Pedagogy and the “Thinking-Feeling Dichotomy” Deception

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I once found myself in a quandary that symbolized my aspirations as a teacher. I had opportunity to take a form of the Myers-Briggs Personality Inventory. When presented with a series of dichotomous choices, my responses clearly categorized me as an introvert rather than extrovert, and as one who dwells more comfortably in the realm of larger, synthetic wholes, rather than focused on isolated and particular facts.

I blithely sailed through several pages of questions when I was brought to a screeching halt by something I was unprepared to answer. It asked whether I was more drawn to convincing arguments, or toward touching arguments. I hesitated long on that one. I read on to encounter other uncomfortable choices, such as a choice between justice and mercy. Finally I came upon a question that asked “Which is more important: clarity of reason, or depth of compassion?” At that point, I refused to mark a response. Myers-Briggs presents a framework where it is assumed we must choose to be either clear thinkers, or compassionate feelers. This reinforces a view that compassion clouds reason and that analytic thinking stifles empathy.

I believe this dichotomy to be a lie. While most people may be more comfortable with either the “thinking” or the “feeling” realms of human experience, I reject the implication that we must choose between the two. An alternative view is that either of the two modes is handicapped by the lack of the other. Compassion moves us to view subjects from perspectives different than we otherwise would. Compassion calls us to ask different questions, and we are motivated in ways that stimulate our thought and action. Clarity of reason brings us more certainly to the goal toward which compassion compels us. Rather than choosing alternative ways of being, I desire to plumb the depths of both compassion and reason. This is also what I want for my classes and for my students. If I am fortunate, somewhere and at some time, my students will experience this in my class.
The dogma that dispassionate, rational objectivity is scientific necessity pervades science in general. By extension, it often pervades the pedagogy of those trained in its disciplines. I will agree that the testing of hypotheses should be done in as rigorously objective fashion as possible, but even the pre-eminent philosopher of science Karl Popper conceded that new ideas legitimately originate from any source. An errant apple may strike the noggin of a young physicist and stimulate revolutionary ideas about gravity. Similarly, love and affection may do the same in science and its instruction.

Few are the examples in science that emphasize this contrary approach. Barbara McClintock was awarded the Nobel Prize in Physiology and Medicine for her revolutionary work in genetics, yet for decades her findings were dismissed by her contemporaries. Historian of science Evelyn Fox Keller titled her biography of McClintock, *A Feeling for the Organism*. Keller asked McClintock what led to her revolutionary concept that genomes, far from being static “beads on a string,” dynamically and actively-rearrange themselves. McClintock responded that it required patience and intimacy with the organism to “hear what the material has to say to you.” New insight came only when the observer acquired “a feeling for the organism.” Such feeling melded intuition with rationality, and rested upon a loving sense of connection between the observer and the subject material of life.

In an educational universe where standards and testing dominate much of what happens in the classroom, there seems to be little room for such “feeling.” Bill Watterson’s immortal comic strip *Calvin and Hobbes* presents the usual consequences of objectified instruction. Many of the strip’s classroom scenes presented Calvin sitting with head on desk, eyes glazed with indifference to all things academic. In one classic scene, Calvin raises his had to speak and pronounces, “Mrs. Wormwood! You can present the material, but you can’t make me care.” It is hard to imagine how thinking will truly take place without the strong feeling for the material’s value.

This was driven home to me recently when my Introduction to Environmental Studies class dealt with the controversial issue of water allocations in the San Joaquin Valley. It is one of the most politically charged issues in central California, yet as we discussed it, there seemed to be little genuine passion for the topic of water.
By good fortune, that week *National Geographic* magazine published a special issue on water. I read the article, which told the personal story of one African woman’s daily trek of several hours to obtain water in her family’s struggle for survival. Her half-a-day’s labor for dirty, contaminated water vividly brought back to mind my experience thirty years ago as a Peace Corps volunteer in Africa watching a similar routine play out before my eyes. And I recalled the promise I made to myself as I returned to the United States—that I would help those I met to understand the realities of life in other places out of our normal view and concern.

