

Preface

In this book, we bring together chapters describing exciting new advances in the study of aesthetics, art, and creativity. The chapters focus either directly or indirectly upon evolutionary and biological approaches to these topics. All known societies produce art, literature, and music. This universality suggests that they must serve functions that are quite fundamental. Dissanayake gives an overview of 10 evolutionary explanations of the importance of the arts. Her own theory, and other similar theories, are that the arts serve an adaptive function that is essential to the survival of a society. As well as adaptive fitness, Darwin saw sexual selection as an evolutionary force. Some current evolutionary theories of art hold that it exists because of sexual selection. That is, artists produce art in order to maximize their chances of mating with a desirable member of the opposite sex. This might be the case with some popular singers, but Dissanayake argues that it is implausible that sexual selection could be the main reason for the existence of art. With this, I certainly agree. A third type of evolutionary explanation of the arts is that they exist as a secondary result of the existence of something else that is adaptive. For example, poetry could not exist without language. This is certainly true, but cannot explain why poetry is universal to all societies rather than occurring only in some societies. In his chapter, Feist works out explanations of art and music based upon both adaptation and sexual selection. In contrast, Carroll presents a purely adaptationist explanation of the function of literature. In their chapter, van Peer, Mentjes, and Auracher offer an essentially evolutionary explanation of why people enjoy reading literature.

Language is of course the stuff of literature. Tsur investigates an interesting problem in poetic meter. Much English poetry is supposedly in iambic pentameter; however, unless one misaccents syllables, hardly any of it really is. As he points out, in the first 160 lines of *Paradise Lost*, only two exactly follow the pattern of strong and weak accents called for by iambic pentameter. In reading poetry, one is supposed to

place accents where they belong rather than accenting syllables so that they are forced to be iambic pentameter. Read correctly, poetry in iambic pentameter sounds “right” even though the accents do not follow the rules for this meter. By examining sound spectrographs, Tsur offers an explanation for this. There is more to syllables than whether they are accented or not. Chinese and Japanese officials freely admit that they have what they call a “creativity problem.” Chinese and Japanese tend to be able to improve upon Western innovations, but tend not to innovate themselves. The problem is that if innovation decreases in the West, this will have profoundly bad economic and other problems for the East. Hannas argues that this problem arises from the nature of the writing systems that they use. Their ideograms stand for syllables rather than phonemes. He argues that this leads them not to analyze words or, by extension, ideas into their component parts. Putting old ideas together in new ways is the essence of creativity. If one does not analyze an idea into its component elements, he or she will be unable to put these elements together in new ways. Hence, the person will not be creative.

A number of theorists have argued that evolution is not confined to biology but may be found on the sociocultural level as well. In her chapter, Helson describes how the personality of the author is related to the type of fantasy stories that he or she writes. She also describes very clear and marked historical trends in the traits of the main characters of such works. Hogenraad approaches scientific writing from the point of view of sociocultural evolution and also describes very clear historical trends in the content of such writing. Petrov presents a theory of evolution based upon modern information theory. Though the theory is very general, he focuses upon aesthetic evolution.

Leder and Belke offer a general neurocognitive framework for the investigation of the appreciation of art. Holland gives us a similar framework that can be used for the explanation of literary creativity. In my chapter, I move to a more concrete level and offer a neural-network explanation of the perception of beauty. Space prevented me from explaining in any detail how an almost identical theory for the explanation of creativity could be formulated. I could only remark that perception of beauty of the “perception” of a creative idea are isomorphic. In their chapters, Vartanian and Goel as well as Chávez-Eakle describe fascinating new research using brain-imaging techniques while people are engaged in creative thought. Both find that the frontal lobes and the right hemisphere are crucial in such thought. A good deal of research suggests that creativity is related to affective disorders. In their chapter, Kinney and Richards deal with exactly how they are related. Affective disorders are in large part genetic, as is

creativity. If there is an evolutionary selection pressure for creativity, it could act as an indirect selection pressure for affective disorders. The research of Kinney and Richards suggests that creativity is not associated with extreme affective disorder but with milder forms that would not usually be diagnosed as mental disorders. Enthusiasm is necessary for creativity, but extreme mania or depression are detrimental to it.

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