ArtScience: The Essential Connection

What is the value of artistic practices, techniques, inventions, aesthetics and knowledge for the working scientist? What is the value of scientific practices, techniques, inventions, aesthetics and knowledge for the artist? When does art become science and science, art? Can an individual excel at both science and art, or is even a passing familiarity with one sufficient to influence the other significantly? Guest editor Robert Root-Bernstein continues the exploration of such questions in the second installment of the Leonardo special project “ArtScience: The Essential Connection.”

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DESMOND MORRIS’S TWO SPHERES

Desmond Morris (b. 1928) is best known to the public as an Oxford University zoologist and anthropologist who has written such classics as The Naked Ape and Manwatching and has produced innumerable public television science programs on everything from sex to understanding one’s cat. He has, however, been a painter for longer than he has been either a scientist or a writer. Morris began painting at the age of 16, when he discovered a book of anatomical drawings that contained stunning illustrations of internal organs such as the intestines, whose loopy, convoluted structures fascinated the young man. Another influence was surrealism, especially the works of Yves Tanguy, Joan Miró and Salvador Dalí. Add a naturalist to a surrealist and the result is something uniquely Morris.

One does not, of course, go to one’s local art school and say, “I’d like to major in naturalistic surrealism, please. Where do I sign up?” Morris is largely self-trained and self-reliant, having overcome the objections of nearly everyone who saw his early idiosyncratic, nonrepresentational work. He painted because he felt compelled to paint. His limited skill provided an unexpected opportunity when he was drafted for military duty in 1947 at the age of 19. The army was looking for people to teach art to military men. Morris volunteered. Quite unprepared, he had to formalize his limited knowledge on the job. The experience taught him that the best way to learn anything is to teach it, a lesson he has employed throughout his life. It also convinced him that his future might lie in the art world. In his autobiography, Morris writes,

I… toyed with the idea of going to art school, to learn from others more efficiently what I had supposedly been teaching for the past year. But at the time, in the late 1940s, the art schools were dead places, and the idea of endless drawings of nudes and still lifes did not appeal to me [1].

Instead of attending art school, Morris took a fruitful detour. His other love was animals, particularly animal behavior. As a child he had spent innumerable hours simply watching mammals, fish, birds and insects go about their lives. So he decided to go to Oxford to work with Nobel laureate Niko Tinbergen and become a naturalist. Art was still in the picture, however. “What I was always coming back to in my paintings,” he wrote many years later, “were shapes based on organisms, and I argued that three years of drawing from the microscope would be the best art school in the world for me” [2].

His unusual training paid off early. At the age of 21, he exhibited in a joint show with Joan Miró, the great Spanish surrealist. Surrealism is at the core of both art and science for Morris. “The table of surrealist,” he writes, “stands on four legs. The first we may call the poetry of chance; the second the joy of exaggeration; the third the shock of juxtaposition; and the fourth the invention of images” [3]. Like other surrealists, Morris relies largely upon automatism—a technique in which the artist allows his or her subconscious to direct the process of painting without planning or oversight. Morris’s internal world of images and processes directs his painting. Not surprisingly, because so much of his time is spent working on biological and anthropological images, much of the artwork Morris draws from his subconscious reflects his internalized feelings about these studies. In a 1974 interview in Lycidas, an Oxford magazine, Morris elaborated on the connection:

It is true that my paintings are very biomorphic, very preoccupied with biological shapes, and that my biological writings are largely concerned with visual patterns of behavior. I have never resisted that kind of leakage…Recently, neurophysiologists have begun to pay more attention to this problem and it now seems likely that this division that I am postulating into two types of mental process actually has some structural basis in the brain. If this research makes further advances, and confirms that the two kinds of activity are mutually beneficial, perhaps the time will come when we will give up the folly of separating sub-adults into the imaginative and the analytical—artists and scientists—and encourage them to be both at once [4].

“Welcome to your two spheres at once,” Morris wrote in a surrealist poem dating from the same period [5].

Article Frontispiece. Desmond Morris, The Budding Force, 16 x 12 in, oil on canvas, 1973. (© Desmond Morris) Morris’s fascination with the biology and evolution of reproductive organs has often manifested itself in his surrealist paintings.
Morris's paintings reveal the interaction of his "two spheres" by combining his naturalistic training and his surrealistic style to create allegories that are visually and materially unique (Article Frontispiece). More to the point of being imaginative, the artist employs surrealism simul- taneously, Morris literally uses his art to explore his science and vice versa.

Being a biologist and a student of evolution, I attempted to evolve my own world of biomorphic shapes, influenced by but not directly related to the flora and fauna of our planet.

From canvas to canvas I have tried to let them grow and develop in a natural way, without ever crudely borrowing specific elements from known animals or plants. This process began as early as 1944, but it was not until 1947 that it gained confidence in itself. In 1947, I completed a strange picture called Entry into a Landscape, which showed a narrow gully with a biomorphic window seen through a cleft in a dark rock face. It was as though I had offered myself a route of access to a secret, inner personal world. In my mind's eye, I slipped through this crack in the rocks and there I was, suddenly surrounded by a whole array of bizarre inhabitants, all busy courting, fighting, breeding, and moving about in front of my eyes. I no longer had to search for them, they were everywhere, making their own demands of me and establishing their own rules [6].

