Toward an Integrative Mind

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What kind of mind do we need for these days and the days to come? Lightening fast change, global interdependence, technological wizardry, political bifurcation, shuddering danger, and remarkable possibility are the norm. The U.S. military has an acronym, VUCA—volatility, uncertainly, change, ambiguity—that captures this sheer intensity.

Our current emphasis on information acquisition and on basic literacy and numeracy is simply insufficient to prepare our charges for even the near horizon. It seems increasingly clear that our largely nineteenth century-based model of learning is in desperate need of an upgrade. The simplistic and continuing emphasis built around basic information acquisition, truncated and instantiated through standardized test scores, misses a genuine consideration of the kind of depth, creativity, and transformative flexibility of mind that seems so essential for the real concerns of today’s world. This fixation has distracted us from the big questions: What kind of person and populace do we want and need for the world of today and tomorrow? Without a big enough view, we end up at best with improved means to an unimproved end. Central to holding a more holistic vision of education and fostering consciousness that is adequate to this age is understanding not simply what we know that matters, but far more how and why we know.

The Good Life

There is a place where developing the mind and serving society was the central mission of education: the original Liberal Arts. The Liberal Arts have a 2,500-year history originating from the ancient Greeks. This was the original schooling for the free man and the means to preserve such freedom. These were disciplines to help one develop through reflection, study, and practice.

These original seven arts were divided into two categories that should seem familiar: the trivium, consisting of the verbal arts of logic, grammar, and rhetoric, and the quadrivium, consisting of the numerical arts of mathematics, geometry, music, and astronomy. Music, and then the language arts, were taught earliest, as they were essential for everything that followed; music especially for its evocation and training of direct feeling. Mathematics blended in soon thereafter. We do almost the same thing 2,500 years later, with the unfortunate exception of the early centrality of music.

This ancient approach is the very literal foundation for formal education in the West. But the central organizing principles and practices of the Liberal Arts are something we might not recognize. It was not acquisition of content that was the key, although information was and must remain the currency of learning.
Liberal, as in Liberal Arts, is often understood to mean broad, as in broadly educated. But the root of the word liberal is the same as liberty and liberation; it is about freedom, not merely knowing lots of different bits. These were the arts of liberty (although mostly available only for the elite at that time). The goal was freedom from ignorance, from prejudice, and from out of control “passions” such as lust or greed. The learning was about cultivating the freedom to choose wisely, to develop reason, grow in virtue, to create our work and our life in a way that serves and satisfies. This genuinely holistic view was the meaning of The Good Life.

The ultimate function of the Liberal Arts was to secure the liberation of the mind. The integrative principle is humanitas. The fullness of our humanity is revealed and may flourish through this inner growth; our human potential for the good of self and society was to be liberated in this way. Historian Pierre Hadot (1995) described the high end of these original liberal arts as “a method for training people to live and look at the world in a new way. It is an attempt to transform humankind” (p. 107). The roots of our education are about preparing us for a life of flourishing and fulfillment by developing our humanity, our human consciousness, our mind and soul.

The Renaissance found much of its inspiration through the rediscovery of ancient Greek ideas. This period profoundly opened human horizons in ways that we still celebrate, even revere, including greater freedom for far more people. However, these visions and values that are often associated with the ancient Greek and early Renaissance eras have undergone significant changes that have been shaping our consciousness and culture ever since.

From the sixteenth to the seventeenth centuries there was a particular turning away from earlier Renaissance values. Toulmin (1992) contends that the intellectual fashion became more rigid and dogmatic and reason itself became narrower, no longer respecting context or appreciating diversity to the same degree.

This narrowing of knowing is hinged on separating the object we are perceiving from us—objectification—and by reducing it to parts—reductionism. Objectification and reductionism, alongside assumptions of materialism, dualism, mechanism, and determinism, are the primary tools of the modernist way of knowing and tend to engender knowing by detachment, reduction, and domination. Whether the atom or our neighboring state or a competing ideology, we might say the work is to capture and tame it to our will and then we celebrate our victory, our greatness.

Sir Francis Bacon, instrumental in the formation of this worldview and method of inquiry through his articulation of inductive reasoning, understood just what this knowing implied for education: “Mastery of nature for the relief of man’s estate begins to become the governing objective of education” (Bacon, 1900, p. 315). The aim was now to “enlarge the power and empire of mankind in general over the universe” (p. 366). It looks as if we have succeeded remarkably well in expanding our powers. In Rene Descartes’ (1994) words, “[We have rendered] ourselves the lords and possessor of nature” (p. 46).

