity	*Creativity in Education
Dialogical Reasoning	Social and Emotional Education
Ecological Reasoning	Ecological, Environmental & Sustainability Ed.
Futures Reasoning	Futures & Foresight Education
Higher Purpose	Spiritual, Transformative & Contemplative Ed.
Imagination	Imaginative Education
Integration	Integral & Holistic Education
*Intuitive Wisdom	*Wisdom Education
Language Reflexivity	Aesthetic, Artistic & Poetic Education
Pluralism	Critical, Postcolonial, Global & Planetary Ed.
Reflexivity	Postmodern & Postructuralist Education

Source: (Gidley, 2016).

In this article on wise education I focus especially on those postformal qualities of *complexity, *creativity and *intuitive wisdom, and the aligned educational approaches that educate for these qualities. There are specific educational theories addressing the cultivation of wisdom (Falcone, 2000; Hart, 2001a, 2001b; Sternberg, 2001). Pedagogies that emphasise creativity (Neville, 1989; Sloan, 1992) and complexity (Davis, 2004; Morin, 2001) also facilitate the cultivation of wisdom. Numerous learning modes can be explored as steps towards wisdom through engaging with multiple intelligences (Gardner, 1996).

I also wish to disrupt a little with some surprising pedagogical concepts. In the serious business of education and learning, squeezed on either side by the audit culture and high stakes testing, such concepts as laughter (Johnson, 2005), play (Derrida, 2001; Ota et al. 1997; Schwartz, 1999), dancing (Pridmore, 2004), jouissance (Kincheloe, 2006) and happiness (Noddings, 2003) seem remote. Such creative human literacies can contribute to a

flexibility and lightness of cognition as facets of the core postformal education value of *pedagogical wisdom*.

Table 2: Postformal Pedagogies that Create Wise Education

Postformal qualities	Postformal pedagogies
Complexity	**Complexity in Education** includes educational approaches that draw from and embrace the science and philosophy of complexity.
Creativity	**Creativity in Education** goes beyond creativity as an "add-on" in education, and recognises creativity as a fundamental educational underpinning.
Intuitive Wisdom	**Wisdom Education** also involves some specific educational theories and approaches that directly address the cultivation of wisdom.

Source: (Gidley, 2016)

Philosophical perspectives: wisdom and multiplicity

> Wisdom is distinguished from bare intellect especially by its integration of the heart… We might even think of wisdom as the power of the mind to honor the insights of the heart… Such qualities as the ability to listen, empathise, and [be] comfort[able] with ambiguity are associated with wisdom (Hart, 2001b, pp. 2-5).

The notion of *wisdom*—for millennia a central concept in the perennial philosophies (or wisdom traditions)—is a complex, elusive dimension. The Greek Stoic philosophers defined philosophy itself as the striving after wisdom. And they defined wisdom in turn as the knowledge of things divine and human. There are numerous definitions of wisdom, even within psychology.

Developmental psychologist and wisdom researcher, Robert Sternberg has developed a "balance theory of wisdom" which he describes as follows*:*

> Wisdom is defined as the application of tacit as well as explicit knowledge as mediated by values toward the achievement of a common good through a balance among (a) intrapersonal, (b) interpersonal, and (c) extrapersonal interests, over the (a) short and (b) long terms, to achieve a balance among (a) adaptation to existing environments, (b) shaping of existing environments, and (c) selection of new environments (Sternberg, 2001, p. 231).

According to Vana Prewitt, Sternberg's theory built on his earlier definition: "wisdom is evidenced during conflict that requires a balanced perspective of multiple points of view and fair judgment" (Prewitt, undated). As one might expect from a quality as multi-faceted as wisdom, even Sternberg himself describes it in many different ways. In quite simple terms, he says it is enhanced by the cultivation of "openness to experience, reflectivity upon experience, and willingness to profit from experience" (Sternberg, 2005, p. 21). He also characterises wisdom as the application of intelligence, creativity and knowledge (Sternberg, 2005).

