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## BOOK NEWS AND REVIEWS

### **CONSILIENCE: THE UNITY OF KNOWLEDGE BY EDWARD O. WILSON. (1998). NEW YORK: ALFRED A. KNOPF.**

Edward O. Wilson, a world renowned evolutionary biologist, has written a book that has significant bearing on the education of gifted students. The primary focus of his narrative is on the problem of identifying procedures and principles for unifying all major fields of human knowledge – physical sciences, biological sciences, social sciences, the humanities, and the arts.

He defines consilience as “. . . a ‘jumping together’ of knowledge by the linking of facts and fact-based theory across disciplines to create a common groundwork of explanation.” (Chapter 2, p. 8). Although the immediate importance of this concept for educating the gifted is not apparent in the early chapters of this book, the later chapters show how Wilson’s search for relevant information bearing on the unity of knowledge in different fields can positively affect the learning and perceptions of intellectually advanced students. Individuals concerned with developing a curriculum for these students such as Harry Passow and Virgil Ward stressed (beginning in the 1960’s and 1970’s) the importance of designing a unified curriculum that concentrates on the interrelation between different subject areas through identifying common concepts and principles. It appears that this commendable goal has been long forgotten (or possibly never learned) by many of those individuals currently involved in designing differentiated curricula.

E.O. Wilson’s book will help to alleviate this memory loss by providing the historical, philosophical and scientific reasons for concentrating on the unity of all subjects through consilience. First, he explains how this idea was rooted in the French Enlightenment (17th-18th centuries) through such philosophes and encyclopedists as Condorcet (1743-94), who believed that general laws could be developed which predict the historical progress of human knowledge and culture. The Enlightenment was sparked by two great thinkers, Sir Francis Bacon (1561-1626) in England who designed an empirical method (the “scientific method”) for investigating natural phenomena, and René Descartes (1596-1650) in France who introduced the powerful mathematical-reductionist method for studying the physical world. Bacon and Descartes wanted to develop a system of knowledge that linked different fields through empirically based knowledge and mathematical proofs. Their influence on the scientists of the Enlightenment such as Sir Isaac Newton was in two areas – the discovery of general laws to explain apparently disparate physical phenomena (hence, Newton’s laws of physics), and a pervasive optimism that science can solve all of humanity’s problems and lead to constant progress. Wilson, of course, follows in this Enlightenment tradition; he is opposed to the anti-science viewpoints of postmodern pessimists and deconstructionists. Thus, he says: “By any reasonable measure of achievement, the faith of the Enlightenment thinkers in science was justified. Today the greatest divide within humanity is not between races, or religions, or even, as widely believed, between the literate and illiterate. It is the chasm that separates scientific from prescientific cultures. Without the instruments and accumulated knowledge of the natural sciences – physics, chemistry, and biology – humans are trapped in a cognitive prison. . . .” (Chapter 4, p. 45).

Wilson carries his optimism about science forward in Chapter 4 when he provides examples of the great discoveries made in the natural sciences through using the methods of analysis and scientific empiricism, e.g., studies of the visual and tactile worlds of animals, mathematical formulae in physics, and the study of smallness (*minutissima*) in energy fields such as electrons. Embedded in this discussion of some of the outstanding accomplishments of scientific research are Wilson’s three preconditions for the development of science: (1) curiosity and drive of the best minds; (2) inborn power of human beings to abstract the basic qualities of the universe; and (3) the “unreasonable” effectiveness of mathematics in the natural sciences. Clearly, these three points are closely related to the work of students who are gifted in the science and mathematics areas. Hence, the type of unified approach to knowledge addressed by Wilson in this book should help to nurture and expand their motivation and achievements.

In Chapter 5, the author uses a Greek myth (*Ariadne’s Thread*), to explain how consilience links together different areas of knowledge by working backwards from the more to less complex subjects, i.e., backwards from religion, the arts, humanities, social sciences, biology and physics. The remaining chapters discuss many of the key concepts related to different fields of study – The Mind (Chapter 6), From Genes to Culture (Chapter 7), The fitness of Human Nature (Chapter 8), The Social Sciences (Chapter 9), The Arts and Their Interpretation (Chapter 10), and Ethics and Religion (Chapter 11). In all of these chapters, Wilson shows how consilience is a driving concept that can help to produce unified explanations within and across these fields. His final chapter, To What End? (Chapter 12), argues for the importance of designing a consilience model for expanding scientists’ and laymen’s understanding of such diverse issues as global warming, the population explosion, biological diversity, and species extinction. Wilson has written a thoughtful book on the problem of

synthesizing enormous amounts of knowledge from different areas of knowledge. He is optimistic that this task can be accomplished for the benefit of all nations and cultures. Gifted students can play a major role in achieving consilience through their advanced analytic skills and ability to see beyond the trees into a more enlightened future.

