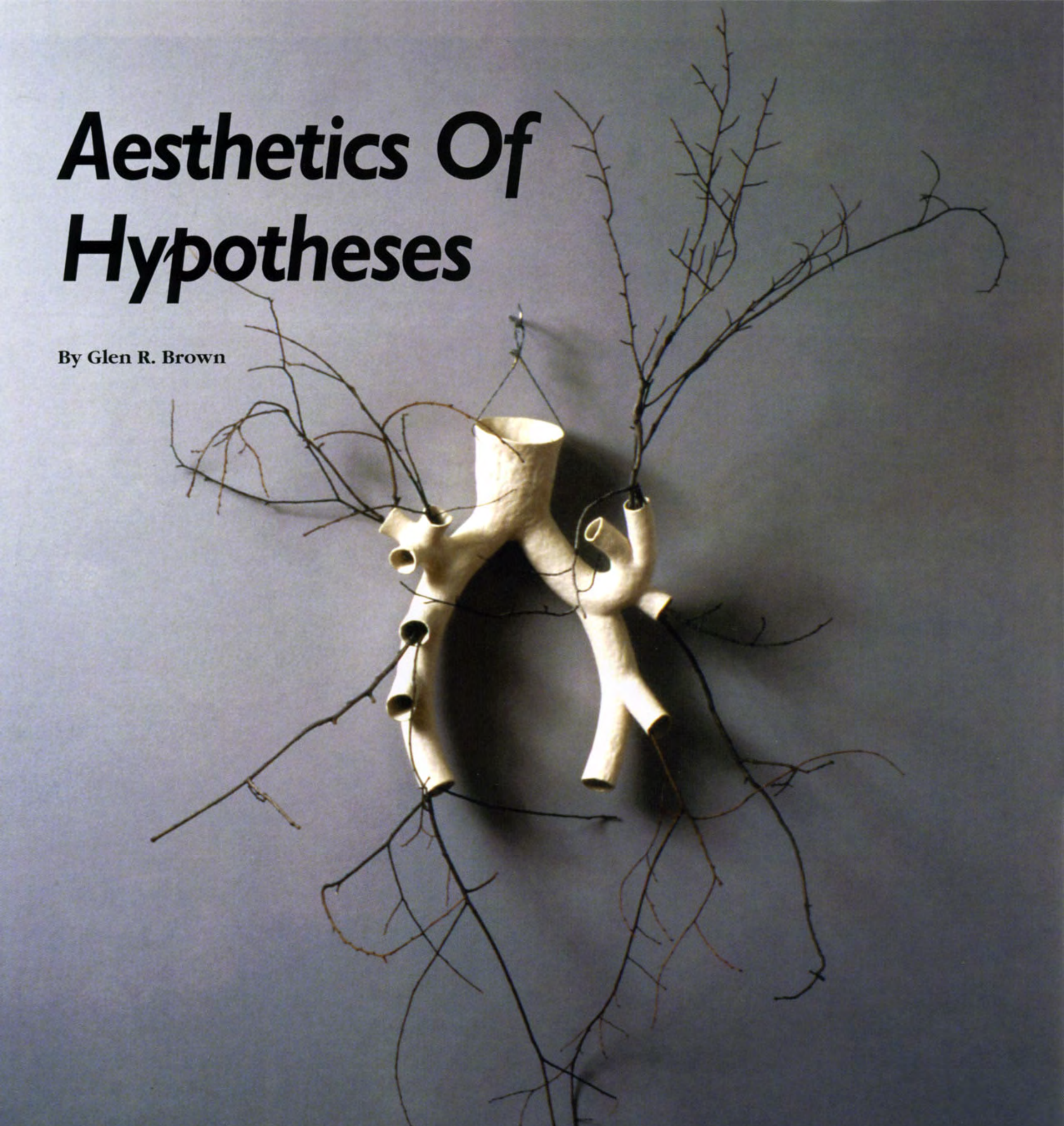
Aesthetics Of Hypotheses

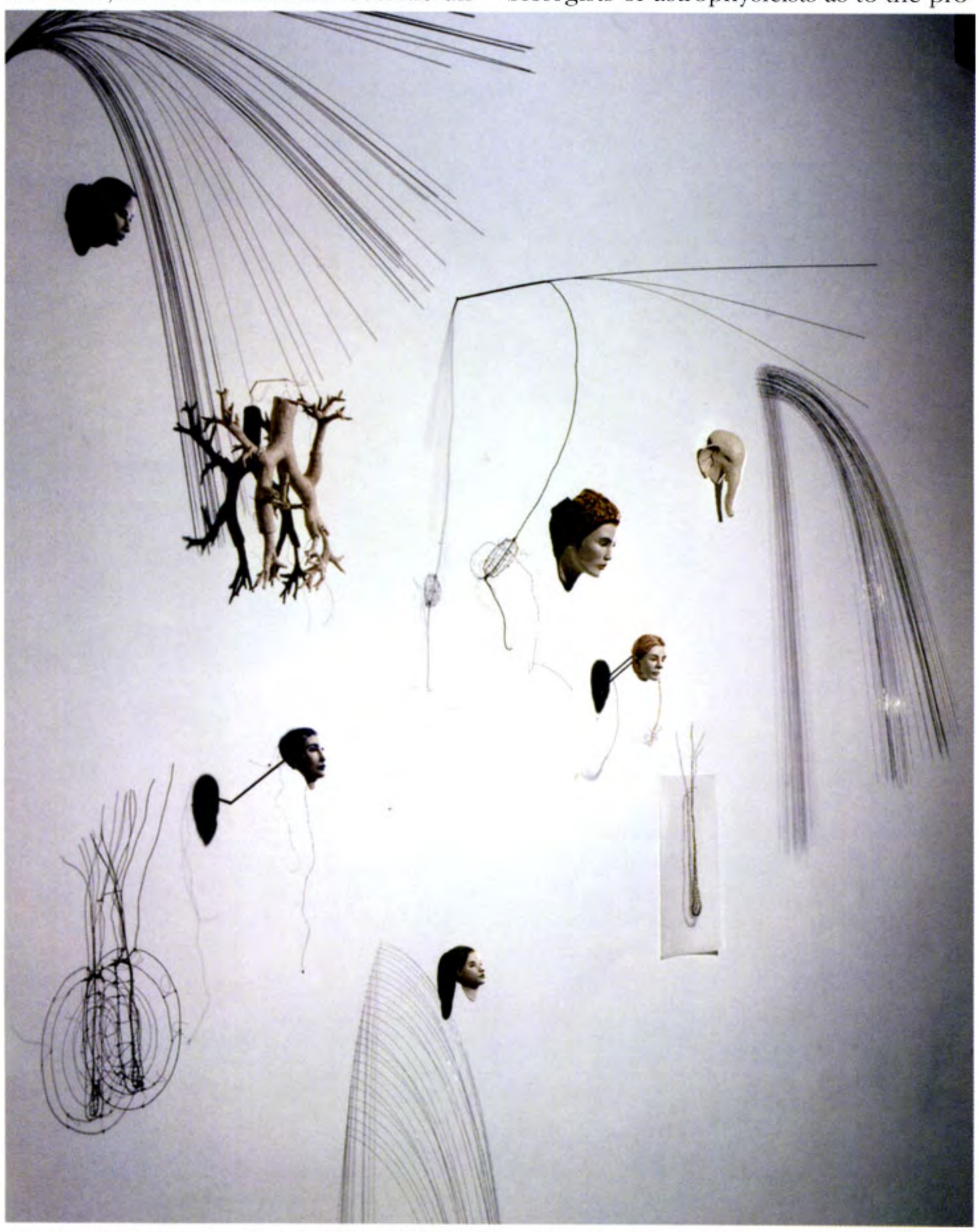
By Glen R. Brown



Many contemporary artists, including the New York sculptor Judy Moonelis, are as inclined to seek inspiration in diverse fields of science as they are from art objects from any age. Their art is as likely to refer to the speculations of biologists or astrophysicists as to the pronouncements of any contemporary theorist of art. Science and artistic practice have in such cases joined to add another dimension to the process of abstraction and to cultivate a new and perhaps even more compelling conception of the sublime.

