Contemporary thinkers frequently lament the difficulty in finding materials that strengthen foundations for cross-disciplinary communication. *Cognitive Science, Literature and the Arts*, by Patrick Colm Hogan, is an exception. A quite readable book, the volume will prove to be a useful tool for those who wish to participate in and contribute to a research program that combines humanities and cognitive science. The interactive feel of the book makes it appealing without compromising its value in explaining scientific concepts. Indeed, as the book progressed, I kept thinking that it would be an effective text in a classroom, where students from the various fields could directly engage with the scientific studies, access the artistic works used to reference artistic concepts (e.g., James Cameron’s *Titanic*, John Coltrane’s rendition of “My Favorite Things,” and Shakespeare’s *King Lear*) and flesh out areas that receive little treatment in the text, such as visual art. In this kind of environment, I believe, the whole would prove to be greater than the parts.

Several factors serve Hogan well as he tackles the task of simplifying relationships among cognitive science, literature and the arts. One is his use of questions to aid in leading us through the material. (A sampling includes: Why are some sequences of sound music and others noise? What are the differences between a literal statement and a metaphorical one? Why do we feel literary emotion, even though we know the events in the work are fictional? Why do many people feel sad at precisely the same moment when watching a movie such as *Titanic*? Is it the music?) A second is the book’s overall organization into sections that build on one another as the material is presented. All of these factors allow Hogan to leave the reader with a sense that dynamics are a major part of the book’s construction as well as the appreciation process we bring to art itself. Listening to music, reading a book, watching a movie and exploring a painting are all dynamic processes. In other words, the work has to be constructed to appropriately activate both the cognitive (cortical) and emotional (limbic) brain parts in their natural dynamic interplay. Shakespeare does not just tell a story; he interweaves comedy and tragedy, mystery and romance so as to keep all the components bubbling with their different dynamics holding our interest. While most of us intuitively recognize the degree to which it is the dynamic reso-

formance that makes music so powerful emotionally. Cognitive Science, Literature and the Arts makes us aware of this explicitly and offers a compelling account of how similar dynamics are evident in literary and visual arts.

In Chapter 1, Hogan gently eases the reader into the subject with a taste of how a listener cognitively processes music. From here, in Chapter 2, Hogan moves to cognitive science more generally, offering an overview of cognitive theory. Chapter 3 then outlines basic principles of creativity (emphasizing Howard Gardner’s work). Next Hogan turns to metaphor (e.g., Lakoff, Turner, Ortony and Tversky), followed by information on how a viewer reconstructs a story from the “discourse” or presentation of it. The theme of Chapter 6 is the emotive response to literature, framed in terms of a work’s narrative structure as well as an individual’s memories, literary emotion and recent work in neurobiology, all the time grappling with the question of why we are moved by the experiences of characters we know to be fictional. Concluding with an overview of evolutionary psychology, and pointing out areas of methodological laxity, Hogan gives us much to think about in terms of the overall potential and roadblocks we must consider in combining cognitive science, literature and the arts.

The strongest part of Hogan’s study comes from his ability to lead us through scientific schools of thought without overlooking the need to simplify technical topics such as representationalism, connectionism, parallel and serial processing, encoding, types of memory, differences between structures and processes, conceptual integration (blending), etc. Juxtaposing the science with a range of examples aids the reader in conceptualizing the links Hogan sees and clarifies, at least to some degree, how scientific researchers have endeavored to integrate qualities we identify with art (emotion, metaphor, etc.) without overlooking aspects of art scientists are likely to ignore in their studies. This multidisciplinary approach alone strongly recommends this work. The author also reminds the reader on several occasions that some art forms include the kind of political analysis that frequently accompanies descriptive theory. These, as he notes, are clearly outside the scientific purview, but are nonetheless an integral element of many artistic works.

Above I mentioned that within a diverse classroom environment some students would likely point out limitations within the slim volume as they learned from it. One that would surely come up is the limited treatment of visual art. It is unfortunate that the book does not give more play to this subject, particularly in light of the historical tendency to elevate narrative elements within visual art when conceiving art theory or speaking about aesthetics. Having primarily focused on one arm of my own research around the tendency to conflate visual art with literary, narrative-driven standards, I am concerned that the interpretations that predominate in the book are likely to sustain the many myths surrounding the subject. As such, I fear, they will reinforce the tendency to confuse art and literature more than they will aid readers in envisioning the visual arts on its own terms. This is not to say the area is totally ignored. Some mention of Robert Solso’s work, for example, offers exposure to how we view paintings.

Still, Solso hardly offers an analysis of visual art to equal Hogan’s touch with literature. Even if memories, story lines and emotive devices are nested within our experience with a visual object, the creation and appreciation of the visual artifact speaks to a kind of visual intelligence that deserves more specificity.

Similarly, the book would have benefited from an enlarged discussion of cognitive work that distinguishes the creation of art from our engagement with it. The chapter on creativity, which was no doubt intended to reference this, seems somewhat abstract, and Howard Gardner’s Art, Mind, and Brain: A Cognitive Approach to Creativity [11] seems a bit dated in light of the advances within cognitive science in the 1990s and since. On the other hand, ironically, one section that hinted at the creative mind was not directly related to a creative practice. In this sequence, Hogan speaks of an experiment in which students who felt a lack of emotional response after reading a passage were asked to re-visit it by first imagining the situation that failed to touch them, and then describing their feelings when doing this. How this exercise of visualization and written description altered their relationship to what they had read is, to my mind, a common component of artistic practice.

These criticisms, while germane, are not intended to obscure how well this book accomplishes its task. Indeed, what I liked most about it was the way it reminded me of my biases and encouraged me to re-visit their limitations.

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