Deirdre Kramer claims that wisdom has been conceptualized as:

> (1) a rare, highly exercised and developed form of cognitive expertise about the domain of human affairs that allows for multiple conduits or (2) a constellation of personal attributes reflecting a high degree of cognitive, affective, and behavioral maturity that allows for an unusual degree of sensitivity, broad-mindedness, and concern for humanity (Kramer, 2000, p. 83).

Sternberg confirms the importance of balancing and integrating the cognitive, conative/behavioural and affective aspects of human abilities (Sternberg, 2005, pp. 9-12). This echoes Rudolf Steiner's thinking/head (knowledge), the feelings/heart (love), and the hands/will (action) (Steiner, 1927/1986, 1909/1965), which must have been influenced by the "head, heart and hands" approach of Swiss educator Johann Heinrich Pestalozzi (1746 - 1827). Sri Aurobindo's integral yoga with its threefold path of *knowledge*, *love* and *action* and the integral education model inspired by it is also

aligned. Wilber's *Big Three*—based on Plato's Truth, Beauty and Goodness—represent similar archetypes (Wilber, 1995/2000). I have discussed how a postformal educational philosophy might integrate the ideals of Truth, Beauty and Goodness elsewhere (Gidley, 2016). Wisdom researcher Carol Bassett has extended the archetypal three to four wisdom dimensions: discerning (cognitive), respecting (affective), engaging (active) and transforming (reflective) (Bassett, 2005a, p.7).

Adult developmental psychologists identify several postformal qualities that are linked to wisdom, including: complexity, multi-perspectivality, creativity, dialectical thinking, relativism, self-reflexivity, ability to deal with uncertainty, complexity, contextualism and problem-finding (Arlin, 1999; Labouvie-Vief, 1990; Sinnott, 1994; Sternberg, 2001; Yan and Arlin, 1995). Psychologist Jan Sinnott views wisdom as a complex and integrative characteristic of postformal thought, explicitly connecting it with spirituality and creativity (Sinnott, 1998). Kaufman and Baer (2005) characterise creativity as the ability to see things from novel perspectives reinforcing Sternberg's and Sinnott's links between wisdom, creativity, complexity, and ability to take multiple perspectives.

The importance of creativity in human psychology was emphasised by Arthur Koestler in his seminal work, *The Act of Creation* (1964/1989). Koestler argued that there is an inverse relationship between creativity and rational thinking and that creativity is suppressed by the "automatic routines of thought and behaviour that dominate" our lives, foreshadowing the notion of creativity as a postformal feature. While creativity was generally ignored by psychologists in Koestler's time, a resurgence of interest among psychologists and educators (Kaufman & Baer, 2005; Sinnott, 1998; Sternberg, 1999) has linked creativity to postformal thinking and transformative learning (Montuori, 1997, 2006). Koestler's observations on the tension between reason and creativity is supported by recent psychological research indicating that creativity and imagination are declining during childhood—in contrast to most aspects of cognitive development (Kaufman & Baer, 2006). This raises the question as to whether it may be the process of schooling itself with its focus on the acquisition of knowledge and the production of correct

(rather than imaginative) answers, which promotes this decline (Kaufman & Baer, 2006).

Further to Kaufman and Baer's research, more recent psychological research has found that creativity as measured by the Torrance Tests of Creative Thinking (TTCT) has significantly declined in the USA over the last two decades (Kim, 2011). The researcher proposes that the reason for this decline is the pressure on young people to compete in standardized high-stakes tests and subsequent loss of freedom. Poet and professor of creative writing Peter Abbs spoke of similar issues in the UK:

> Most of the educational changes … have engineered a vast prescriptive system of convergent learning … at the expense of the potential creativity of the overloaded learner. Pupils and students are now driven through a series of preconceived programs to emerge as convergent members of the consumer society; I would rather have them go through a series of transformative experiences to enter a cultural democracy as reflective citizens and radical contributors to the workplace (Abbs, 2003, pp. 1-2).

In Erik Erikson's theory of stages of mature adult development, he refers to the basic virtues to be developed as love, care and finally wisdom (Erikson, 1950/1985). Table 3 demonstrates Erikson's placement of wisdom as the most mature virtue—to be developed in later life, post 65 years of age (Stage 8). Erikson regarded wisdom as the successful resolution of the growing tension during older age between despair and ego integrity. I discuss the earlier stages in Chapters 8 and 9 of my book *Postformal Education (Gidley, 2016)*.