Scientific abstractions of natural systems and processes—theories of the structure of the universe, hypotheses regarding the mechanics of the brain, models of biological transformation, and the lik—are often as notoriously complex as the original phenomena that they purport to represent. As a consequence, they can be as great a source of wonder as those natural phenomena themselves. What they do not elicit from us in the form of instinctual awe, they make up for by provoking admiration for the capacity of the mind to generate such abstractions. The nuances of scientific theory can, in fact, be appreciated almost with the delicacy of connoisseurship. The flow charts, graphs, conceptual models, and explanatory metaphors generated by scientific inquiry manifest a nearly aesthetic dimension for any who are inclined to consider them in this light. It is hardly surprising, therefore, that as abstraction became an increasingly dominant impulse in modern art, scientific theories assumed a more influential role in the conception and production of paintings and sculpture.

Today, the impact on art of scientific abstractions such as chaos theory, models of DNA, or hypotheses about an expanding universe has become widespread. As a consequence, the notion that the process of creating art can be characterized as research has perhaps acquired greater credibility than at any time since the waning of the authority of art academies in the late 19th century. The nature of this research is, of course, quite different from the classical investigation of universal form and its reflection in exalted examples of art from the past. Many contemporary artists, among them New York sculptor Judy Moonelis, are as inclined to peruse a treatise on cytology as to seek inspiration in art objects from any age, and as likely to refer to the speculations of biologists or astrophysicists as to the pronouncements of any contemporary theorist of art. Science and artistic practice have in such cases joined to add another dimension to the process of abstraction and to cultivate a new and perhaps even more compelling conception of the sublime.