As powerful and valuable as this is—and there is absolutely no denying its worth—we are recognizing the limits and unintended consequences of this as an exclusive way of knowing.

One hundred years before Bacon and Descartes, Leonardo da Vinci understood the limits and danger of this emerging perspective; he referred to it as the abbreviators’ approach. His words seem stunningly prophetic now, 500 years later.

The abbreviators of works do injury to knowledge and to love . . . Of what value is he who, in order to abbreviate the parts of those things of which he professes to give complete knowledge, leaves out the greater part of the things of which the whole is composed? . . . You don’t see that you are falling into the same error as one who strips the tree of its adornment of branches full of leaves, intermingled with fragrant flowers or fruit, in order to demonstrate that the tree is good for making planks.

(cited in Capra, 2007, p. 12)
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Da Vinci’s approach was an integrated science, philosophy, and art of quality and wholeness, an exploration of patterns and the interrelatedness of things, more complete than the mechanistic and reductionistic understanding that was to emerge and dominate our worldview and education.

His keen sensibilities and intimate style of knowing engendered reverence for natural creations and recognition of patterns and interconnecting phenomena that provided a more integrated way of seeing the world. Without this way of knowing, as he says, we “do injury to knowledge and to love.” Herein lies our current educational predicament. We have invested nearly everything in an abbreviators’ approach. To what extent does our leaving out key ways of knowing foster the same kind of injury?

Episteme

Confusion arises in education today particularly because we are at the end of an era and we cannot quite make out the near horizon and, thus, how education should best prepare for it.

Civilization appears to move through various eras or epochs of knowing, that is, the grounds on which we constitute truth and knowledge. Philosopher Michel Foucault (2002) referred to this as the *episteme* of an era. Thomas Kuhn (1962) spoke of scientific *paradigms* in a fairly similar way. Basically, the episteme is made up of the assumptions, rules, roles, standards, and methods of knowing that guide and constrain how we think and know. This serves as a kind of epistemic unconscious that we operate within. Such an epoch of knowing is thought to last a few centuries and emerges from, overlaps with, and then eclipses the previous episteme. For example, in the West, the enlightenment saw the rise of the individual and the application of a particular scientific, materialist knowing as the ultimate standard for truth, bit by bit overturning the ultimate authority of religion to shape worldview.

More recently, the postmodern turn has opened cracks in the modernist episteme. It helps us recognize that our nature and knowing is more socially embedded and historically shaped. It helps us unpack “facts,” unearth assumptions, and ask critical questions about the backstory of knowledge. For example, knowledge is often tied to power. When we ask, “Who funded that research?” we are recognizing the mutability of “objective fact.” Truth is mediated by our intent, expectations, social status, language, race, history, spin, and more.

This in no way whatsoever diminishes the importance of science or facts or measurement, but instead helps us go behind the curtain of so-called “objective” knowledge, recognizing that “truth,” to one degree or another, is historically situated and socially constructed.

Today, after 400 years of a modernist backdrop challenged by the postmodern turn, it appears that we are on the cusp of a new episteme, able for the first time to see not just the cracks in the modernist paradigm, but how it can be expanded, deepened, and enriched to form a new whole, a more definitive, and, above all, a more human, worldview. The challenge involves not just exposing the flaws in the abbreviators’ approach as the postmodernists do, but finding a way to bring together the bits and the bytes in the living of an integrated life in a world of global technical interconnection but human disconnect. Goethe (2008) said it this way: “To find yourself in the infinite you must distinguish and then combine” (p. 48).

Both the modern and the postmodern have helped us to distinguish, dissect, define, and deconstruct in so many domains. We have focused on the function of mind that takes things apart and meets the world at arm’s length.

We also need to connect, meeting the world up close and in person, to feel it in our bodies, to be moved, to find context, meaning, and beauty so that the bits and bytes make sense. We do not want or need to just catalogue our life; we need to enter it. In so doing, we are transformed.

This shift is not a romanticized return to a simpler time, turning back the clock to the pre-modern immersion in the forces of the world. It is, instead, about moving beneath the surface of a valueless, materialist, reductionist worldview to recognize our emergent, co-constituted, interdependent, integrated existence.
After centuries of increasingly one-sided knowing, we are called to find a balance between subjective and objective, participative and detached, meaning and “fact,” unseen and seen, rhizomatic and viral development beside linear and sequential, intuition and logic, resonance and rationality, systems and components, compassion and calculation, feeling and reason, forest and tree, mystery and certainty.

