Considerations by Hana Ayala MEMORIAL ACT

The Immortal Legacy of Francisco José Ayala: A Salute to a Preeminent Scientist and Humanist and to His Boundless and Timeless Intellectual Progeny

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I am deeply honored to pay a tribute to my beloved Francisco and his profound legacy on the premises of the prestigious Comillas Pontifical University —a university that Francisco and I have been privileged to call, with much affection and gratitude, our adopted intellectual home. I cherish the opportunity to offer this tribute surrounded by our esteemed companions on the journey I have been blessed to travel with Francisco for 38 years. And what a journey it has been! Words fail me to adequately convey the joy and exhilaration of being nurtured and bettered by Francisco's boundless love, passion for life, towering intellect, grace, generosity, dignity, sensitivity, and modesty.

As we journeyed the world —sometimes together, sometimes in different directions across the globe, driven by our professional passions but always returning ever more committed to each other— we were growing ever closer in our intellectual and humanitarian aspirations. About a year ago, Francisco wrote a note that he has kept on his desk ever since. Excerpting from that note: "My intellectual legacy is intertwined with Hana's... When my life ends, Hana will continue my (our) legacy."

What an honor he has bestowed on me. What a huge responsibility he has entrusted me with. I am committed to fulfilling this responsibility. I wish to use this solemn occasion to make a solemn pledge that will profoundly shape the remaining chapters of my life's mission. I pledge to keep advancing the treasured synergies that Francisco and I have been weaving into our respective intellectual endeavors and humanitarian goals, thus striving to ensure that my own legacy reinforces the immortality and perpetual benefit of Francisco's gifts to humanity.

One path I will pursue is illuminated by a single word that uniquely interlinks Francisco's and my thinking about the world and our endeavoring to build bridges to better the world. That word is **WONDER** —wonder that science unlocks from the natural world.

In his book titled Evolution, Explanation, Ethics, and Aesthetics: Towards a Philosophy of Biology (2016)⁵, Francisco wrote: "Science may inspire religious beliefs and religious behavior, as we respond with awe to the immensity of the universe, the glorious diversity and wondrous adaptations of organisms, and the marvels of the human brain and human mind. Religion promotes reverence for the Creation, for humankind as well as for the world of life and the environment. Religion often is, for scientists and others, a motivating force and source of inspiration for investigating the marvelous world and solving the puzzles with which it confronts us."

In a parallel way of thinking, I point to the growing evidence that highly consequential scientific discoveries await in insights into the boundless webs of relationships and dynamics that transcend the natural world. The grandest dormant reserves of scientific knowledge are distinguished on transnational scales. And it is at those transnational scales where an immense source of economic energy could be mobilized by appraising scientific exploration of the natural world as an unparalleled source of wonder. Wonder is blind to national borders, t harbors a unique quality to act as an economic asset that could revolutionize the rewards of world travel. Innumerable uncharted opportunities exist for valuing scientific discoveries that span continents and oceans as fountains of wonder that will dazzle and enlighten the traveler's mind, and for harnessing this business value of wonder to keep advancing the frontiers of science while charting borders-spanning paths for diplomacy and peace. But such an economic perspective is critically dependent on its interface with the arts, on artistic creativity that would open the world's eves to the bounty of wonder brought to light by globe-wide scientific exploration and would translate this wonder into the senses-captivating, perspective-altering experiences.

⁵ AYALA, F. J. (2016), *Evolution, Explanation, Ethics, and Aesthetics: Towards a Philosophy of Biology*, San Diego, Elsevier Science Publishing Co Inc.

And this brings me to another keyword, namely, **ART**, a vital ingredient of the wisdom, sophistication, and lasting relevance of the immortal progeny of Francisco's intellect—and a platform on which I will continue to foster the bond of our minds and hearts. Remarkably, both Francisco and I encountered a monumental piece of art that, albeit different for each of us, exerted a decisive influence on our work.