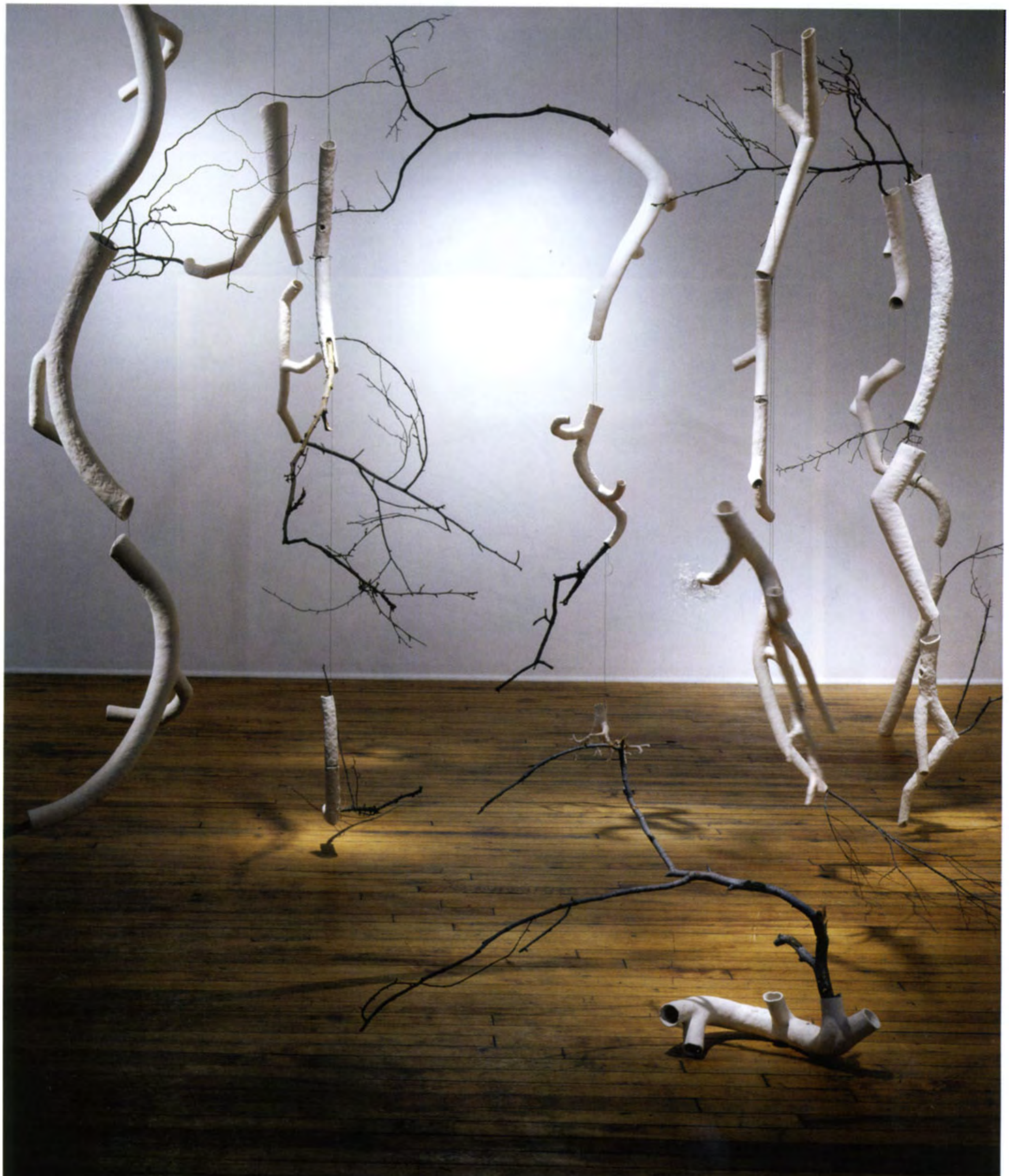


Above: **Judy Moonelis, Touch Wall,** 2000, mixed media, 84 x 96 x 35". Photograph: Cathy Carver.
Previous page: **Judy Moonelis, Branch Bronchial,** 2002, mixed media, 80 x 60 x 15". All photographs: Courtesy of the Artist.

Moonelis, who works in a variety of media but gravitates toward clay and wire, has over the course of her career employed her art as a means of engaging diverse scientific theories on material, aesthetic and conceptual levels. The installation *Touch Wall* (2000), for instance, had its origins in a study of the sense of touch that generated an entire series of sculptures based partly on scientific diagrams of cutaneous receptors and partly on analogies that could be made to the processes through which these receptors respond to stimuli. Consisting of six finely rendered miniature porcelain heads, a white earthenware bronchial tree, and six wire structures that protrude from the wall like sprouting seeds, burgeoning twigs, and wisps of hair, *Touch Wall* functions on two primary levels. As its title suggests, its components are magnets for the fingers of its audience, who discern in the ceramic elements the imprint of Moonelis's own touch. Regardless of the lack of any explicit invitation to do so, many viewers of the piece have indulged their desire to set the wires in motion with a brush of the fingers.

This action, even if it is only contemplated, emphasizes the actual haptic perception of stimuli. In this respect, *Touch Wall* is a kind of sensory trigger. It is experiential. At the same time, the wires, which become stimuli when they are touched, are implicitly enlarged representations of the tiny hairs in human skin: they are, in other words, simultaneously stimuli and representations of the receptors of stimuli. In relation to the sense of touch they are significant both as objects in themselves and abstractions of objects. Moreover, they respond to touch by vibrating in a manner that is superficially analogous to the reception of stimuli through the receptors in hair follicles. In this respect they form abstractions of a process. Their conceptual value is enhanced by the fact that they are wires and consequently are capable of conducting the same electrochemical impulses that travel through the nervous system when a sensory stimulus is encountered.