TABLE 3: ERIKSON'S LATER THREE STAGES OF MATURE ADULT DEVELOPMENT

Stage	**Psychosocial crisis**	**Basic virtue**	**Age**
6	Intimacy vs. Isolation	Love	Young Adult (18-40)
7	Generativity vs. Stagnation	Care	Adulthood (40-65)
8	Ego Integrity vs. Despair	Wisdom	Maturity (65+)

Finally, wisdom is about *waking up*—to our own presence and the presence of others. The complex wisdom embedded in the art of education demands being awake in every moment. According to Steiner in 1922:

> Education is not a pedagogical system but an Art—the Art of awakening what is actually there within the human being … the teachers must be awakened, and then the teachers must awaken the children and young people… what matters is a question of awakening, for evolution has made human beings fall into a sleep that is filled with intellectualistic dream… The awakening must be sought within the human being himself (Steiner, 1967, pp. 23-28).

Echoing Steiner's sentiments, Tobin Hart refers to Henri David Thoreau's notion of the value of being able to live even one day 'deliberately'.

> The deliberateness he [Thoreau] refers to implies moving beyond habits of thought, perception, and deed to be fully centered and awake throughout the day. Education for wisdom is not about simply being taught but about *waking up.* Waking up requires a certain kind of energy, certain capacities for taking the world into our consciousness (Hart, 2001b, p. 10).

The evolutionary significance of this waking up is poignantly brought home in the last lines of poet Christopher Fry's poem: 'Sleep of Prisoners'.

… It takes
So many thousand years to wake,
But will you wake for pity's sake!

Postformal pedagogies: wisdom in education

In addition to educational approaches that explicitly educate for wisdom in its own right, wisdom is also cultivated by pedagogies that emphasize creativity and complexity in education. Such multimodality can include many surprising features.

Creativity in education.

> Whitehead referred to creativity as the ultimate category—the category necessary to understand all other processes. That is, creation as a movement into novelty is the basic process of existence (Hart, 2006, p. 121).

Early 20th century philosopher and educator, Alfred North Whitehead, cited by Hart in the opening quote, places creativity at the forefront of everything. With the following words, contemporary British educational philosopher, Gert Biesta, aligns himself with Whitehead in that he sees education itself as a creative act, and creativity as not just something to be added on or cultivated.

> I am interested in education as itself a creative "act" or, to be more precise, in education as an act of creation, that is, as an act of bringing something new into the world, something that did not exist before (Biesta, 2014, p. 11).

This makes sense in the context of research on creativity by Kaufman and Baer, who operationalise creativity as the ability to see things from novel perspectives. Their psychological research showing the decline of creativity and imagination in childhood does not augur well for the development of wisdom in later life (Kaufman & Baer, 2006). Kaufman and Baer are continuing their research into whether this decline in creativity can be attributed to modern education, or to other factors. Building on Sternberg's and Sinnott's links between wisdom, creativity, complexity, and ability to take multiple perspectives the question we need to ask is: "How might education be more creative and thus nurture wisdom more effectively?"

Integral educator, Alfonso Montuori is a strong voice in the area of creativity in higher education, using the metaphor of jazz improvisation as a way to think about creativity in education (Montuori, 2003). He also points to the close relationship between creativity and complexity, both of which being important for developing higher consciousness (Montuori, 2003; Montuori et al., 2004). Montuori has developed an educational research methodology

called creative enquiry, which, he argues leads student beyond instrumental formal learning to a love of learning (Montuori, 1998).

Wisdom can be nurtured by pedagogical approaches that acknowledge *multiple intelligences* (Gardner, 2001), and/or multiple lines of ability (Wilber, 2004). Further reading on the importance of multiple perspectives and their integration can be found in special issues of the journal Futures on transdisciplinarity (Klein, 2004), and global mindset change (Gidley, 2010). Kaufman and Sternberg's (2006) international creativity research also found aesthetic orientation to be a personality trait associated with creativity. This suggests a role for aesthetic education in cultivating wisdom, as indicated by post-formal educators (Rose and Kincheloe, 2003). Aesthetic education is further discussed elsewhere (Gidley, 2016).