This integration requires a fundamental recalibration in knowing.

Two Ways of Knowing

There are two ways of knowing. That is, two basic ways that the mind works to know the world. Of course, knowing is complex and multifaceted. There are myriad variations, to be sure, and certainly plenty of other ways to slice this rhetorically, but essentially most knowing comes down to this.

One way we could call *categorical*. This knows the world through abstraction, through labeling, separating it from us, through taking apart to understand. Categorical awareness narrows focus, seeks precision, detail, and objectivity. It simplifies and represents, proceeds linearly and sequentially. As we dig deeper with this tool, things are reduced to parts, to lowest units that are differentiated and catalogued. It reaches its current apex in the metaphor of computer zeros and ones. Schooling has been emphasizing categorical knowing.

The other knowing is through *contact*. It is direct, embodied, recognizes wholes and connections. It is intimate, holistic, relational, and dynamic. Awareness through contact enables a broader view, one connected with the world and the body. This knowing seeks novelty, picks up implicit meaning and metaphor.

Drawing from a vast body of neuroscientific and phenomenological data, McGilchrist (2009) contends that these ways of knowing have neurological substrates roughly corresponding to the anatomically distinct hemispheres of the brain.

Today, we are recognizing that left and right hemispheres of the brain help to provide two different ways of relating to the world. Left brings that categorical, narrowed, discriminative focus, while the attention of the right is broad and flexible, connects directly, and recognizes connected wholes as opposed to the left’s individual parts. These seem perfectly designed to complement one another and both ways of knowing are essential to human understanding. The problem is that their partnership has come unhinged.

One of McGilchrist’s primary insights is that the left does not have the capacity to integrate the right. By its very nature, the left cannot process or value in wholes or draw material from the body and senses so readily. On the other hand, the right is largely integrative and naturally incorporates the data from the left, and is, thus, positioned to serve as the driver of consciousness.

However, because of the current domination of categorical consciousness activated and amplified by objectivism and reductionism and the education that both derives from and reinforces it, the right has lost its primacy; the left is running the show. Inevitably, the view it can see is limited, an abstracted or virtual view of the world—a simulacrum—but one thought to be real and assumed to be complete, encouraging a particularly fixed view of “truth.”

Both ways of knowing are critical. Both impact how we see, what we see, and, ultimately, how we treat what we see. But in human culture and classrooms, the past several centuries have increasingly emphasized one aspect of mind—da Vinci’s abbreviators’ approach—and the consequences have been monumental to both how we know and how we love.

It is not hard to see that the power of technology has overrun our wisdom to use it, that despite great advances in knowledge across every discipline and instantaneous access to information and one another, we are not treating one another better or more fairly. The Greeks’ notion of liberation gets mistaken for buying power; we take advantage of unprecedented opportunities for indulgence; The Good Life comes to mean stuff and celebrity. In gaining the possession of the world, we seem to have lost possession of our very minds, and certainly to have lost our way.
Gateways Toward the New Good Life

How do we balance the powerful precision of categorical consciousness with the open-ended view and intimate touch of contact? Is it even possible or practical to go about this in our daily life and in contemporary education?

In the middle of this moment, this day, or a school assignment, there are certain orienting activities that help open the aperture of consciousness, welcoming contact and engendering a more integrated knowing. These have largely been absent from contemporary consideration as they fall outside the modernist–abbreviators’ approach that guides educational enterprise. There are, of course, wonderful exceptions in which other means and directions of inquiry have been included. Historically, more intimate knowing has found some harbor in the humanities, where subjectivity, meaning, and beauty have retained some cache. A host of “progressive” educational orientations (e.g., Holistic, Humanistic, Contemplative, Democratic, Critical, etc.), although having plenty of variability, share a larger view of the learner and of learning. And recent initiatives, ranging from character education to social–emotional learning, demonstrate the acknowledgment of education’s role in fostering civility and interiority. But it is hard to sustain such initiatives in the unstable winds of political, economic, or social conditions and implemented through an out-of-date operating system. A more fundamental recalibration and revaluation of our ways of knowing is required at the edge of this new episteme.