That evening I found a short film clip online detailing the article I had read. The next class session I showed the film. The author of the article told of the struggle for water she witnessed, as pictures and stories of African women rolled before the camera. The value of a single drop of life-giving liquid suddenly became starkly apparent. It now was difficult for anyone in the class to overlook the preciousness of this commodity that flows constantly down American drains as we brush our teeth or shower or prepare our meals. Of all the questions I asked on the next exam, the one that everyone answered well related to the issues associated with water in Third World settings. It was hard not to think more deeply about global issues of water scarcity when we vicariously feel our neighbors’ thirst.

Stories that connect us to realities we otherwise would not encounter seem to me so essential in education. When a sabbatical leave comes to our small biology department, it presents an opportunity and a challenge. Those of us covering for our colleague have the opportunity to expand our understanding of biology by instructing a course we may never have expected to teach. Such was the context for my first opportunity to teach microbiology. Given my lack of recent familiarity with the subject, the easiest path would have been to follow the text PowerPoint slide by PowerPoint slide. Instead, I spent additional time reading popular press books on the impact of microbes on human history and contemporary emerging microbial threats. Most days I used the first fifteen minutes of each lecture to recount stories of the impact of microbes on human life. Often the stories read like a mystery novel, as scientists rushed against time to identify and control microbes in an effort to save human life.
The more structured and ordered approach to material would be much more linear and suitable to a bulleted list. The topics would have been clearer, more orderly, and easier to digest. But it would have thoroughly lacked fascination and elicited no sense of wonder. It would simply require rote memorization rather than an encounter with a natural story with numerous applications and intricate digressions. A narrative approach is guaranteed to lower the logical flow of subject presentation. However, I do feel in good company here. Jesus almost always taught in parables. I imagine his critics filling out teacher-evaluation forms and complaining that he ought to simply say what he means, rather than tell all of these obscure stories.

In my effort to bridge the thinking-feeling dichotomy, I take as my highest model John Muir. Muir is best known as the writer whose lyrical prose extolling the grandeur of the American wilderness moved a nation to preserve natural wonders in a newly created system of national parks. His aesthetic eye and empathy for all things beautiful and wild created the impression that he was an archetypal “feeling” poet.

But Muir’s genius lay equally in his careful, analytic observations and logical deductions. It was Muir who, contrary to the reigning scientific orthodoxy of his day, insisted that the landscape of the Sierra Nevada had been molded by the action of past glaciers. He carefully and lovingly read the evidence of past glaciers in the rocks and demonstrated the presence of living glaciers. He was the first to research the ecology and distribution of giant sequoia trees and presented his findings to the pre-eminent American scientific society of his day. His great devotion to the natural world did not cloud his observations; rather, his empathetic intimacy with it motivated him to greater study, and provided him with a deeper understanding of nature that yielded profound insights hidden from other more detached scientists.

This fusion of the aesthetic and analytical aspects of Muir’s understanding is illustrated by the frequent company he kept. The foremost botanists on his day, Harvard’s Asa Gray and England’s Joseph Hooker, journeyed to the mountains with him; with faculty members from the newly established University of California and Stanford, he co-founded the Sierra Club. Yet painters, photographers, writers,
and even the great transcendentalist philosopher Ralph Waldo Emerson all sought out Muir in his mountain refuge.

The most direct pedagogical application I take from Muir’s integration of the aesthetic and analytic is encapsulated in Muir’s own words regarding the insufficiency of his writings:

[T]o get all this into words is a hopeless task. The least sketch of each feature would require a chapter. Nor would any amount of space, however industriously scribbled, be of much avail. To defrauded town-toilers, parks in magazines are like pictures of bread to the hungry. I can write only hints to incite good wanderers to come to the feast.1

Muir the educator and motivator recognized the insufficiency of even the finest prose. My emphasis on field experience fits well with this philosophy of teaching. We will only value what we come to know intimately. We will truly know and understand only what we experience. Biology is much more than fetal pigs and prepared microscope slides; it is a world of diversity and beauty. Mathematical models and formulae are essential tools of the scientific enterprise, but the created world is also a subject that God himself pronounced good. If students are to understand that it is intrinsically good and be moved to act for its preservation, it must be experienced first-hand. Then can our thoughts and feelings find their common and mutually reinforcing ground for action.

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