Although some of the components of *Touch Wall* are clearly inspired by medical illustrations of structures such as Pacinian corpuscles, Moonelis has never been interested in creating objective diagrams of anything. If her work references empirically obtained



Judy Moonelis, Branched Matrice, 2002-2003, mixed media, 150 x 240 x 180". Photograph: Saverio Truglia. At Groot Foundation Space, Chicago.

information about the natural world, it is more closely attuned to the speculative aspects of scientific research. She is, in other words, most interested in that region where empirical observation must yield to the imagination: the point at which the hypothesis replaces concrete evidence. In *Touch Wall,* the miniature head of an elephant could be described as originating in a kind of parallel to the brainstorming that often precedes a breakthrough in scientific theory. At the time she was producing the porcelain representations of human heads, she was investigating Hindu cosmology and making small portraits of Ganesha based on Indian precedents. The connection of the Ganesha head to the other elements of *Touch Wall,* however, apart from the general formal similarity between the elephant's trunk and the drooping clusters of wire, is largely inexplicable. "I generally begin a piece with a very clear concept in mind," she says, "but I allow for an intuitive drawing in of things along the way. If it feels

right, even if it can't be precisely explained, I allow it to stay."

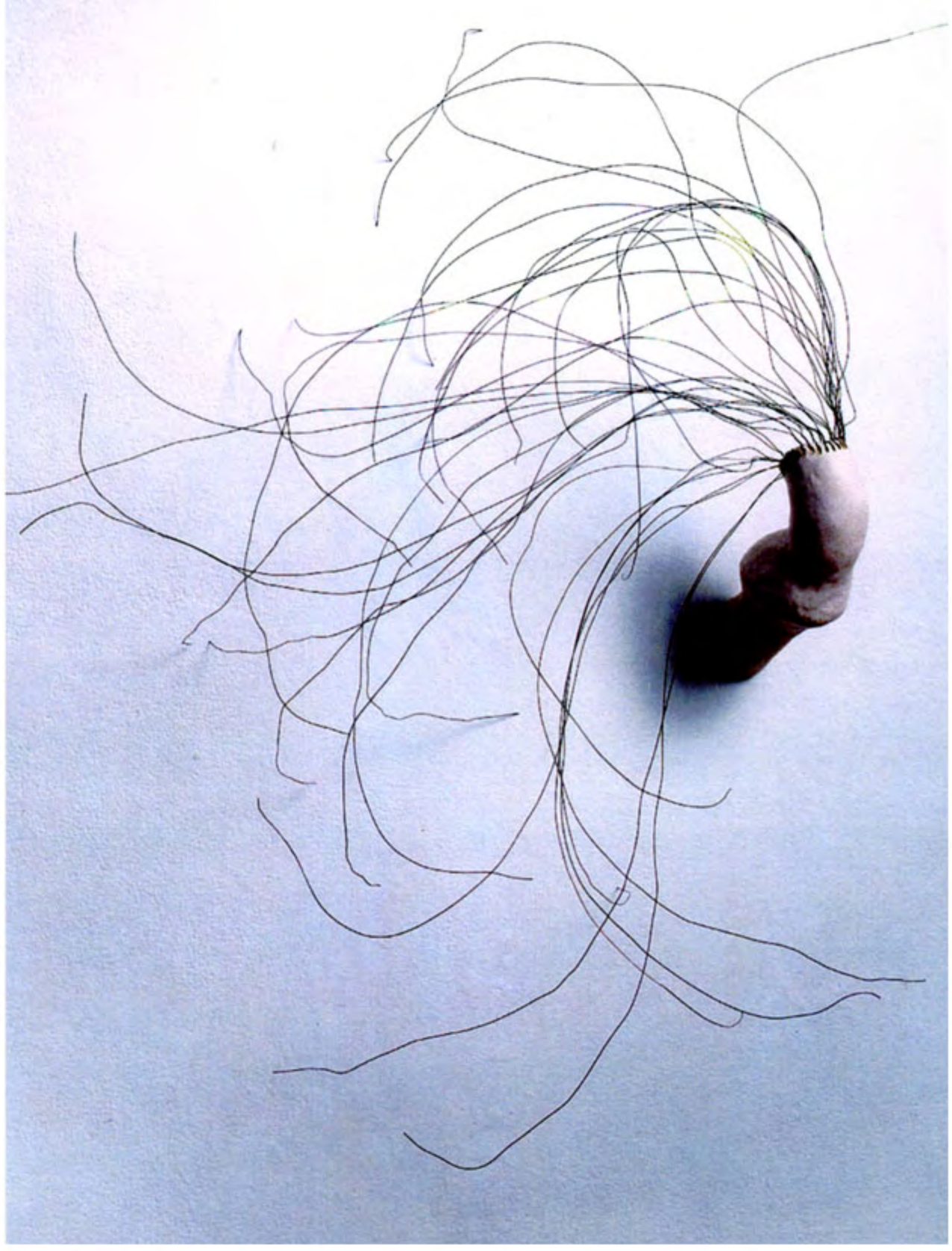
This suggests that intuitive association is as important to Moonelis as the rational aspects of scientific explanation. This valuation lends to her works a feeling of vague appreciation of the mystical, or at least the enigmatic—which must, after all, be the incentive for applying science to the natural world in the first place. The rational and the intuitive coexist in her sculptures as they do in the process of forming scientific hypotheses in response to the mysteries of the universe. In *Touch Wall* a logical connection exists, for example, between the representations of receptors and the miniature bronchial tree: "One of the primary things affected when we're touched is our rate of breathing," Moonelis observes. The exclusive concentration on the bronchial tree in subsequent sculptures therefore constitutes a rational shift in exploration from the site of tactile stimuli to that of response. *Inversion*, a piece recently exhibited at the Frankfurt 9th Triennial and the Museum of Art and Design in New York, is a good example. In the related work *Branch Bronchial*, however, the unexpected sprouting of twigs from the respiratory tubes suggests quite a different relationship from that of cause and effect. Here, Moonelis refers to the kinds of mysterious analogies between forms in nature that have since ancient times prompted such aesthetically intriguing formulas as the Fibonacci sequence and the Golden Section.