There is certainly a wide array of conditions, approaches, and practices that engender the kind of deep understanding that is called for. But a very brief thumbnail sketch of five gateways—approaches to knowing or inquiry—may give some sense of the general kind of emphases that may move us toward a more holistic, integrated consciousness with the power to bridge the divides we have created in our world. These are elaborated in detail with practical classroom examples elsewhere (see Hart, 2014).

Contemplation

“Pay attention” is perhaps the instruction we implore most often in education. Yet, we rarely help students to do this, we just insist that they do. To deploy, shift, sustain, and open awareness gives us power to use the mind intentionally. The most basic and universal practices of contemplation do just this, developing the strength and flexibility of the muscle of attention. In addition, the contemplative mind allows us to do more. With just a little practice we can turn our gaze inward, witness the content (sensations, thoughts, feelings) and the process of one’s own consciousness, helping to clean and even regrind the lens of perception.

This reflection leads to metacognition, which allows us not only to inquire into the question at hand, but also toward the asker of the question. We can become the object of inquiry as well as the instrument, as we look into self and subject. Ultimately, the contemplative allows us to interrupt habitual patterns and reactions and stay awake to new ways of thinking and being, to the immediate flow of consciousness inside and out. In a contemplative moment, there is fresh chance to awake to the taste of the food, the sound of the bird, a fresh inspiration that arrives out of the blue, or notice the pattern of thought that has kept me stuck. This opening of consciousness can bring vitality, depth, and meaning to existence.

In addition, the attention to attention has a variety of related effects. This inner technology allows us to steady the mind and modulate emotional reaction, reduce stress response in the body, and foster executive function, especially important at a time when outer technology is pushing so much, so fast, at us. We discover that this way of knowing has the potential to alter the function and even the structure of the brain and, with it, shift long-term traits such as compassion and emotional balance (see Hart, 2008). The simplest of activities, such as a moment of silence, mindful attention, or quiet reflection, can help to open this gateway in a moment, in or outside of the classroom (see Hart, 2004).
Empathy

While science claims a detached, objective gaze, the way some great scientists do science is often quite different from the way we teach it. Specifically, that difference involves a less detached empiricism where the gap between knower and the object of study is reduced. Nobel Laureate in genetics Barbara McClintock says it this way, “You have to have a feeling for the organism, you have to have an openness to let it come to you” (Keller, 1983, p. 198).

Not only in science, but in all domains, a capacity to put oneself in another’s shoes provides a multiplicity of perspectives, helping us understand how a terrorist might, from another point of view, be a freedom fighter or vice versa. This allows us to reconsider our own assumptions, the other’s vantage point, and see the impact of social context on worldview and one’s choices.

As we close the distance between self and object, something else happens. We become less willing to do violence to the other, whether a tree or our neighbor. In fact, empathy has been described as the trait that makes us most human (Azar, 1997) and the foundation for morality (Hoffman, 1990). Thus, a more intimate empiricism has profound implications for values and virtue, caring and civility, domains that education has been tasked to develop. When we open to this level of understanding, we find the mind most often naturally includes the heart.

Empathy is about a way of meeting the world, a participative way of knowing. We begin to resonate with the other, experiencing intimately our interconnection, our interbeing (Nhat Hanh, 1995). When the frustrated teacher comes to really meet and understand the “frustrating” student, the world changes for both. When a student has “a feeling for the organism”, appreciation, awe, wonder, and understanding follow. This quality of meeting engenders the possibility for collaboration, community, and communion and, with it, a more vibrant sense of interdependence.

Imagination

In general, there has been a tendency in the modern West not to take imagination seriously. The non-observable, non-logical nature of imagination renders it difficult to pin down and, thus, awkward in a rational, materialist backdrop. Imagination has been mistaken as merely a colorful accent to life, and largely dismissed in an educational age anxious about meeting standards and status. However, we do not outgrow imagination individually or culturally, as this process is fundamental to our knowing at every level of development and across every significant domain. We hear, for example, that imagination is the source of insight from scientific discovery to artistic innovation to practical problem solving. Improvisation, divergent thinking, play, fantasy, myth, spontaneity, irony, metaphor, and design are at home here as we imagine possibility beyond the information given, so essential in this dynamic age. Leonard and Willis (2008) make explicit the role of imagination in teaching and learning.