Complexity in education.

> Pertinent knowledge must confront complexity. *Complexus* means that which is woven together… Complexity is… the bond between unity and multiplicity. Developments proper to our planetary era confront us more frequently, ineluctably with the challenge of complexity (Morin, 2001, p. 15).

My approach to complexity in education is inspired by French philosopher and sociologist Edgar Morin's *third-generation complexity theory* which goes beyond the mathematical and cybernetic approaches of first and second generation complexity science (Alhadeff-Jones, 2008; Morin, 2005; Nicolescu, 2002). Morin is a leading thinker on complexity in educational futures (Morin, 2001), his writings being particularly favoured in Latin America, where he has founded a university based on his complex education philosophy.2 Morin distinguishes his approach from complexity sciences which he calls "restricted complexity, to differentiate it from that wider and humanist holding, which defines it as a method of new thinking, valid to understand the nature, society, reorganize human life, and to find solutions to the crisis

2 The Real World Multiversity of Edgar Morin is also called The World Centre of Higher Learning for Social Transformation. http://www.multiversidadreal.edu.mx

of contemporary humanity" (Morin, 2015). Morin's multiversity in Mexico applies advanced complexity thinking in higher education.

In 2008 a special issue of the journal *Educational Philosophy and Theory,* was published on "Complexity Theory and the Philosophy of Education" and edited by Michael Peters. Mark Mason suggested that educational research informed by complexity theory might be concerned with "connectionist holistic, non-linear" perspectives, rather than "input-output, 'black-box' causal modelling" (Mason, 2008, p. 4). Mike Radford echoed Mason's claim stating that: "Complexity theory, with its emphasis on non-linear and dynamic interactions between multiple variables, within indeterminate and transient systems, supports the case for a connectionist and holistic analysis" (Radford, 2008, p. 144). These papers support my theory that complexity is one of several interconnected postformal reasoning qualities which need to inform educational theory. In other papers, Inna Semetsky undertakes a re-reading of Dewey in the light of complexity theory while Mark Olssen views Foucault as a complexity theorist (Olssen, 2008; Semetsky, 2008). William Doll focuses on the potential impact of complexity theory on curriculum development and instruction so that it becomes: " open, dynamic, relational, creative, and systems oriented…with an integration of the rational/scientific with the aesthetic/spiritual" aspects (Doll, 2008, p. 190).

Wilber's integral framework could offer theoretical coherence to wisdom in education, but there is an art to how this works in practice (Rose and Kincheloe, 2003; Steiner, 1928/1972). Kincheloe refers to what he calls a *complex* aesthetics that creatively integrates the multiple perspectives to facilitating higher order thinking.

> As teachers think about the relationship between the aesthetic and the intellectual, they develop pedagogical strategies that encourage engagement… It is a collaborative endeavor to aesthetisize the familiar and to intellectualize the aesthetic. This involves the recognition of multiple ways of knowing which assists more students to discover that they are imaginative, creative and smart. (Rose and Kincheloe, 2003, p. 46).

Wisdom education.

> Wise teachers are described as having a sense of context, an understanding of relativism, and an appreciation for uncertainty. Since contextualism, relativism, and uncertainty are characteristics of mature adult thought, it appears that teacher personal and professional development may be a special case of general cognitive and social development (Arlin, 1999, p. 16).

In the opening quote, Patricia Arlin uses several of the key postformal qualities to identify her wise teachers. She focuses on what a wise teacher might be like. She arrives at five characteristics related to the five wisdom characteristics indicated by Baltes and Smith (1990) and adapts them to education. What Arlin concludes from her research is that the characteristics that distinguish otherwise good or even *expert teachers from wise teachers are anchored in "current developmental psychology theories of wisdom"* (Arlin, 1999, p. 16).