Pablo Picasso's legendary Guernica—praised as the most powerful anti-war painting in history, loaned to the Museum of Modern Art in New York for 42 years and, since 1992, displayed in the Museo Reina Sofía in Madrid—had an immense influence on Francisco's thinking and writing. In a segment he wrote for a book titled Faces of Science, Francisco states: "in 1961 I began doctoral studies at Columbia University with Dobzhansky as sponsor...The first Sunday I visited the Museum of Modern Art and was overtaken by emotion when I discovered Picasso's Guernica."6 Mentions of Guernica pervade most of Francisco's work, particularly his systematic pairing of science as a way of knowing with common experience, literature, art, and history as sources of equally valid knowledge about the world. For example, in his collection of essays reflecting on From where I come? Who am I? Where I go? (De dónde vengo? Quién soy? A dónde voy?)⁷, which he dedicated to Camilo José Cela Conde, "endearing friend and tireless collaborator," Francisco states: "We learn about the human predicament when we read Cervantes' Quijote, contemplate Picasso's Guernica, or listen to Manuel de Falla's La vida breve. We learn this way about ourselves and about the world we live in and we also benefit from non-scientific knowledge."

I was overtaken by emotion when I discovered **The Heart of the Andes** painting by the renowned American landscape painter Frederick Edwin Church. Housed in the Metropolitan Museum of Art in New York, this painting masterfully reveals the bounty of wonder in the interlocking aspects of our planet. It translates into an emotional journey of discovery the magnificence of the connections and unity of South America's wilderness that so fundamentally inspired the great German explorer and humanist Alexander von Humboldt in formulating his breakthrough scientific concept that natural world was a web of life wherein everything was connected and correlated. My discovery of a painting that I identified with in a most profound way—just as Francisco did with Guernica—hap-

⁶ Соок, М. (2005), "Francisco J. Ayala", in Соок, М., *Faces of Science*, New York: W.W. Norton & Company, pp. 22-23.

⁷ AYALA, F. J. (2015), ¿De dónde vengo? ¿Quién soy? ¿A dónde voy?: Ensayos sobre la naturaleza humana, la ética y la religión, Madrid, Alianza, p. 339.

pened relatively recently. Thus, rather than influencing my work from its germinating stage, my discovery of The Heart of the Andes greatly energized my ongoing effort to make the wonder of the natural world the centerpiece of both the ideal and the pursuit of global sustainability.

Quoting from the beautiful biography From God and Science. The Evolution of Francisco J. Ayala (De Dios y Ciencia. La Evolución de Francisco J. Ayala) by Susana Pinar García⁸: "Dobzhansky and Ayala found the meaning of life in terms of achievements of the human intellect. Science, art, and creativity gave the reason to be when on passage through the Earth." And these three were the joy of our life together. For Francisco, for both of us, life would be poorer without operas, music...

But no art has more profoundly shaped and bonded Francisco's and my lives during those magnificent 38 years together than the priceless art collection that graces our home —better described as a living museum in California.

And this brings me to the closing point of my remarks. Francisco's last written words, words that he put down on a piece of paper when intubated in a hospital's Intensive Care Unit, are sacred to me. In that one-sentence note, he requested that our collection of art be saved for humanity. What a noble wish! That precious collection nourished our work with inspiration and molded the spiritual dimension of our life together. Francisco's extraordinary intellectual and humanitarian legacy that we are celebrating today is deeply interconnected with the art that nurtured it. My intent, which Francisco shared, is to donate to Comillas University, upon my passing, our entire art collection and, thus, forever reunite what belongs together.

Thank you, Comillas Pontifical University, and thank you, Cátedra Hana and Francisco José Ayala for Science, Technology and Religion, for embracing and making ever stronger the eternal union of Francisco's and my hearts and minds.

⁸ PINAR GARCÍA, S. (2016), *De Dios y Ciencia: La Evolución de Francisco J. Ayala*, Madrid, Alianza, p. 131.