In this way, Morris has allowed himself, first in his paintings and later in a novel titled Inrock [7], to explore the concept of evolution divorced from the constraints that are necessarily imposed upon such studies by the reality of life on earth. And because his art is about evolutionary theory just as much as it is his science, his paintings are full of courtship rituals, fights over territory, aggression displays, posturings that make peacocks look humdrum, and sex—sex acts, sexual habits, sexual organs, sexual rituals—all with the same outrageous, whimsical sense of humor that so informs The Naked Ape. Morris observes his inner world with the same clear eye that he trains on his outer world.

Since his art and science are inseparable, Morris uses the same methods in his science that he cultivates in his art, making his zoology as unique as his art. His research ethologist, to put myself in the animal's place, so that its problems became my problems, and I read nothing into its life-style that was alien to its particular species. And the dream said it all [8].

The objective, quantitative approach that characterizes so much of modern science is not for Morris. "No one ever studies anything unless, in some way or other, they are deeply emotionally involved with it," he has written [9]. Morris's empathetic approach maximizes his emotional involvement by employing dreams, images and feelings to provide insight and inspiration.

On a practical level, Morris has also noted that his artwork has "helped [him] greatly with the business of drawing the animals [he] was studying" [10]. He recognizes explicitly that both his art and his "biological writings are largely concerned with visual patterns of behaviour" [11], a preoccupation particularly evident in Manwatching [12], a study of courtship behaviors in human beings, and Gestures [13], a collaborative study of shared nonverbal patterns of human communication across 28 countries. What both studies share is the artist's goal of making the audience perceive what it can so easily overlook: the hand motions that accompany anger or love; the analogies between peacock displays and fancy dresses; the hidden message behind the way in which a model is posed for an advertisement. Morris reveals subtlety in the mundane.

Indeed, one of the sublime puzzles that has brought Morris face to face with his artist-scientist self is why humans create art at all. Is art an exclusively human endeavor, or did it evolve from other animal behaviors, as did all our other attributes and proclivities? What functions would have made art-making a selective advantage in evolution? He has pondered these questions in two of his most time-consuming projects, the writing of The Biology of Art [14] and The Art of Ancient Cyprus [15]. The Biology of Art is a groundbreaking study of paintings and drawings by great apes. The project began in 1956 when Morris started collecting examples of ape art and then organizing exhibitions. The work was aided and abetted by his appointment in 1959 as Curator of Mammals at the London Zoological Society, where he worked with a male gorilla named Congo, a prolific painter who helped to reveal the existence of artistic urges and an aesthetic sense among our primate cousins. It is unfortunate that Morris's dream of founding an institute for the study of the biology of art to continue these studies failed, but he took his interest in another direction a few years later by carrying out a prehistory of the art of Cyprus. The study required the execution of over 5,000 line drawings and paid off in two insights. First, Morris realized that most prehistoric Cypriot art was nonrepresentational, which turned out to be true for most of the rest of the world's early art as well. The Western fascination with representational veracity is a recent aberration, perhaps tied to the West's concomitant love affair with science and technology. Second, Morris found that the symbolic shapes he discovered in Cypriot artifacts evolved in very much the same way that his own biomorphs evolve—with rules and trends of their own. His book is considered a major contribution to "archeo-aesthetics."

Morris's art and science have intersected in one final, and unexpected, way as well. As a young man, he made two surrealist movies, Time Flower and The Butterfly and the Pin. The former won an amateur award and was aired on television. Morris considers the latter a failure, but he does acknowledge that "the two films were later to play an important part in acquiring me..."
a post as head of a film unit, not because of their content, but because they revealed that I did, at least, understand the business of film scripting and editing” [16].

Anyone who has followed Morris’s career will be aware of the many entertaining and visually rich educational science movies and television specials he has directed.

It is not surprising that Morris identifies himself as neither artist nor scientist. “I never thought of myself as a zoologist who painted or as a painter who was interested in zoology. They are both equally important to me because they both involve visual exploration” [17]. He elaborates by saying that he dislikes labels such as “painter” or “scientist,” although his passport does identify him as a zoologist for those who must have such labels. Morris writes,

If my paintings do nothing else, they will serve to demonstrate that such titles are misleading. In reality, people today are not scientists or artists . . . they are explorers or non-explorers, and the context of their explorations is of secondary importance. Painting is no longer merely a craft, it is a form of personal research. . . . So, in the end, I do not think of myself as being part scientist and part artist, but simply as being an explorer, part objective and part subjective [18].

If there is any distinction at all between Morris’s science and his art, it is that his science is about what is, and his artwork is about what could be. It should not be a surprise that the two are synergistic. As any scientist knows, one only discovers what is by imagining what could be.

References
11. Remy [4].