Sternberg builds on his balance theory discussed earlier to develop sixteen principles for teaching wisdom in schools. It is beyond the scope of this paper to detail them all, but they include: role-modelling wisdom; encouraging students to think about, critique and integrate their own values; to think dialogically and dialectically; and to avoid self-interest (Sternberg, 2001, p. 238). Secondly, Sternberg proposes several procedures for teachers to follow in teaching wisdom. These include: "read classic works of literature and philosophy"; engage students in class discussions to help them to develop dialogical thinking so that they can understand "significant problems from multiple points of view and understanding how others could conceive of things [differently]" (Sternberg, 2001, p. 238). Teachers would also emphasize "critical, creative and practical thinking in the service of good ends" (Sternberg, 2001, p. 238). Sternberg distinguishes his approach to teaching wisdom from a standard "constructivist approach to learning" in that students of wisdom "must be able to construct knowledge not only from their own point of view, but to construct and sometimes reconstruct it from the point of view of others" (Sternberg, 2001, p. 238). For those interested in Sternberg's wisdom-related curriculum I recommend reading his article "Why Schools Should Teach for Wisdom" (Sternberg, 2001).

Wisdom educator Caroline Bassett (2005b) proposes three approaches: "wisdom as cognitive functioning, wisdom associated with various personal attributes, and wisdom understood as exceptional self-development" (Bassett, 2005b). She contextualizes Sternberg's approach within the first, but omits Sinnott's research. Bassett situates her own work in the third approach, which she associates with postformal thinking, transformative learning and aesthetics/creativity. She claims that through affect, aesthetic education also contributes to wisdom. Sinnott's approach is more generally focused on developing complex postformal thought than specifically targeted at wisdom. However it is worth noting that in her work with college students she emphasises postformal qualities such as dialogical reasoning, complexity, synthesis and the honouring of the student as a *whole person* (Sinnott, 2002).

Hart has developed an elegant theoretical model designed to align education to the evolution of consciousness. His model of learning goes through six successive *microgenetic stages from: "information gathering to learning as knowledge building… [then] to learning that involves, successively, intelligence, understanding, wisdom and finally transformation"* (Hart, 2006, p. 104).

Practical examples: weaving a wisdom culture

> Good teachers…are able to weave a complex web of connections among themselves, their subjects, and their students so that students can learn to weave the world for themselves. The methods used by these weavers vary widely: lectures, Socratic dialogues, laboratory experiments, collaborative problem solving, creative chaos. The connections made by good teachers are held not in their methods but in their hearts—meaning heart in its ancient sense, as the place where intellect and emotion and spirit and will converge in the human self (Palmer, 1998, p. 11).

Parker Palmer is one of the educators who has cultivated pedagogical wisdom as an *art through their creativity, adaptability and professional judegment.* Biesta refers to "the crucial role of judgement in always new, open, and unpredictable situations" (Biesta, 2014, p. 120). An education for complex futures requires just such judgement, which I call *pedagogical wisdom* (Gidley,

2016). Biesta calls it educational "virtuosity" which should be "at the very heart of education" (Biesta, 2014, p. 120). My notion of pedagogical wisdom is very similar to what Biesta refers to as:

> A virtue-based conception of teaching and teacher education one that focuses on educational wisdom and the ways in which, through teacher education, we can help teachers become educationally wise (Biesta, 2014, p. 120).

And yet in spite of the evolutionary waves of educational change over the last 100 years, MacLure bemoans the situation in the UK and beyond where: "… state-sponsored intolerance of difference and complexity is now part of the story of education policy and research funding in many countries" (MacLure, 2006a, p. 731).

Kincheloe makes the interesting point that it was because of the alternative movements of the 1970s— that I call the second evolutionary wave—that conservative interests began to fear a loss of control (Gidley, 2016). He refers to this as the "recovery movement" in the US, and explains it as follows:

> By the mid-1970s a conservative counter-reaction—especially in the US—to these liberation movements was taking shape with the goals of "recovering" what was perceived to be lost in these movements… Thus, the politics, cultural wars, and educational and psychological debates, policies, and practices of the last three decades cannot be understood outside these efforts to "recover" white supremacy, patriarchy, class privilege… (Kincheloe, 2006)