We might imagine ourselves as a cancer cell or bacterium, as did the inventor of the polio vaccine, Jonas Salk (1983), or conduct thought experiments, such as Einstein imagining, for example, what would happen if we traveled at the speed of light. The moral imagination of Mother Theresa or the “dream” of Martin Luther King, Jr. opens new possibilities, changing both consciousness and culture. Essentially, imagination builds a bridge between the known and the unknown. It enables us to work through problems in the laboratory of our minds and perhaps reach into hidden realms, the mundus imaginalis, as Henri Corbin (1972) named it, from where we may draw inspiration.

Beauty

The ancients knew that somehow the goal of life was not only about the good and the true; it was also about the beautiful. Whitehead (1967) claimed that the “teleology of the universe is the production of beauty” (p. 324). Somehow, beauty embodies something both immanent and transcendent.
that resonates deep within us. It awakens emotion and we know emotion is central to deep learning
and motivation. We recognize it, we seek it, we base decisions on it; we might call it “quality.” Even
in science we discover beauty may be the prime mover: “The scientist . . . studies [nature] because
he takes pleasure in it; and he takes pleasure in it because it is beautiful” (Poincaré, 2003, p. 22).

One of the primary sources of beauty is nature: a spectacular sunset, the redness of a rose, the
majestic flight of a hawk. Nature serves as wonder for the mind. We know that most descriptions of
transcendent ecstasy are triggered by nature (Laski, 1968) and ecstasy reflects a profound opening of
consciousness, hinting at a move from category to contact. In intimate encounter with the natural
world, we so often come to recognize that we are part of nature rather than detached from it and, as
such, our sense of belonging and responsibility is radically amplified.

Attention to beauty, quality, or an aesthetic is not ancillary, but instead central to an integrated
mind. In this day or this assignment, we may lead with appreciation instead of categorization,
try to behold rather than just label, encounter first hand the tension of contrast and harmony
(Whitehead, 1967) in an assignment or any moment, and work to manifest our own beautiful
expression in the world.

**Embodiment**

From Plato to Augustine to Descartes, the body has been understood as primitive or mechanistic.
But contemporary cognitive science and our lived experience paints a picture of a body—feeling,
sensation, movement, physiological processes—that is not separate from, or inferior to, thinking,
but is instead unified with it. For example, the discovery of neuropeptides and their receptor sites,
assumed to exist only in the brain and associated with thinking, have been discovered in the gut
(Pert, 1986). This enteric nervous system alongside other body-based systems, such as the heart,
appear to be central to knowing. Thinking is a more embodied process than assumed.

From this expanded understanding, education is dramatically catalyzed by attention to the body,
developing an embodied mind, we might say. The mind–body unity helps put our parts back together
and with it comes a richer, sensual, more robust way of knowing cultivated by attunement to the
body. Asking simple questions such as “Where am I now? “What do I notice in my body?” turns us
ward toward the felt sense (Gendlin, 1988) that incorporates a more immediate and integrated knowing.

In addition to this most direct understanding of embodiment, we can recognize that we are
embodied and embedded in a locale, a culture, and the natural world. A front edge in the study of
human cognition is referred to as 4E cognition (enacted, embodied, extended, embedded). Rather
than passively receiving the world, there is constant interaction between mind, body, and environ-
ment. Enacted implies that we shape and activate the world we see. Embodied tells us we know
through our bodies. Extended suggests that consciousness extends beyond the body–mind into the
environment. Embedded recognizes that we exist within a context, embedded in culture and locale.
This is too superficial a depiction, of course, but it does give a sketch of a theory of mind that chal-
lenges the prevailing Cartesian dualism and the detached, self-generating consciousness that remains
a dominant superstructure for educational theory and practice. As such, it helps to understand and
make space for the return of the body to education.

**Knowing and Loving**

Recalibrating knowing in teaching and learning gives us a better shot at a consciousness in which
transformative flexibility is the norm. Consciousness stands on content, but is not reduced to it. An
integrated, holistic approach returns information and basic skills to their rightful place as the currency
of education and returns the development of mind (knower and knowing) in its relationship to the
world to being the primary agent and the target for teaching.
In every moment we stand poised between moving on and moving into our experience, between differentiation and integration, between categorizing or making contact with our world. The opening of a more intimate knowing in balance with the powerful analytic mind gives us a chance, in the words of Thomas Berry (2000), to view the world not as a collection of objects, but to experience it instead as a communion of subjects. When we do so, we not only lessen the chance of doing injury to knowledge and to love, we heighten the possibility of making deep knowing and deep loving the new standard for education and for human existence on earth.

Note

1 See also Hart, this volume

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References