## ***BOOK FOR THE MUSICALLY GIFTED***

**MOZART: A LIFE BY MAYNARD SOLOMON. HARPER COLLINS, NY, 1995.** – The life of Mozart is a paradigm for creative genius expressed through musical composition and performance. Hundreds of anecdotes have been used by authors, musicians and commentators to illustrate this uniqueness which underlies the exuberant power of Mozart's music. The author has written a fascinating account of Mozart's life and musical work that carefully describes the influence of family and colleagues, and that documents his musical works. This book emphasizes Mozart's psychological struggles with his family, particularly with his father. Of this relationship, Solomon indicates that, "Leopold Mozart was a supreme teacher who understood how to inspire gifted children to great effort and achievement, instilling a drive for excellence and awakening in them a sense of unlimited devotion to his person and a desire to obtain his approval above all else. . . ." (p. 39). The author's descriptions of Mozart's compositions are equally insightful concerning the creative process. For example, his statement regarding the opening movement of the String Quartet in C major, K. 465 is as follows: "Here, Mozart has stimulated the very process of creation, showing us the lineaments of chaos at the moment of its conversion into form. . . . Mozart has simulated the transitions from darkness to light, from the underworld to the surface, from the id to the ego. . . ." (p. 200).

<p><b>LIFE OF EDNA ST. VINCENT MILLAY: LYRIC POET FOR GIFTED FEMALES BY MICHAEL E. WALTERS CENTER FOR THE STUDY OF THE HUMANITIES IN THE SCHOOLS</b></p>
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Edna St. Vincent Millay (1892-1950) was a member of the poetry renaissance that started in the United States in 1912. Among the other members of the poetry resurgence were Carl Sandburg, Robert Frost, William Carlos Williams, and Stephen Vincent Benét. She wrote in a unique style that blended the sonnet, ballad and lyric poem. Also during this period, she was part of a poetry movement that expressed itself from a woman's point of view. The other women poets that were representative of this feminist awareness were Amy Lowell, Sara Teasdale and Elinor Wylie. Millay's poems captured emotional truths that suggested the political and social aspirations of women in the United States during the 1920's and 1930's.

Millay's life can serve as a model for the education of gifted females. She was born and raised in small coastal towns of Maine. When she was young, her family was shattered by an agonizing divorce. Throughout her youth, she and her family were financially insecure. Yet she was constantly encouraged and stimulated in her sensibilities and talents. Her father was a high school teacher and school superintendent who, although separated from his family, continued to encourage the development of Edna's creative talents. The mother was a working single parent and a nurse who was actively interested in the arts. Millay's two sisters were also talented, and one of them (Norma) became a professional opera singer. During their childhood, the Millay sisters were writing, singing, acting and playing the piano. Besides reading from her mother's vast personal library, Millay spent a good deal of time in the town library. She was recognized while a teenager for her poetry by *St. Nicholas* magazine, which was a national journal that awarded the talents of gifted girls. Her hometown, Camden, Maine, was a popular summer resort. One night when she was giving a poetry reading Caroline B. Dow was in the audience, an administrator with the YWCA. Ms. Dow enabled Millay to receive scholarships to both Barnard and Vassar colleges – two schools that were in the forefront of the women's movement. While a college student, her poems were given national attention by *Poetry: A Magazine of Verse* edited by Harriet Monroe in Chicago.

After graduation from Vassar, she resided in Greenwich Village which was a center of creative arts, e.g., drama, modern dance, painting and music. She participated in the development of modern American drama. Among her colleagues at the Provincetown Players (located in the Village) was Eugene O'Neill.

During the 1920's, she joined the community of American artists and writers that lived in Paris. She was a patron of the same Parisian cafes as Picasso, James Joyce, Hemingway and F. Scott Fitzgerald. In the 1930's, she wrote poems that aroused the American public to the dangers of Nazi Germany. During World War II, she wrote a poetic play that protested the Nazi atrocities committed against the town Lidice in Czechoslovakia because of its resistance to Nazi tyranny. This poetic drama was broadcast over the NBC radio network on October 19, 1942 – the cast included Alexander Woolcott, Paul Muni and Clifton Fadiman.

Despite a lifetime of physical ailments and bouts of nervous breakdowns, Millay continued to write until her death on October 18, 1950. She also translated the poems of Charles Baudelaire and was a consultant to other translators such as Rolfe Humphries, a fellow poet and translator of the Aeneid by Virgil. Edna St. Vincent Millay's life is indeed an object lesson for understanding the need for the enrichment of gifted females. **REFERENCES – (1) *Restless Spirit: The Life of Edna St. Vincent Millay*** by Miriam Gurko. Thomas Y. Crowell, 1962; **(2) *Collected Poems of Edna St. Vincent Millay*** by Norma Millay (Editor). Harper & Row, 1956.

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