The ability to teach with, and for, wisdom cannot be measured by the evidence-based auditing of teachers' "skills and competencies". It can however be developed in teachers through a variety of ways and means. To counter-balance this rise of neo-conservatism we need to hear the creative voices of educators who have cultivated pedagogical wisdom as an art. MacLure's (2006b) art is her critical passion. She claims "Interruptive methods are needed to try to crack… the inertia coded in the pedagogic encounter" (MacLure, 2006a, p. 731). She proposes a baroque educational philosophy, drawing on the educational philosophy of Deleuze, as a creative way to interrupt and

resist closure (Deleuze and Conley, 1992). MacLure summarised some key features of this creative model as: "entangled, disruptive, defamiliarises traditional education, artistic aesthetic and literary, resistance to audit culture." MacLure further noted that by utilising "dislocation of time and space… [and] periodic interruptions of the 'other'" baroque educational philosophy offers "resistance to audit culture…[and] disrupts closure seeking" (MacLure, 2006b).

It is intriguing to see how many of MacLure's *baroque features resemble Steiner education—often regarded as quaintly anachronistic. Yet from MacLure's (2006c) perspective this "defamiliarisation" with the "mythic immediacy of the educational present" is of immense value in moving beyond the "closure-seeking tendencies" of the audit culture. So how might such "left-field" aesthetic approaches as Steiner education or Deleuze's baroque philosophy lead to wisdom, postformal thinking, or even qualify as "good education?" Some practical examples follow.*

Multi-modal and interconnected.

Being able to see and perceive in multiple ways is necessary for a great artist, an artful teacher and higher order thinkers in general. To see the self, objects, students ad infinitum from multiple perspectives and in the process discern the significance of each perspective and, importantly, their relationship to one another rests at the heart of expanded forms of cognition (Rose and Kincheloe, 2003, p. 144).

While it may seem challenging, and even paradoxical, the most effective way to cultivate wisdom in education is to embrace complexity and creativity by presenting knowledge from multiple perspectives while artfully showing the interconnectedness. Creative and complex thinking are inevitably enhanced when we take multiple perspectives and honour multiple ways of knowing, as Howard Gardner explains in this quote:

> In my view, if we are to encompass adequately the realm of human cognition, it is necessary to include a far wider and more universal set of competences than has ordinarily been considered. And it is necessary to remain open

> to the possibility that many - if not most - of these competences do not lend themselves to measurement by standard verbal methods, which rely very heavily on a blend of logic and linguistic abilities (Gardner, 1984/2011, p. 28)

The integration of multiple perspectives is enabled especially through the arts and imagination. The crucial point is that in postformal thinking these qualities and processes are not separate but already integrally interwoven. Notions of creativity-based integration and aesthetic interconnectedness in education have been in the literature for over a decade. The scenarios described by Palmer earlier, and Nel Noddings in the quote below, are similar to processes that have been implemented in Steiner schools for a century.

> Mathematics teachers, for example, must be able to draw on philosophy, biography, history, fiction, poetry, science, art, music, and current events. In doing this competently, teachers help students to make connections between school studies and great existential questions (Noddings, 2005, Para 13)

Cultivating broad creativities.

> Postformal thought … is linked to creative production by virtue of its … multiple views of reality and its multiple solutions, definitions, parameters, and methods during problem solving… [also combining] subjective and objective understanding… the same sorts of processes [can be observed] under the rubrics of wisdom (Sinnott, 1998, p. 271)

Effectively, wisdom is enhanced if we ensure that children learn critically under-appreciated human values, and a diversity of modes of thinking, doing and being through cultivating a broad range of "creativities." Other ways to ensure that children develop a creative, wise, multi-perspectival experience of learning include the honouring of the often-subjugated humanistic values, play and laughter.

- *Value of play: Awareness of the value of play in education goes back two centuries to German romantic philosophers, particularly Friedrich Schiller (1954/1977)*

and Jean Paul Richter (Pridmore 2004; Schiller 1954/1977). Schiller regards what he called the play-drive as being a crucial force in balancing the excesses of reason and the excesses of the senses. In the fourteenth letter of his 1794 book "On the Aesthetic Education of Man" Schiller famously stated: "…man only plays when in the full meaning of the word he is a man, and he is only completely a man when he plays…" (Schiller 1954/1977). Born just a few years after Schiller, Jean Paul claimed that: "spiritual education is essentially counter-cultural, that it is promoted by play and that it is grounded in love" (Pridmore, 2004, p. 279). Dutch historian and cultural theorist, Johan Huizinga wrote about the cultural significance of play in his book *Homo Ludens (1938). German philosopher of hermeneutics, Georg Gadamer, building on the German romantic lineage, also wrote about the significance of play in the appreciation of art* (Gadamer, 1960/2005). Contemporary North American educator Eugene Schwartz (1999) sees play as a foundation for conceptual knowledge. Kincheloe and Steinberg (1993) link it to postformality. Play can be philosophically grounded by the *jouissance of poststructuralist word play* (Derrida, 2001; Kristeva, 1982) and integral developmental theory (Gordon and Esbjörn-Hargens, 2007). Kincheloe, citing Kristeva, links Hermes to play in education.

Hermes, the playful trickster, mysteriously pops up everywhere with his fantasies, surprise inspirations, and other gifts of the imagination; they are ours for the taking if we can hold onto the silence long enough to listen to him, if we have not let social expectations crush our propensity for play (Kincheloe and Steinberg, 1993, p. 304)

- *What about Games?* While the topic of games could be a subsection of 'play', the influence of video gaming in youth culture is such that I will briefly address it separately. While substantial literature suggests that violent video games have a destructive influence on children (Benoit 2000; Clouder et al. 2000; Grossman et al. 1999; Healy 1998; Pearce 1992) Stephanie Urso Spina contests this, arguing that this is only part of the picture:

> Video games serve young people as social, cognitive, and psychological tools, as signs of individual and social identity, as meaning-full experience… [and with reference to some of the 'unspeakable horrors' contained in some of them] … I would encourage game designers and corporations to imagine and develop new games that marshal all the creative and technological sophistication currently mesmerising kids while engaging the self-expressive and even altruistic impulses. (Spina, 2004, p. 278).

A new genre of altruistic games is emerging to balance the dominant violent game genre (Klisanin, 2003). From a futures perspective Buckminster Fuller's World Game could assist. In addition, German strategy games are another way to introduce into schools a balance to the extra-curricular influence of violent video games, which would also contribute to the development of complex systems thinking. A whole genre of postformal game playing is just waiting to be discovered by the educational world. For example, non-violent strategy board games could playfully contribute to the development of postformal, complex systems thinking in adolescence.

- *Happiness, Humour and Laughter: Perhaps even more subjugated in most mainstream education settings are notions such well-being and happiness* (Abbs, 2003; Eckersley et al., 2006; Noddings, 2003); *laughter, humour and even frivolity* (Johnson, 2005; Koestler, 1964/1989; MacLure, 2006c; Kincheloe, 2006). Koestler notes the relationship between humour, laughter and creativity (Koestler, 1964/1989); while Helen Johnston and Maggie MacLure point to laughter and frivolity as indicators of healthy resistance to the performativity of the audit culture, the latter drawing on Derrida's archaeology of the frivolous (Johnson, 2005; MacLure, 2006c).
- Noddings draws on the Dalai Lama, William James and John Dewey to challenge the Aristotelian foundations of our education system based on the hierarchical valuing of rational intellectual pursuits at the expense of many other human qualities and experiences, in particular happiness (Noddings, 2003). It is encouraging to see these broader human literacies opening up through the creativity of postformal educational offerings.

Concluding remarks

They say you can't put an old head on young shoulders, and it is important to be clear that in this academic work I am not trying to turn children into "wise elders" before their time. Conversely, by letting children play and move and be active and mobile when they are young, and by stimulating their imaginations, their creativity and their senses of care, justice, and fun while they are still children, we will help them to become wise as elders. Only if we learn to see content and concepts from multiple perspectives in childhood are we able to see multiple perspectives in adulthood. Wisdom is essentially about being able to see things from multiple points of view.

By grounding this article in the educational domain we can also bring greater insight to the core value of pedagogical wisdom. Much of the educational work we have reviewed involves recognising the importance of integrating the ways of knowing of the heart with our analytical, intellectual way of knowing if we are to work towards wisdom. This reflects the idea that wisdom cannot be separated from love, life and language. You can read more about the other core values of love, life and language, in my book *Postformal Education: A Philosophy for Complex Futures.*

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