Theories of the essential interrelationship of space, energy, and matter—the cosmic triad—have increasingly occupied Moonelis's interest. The transition from the wall-mounted, largely autonomous *Branch Bronchial* to the multipartite installation *Branched Matrice,* for example, could be seen as indicative of the desire to explore more fully the elements of space and motion. Here, the bronchial tree has been dismembered and dispersed, its segments suspended by wires to produce an intimation of the slow drift and swirl of debris in a space beyond the influence of the earth's gravitational pull. The rush of air through the respiratory system, the flow of sap in the branches of a tree, and the movement of particles through outer space are thus intuitively related, not for what they might reveal about a common empirically verifiable process but rather because together they manifest a sense of the incommensurable, the mysterious sympathy between aspects of the universe that has always alluded rational inquiry.

Branched Matrice is perhaps most interesting for its vacillation between the internal and the external: the structures of the respiratory system ensconced within the chest and the limbs of a tree that probe the outer environment. "I wanted to create a space that could be entered and felt like the inside of the brain or body," Moonelis says, "but that at the same time would be something like a forest." The primary connection between the two is a structural analogy, something that emerges not as an object of scientific inquiry so much as a consequence of the rational attempt to grasp such objects in their essential forms: an abstraction, in other words.

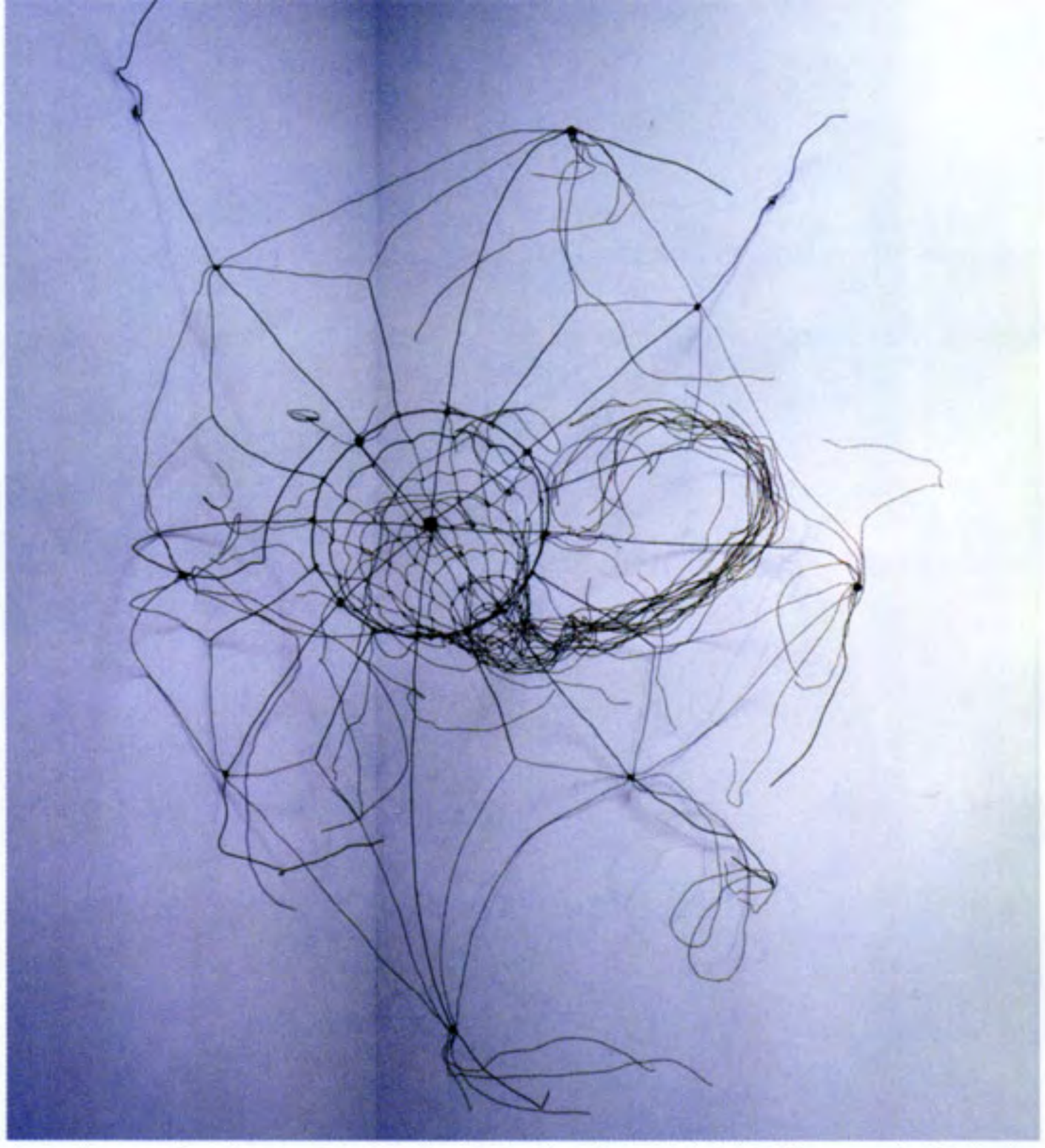
The shift in her work has been to a focus on analogies in scientific explanation, a rhetorical strategy of defining the essences of things. A visit to the Comparative Anatomy Gallery in the Museum of Natural History in Paris in the summer of 2003 proved particularly significant. "Apparently, the Gallery had been left just as it had existed at the end of the 19th century," she says. "It was amazing for me as an artist to see the orderly display of objects. In the same case were the bronchial trees from lions, giraffes, polar bears, and humans, all lined up in jars for comparison."

Related to this scientific exposition of anatomy is the sculpture *Root,* a wall mounted piece consisting of a hollow porcelain form terminating in curling tufts of wire. Based on an illustration of a trachea found in the 18th-century Diderot Encyclopedia, the sculpture has anatomical connections that are easily perceived. Moreover, the wires, light and hairlike, suggest exhalation, animating the piece and implying the connection between form and function in an actual trachea. As a representation, however, the sculpture is far from objectively diagrammatic. In fact, viewed in the context of Moonelis's previous works and taking into account its title, *Root* hints at structural analogies between animals and plants. The



Judy Moonelis, Root, 2003, clay, wire, 22 x 18 x 12".

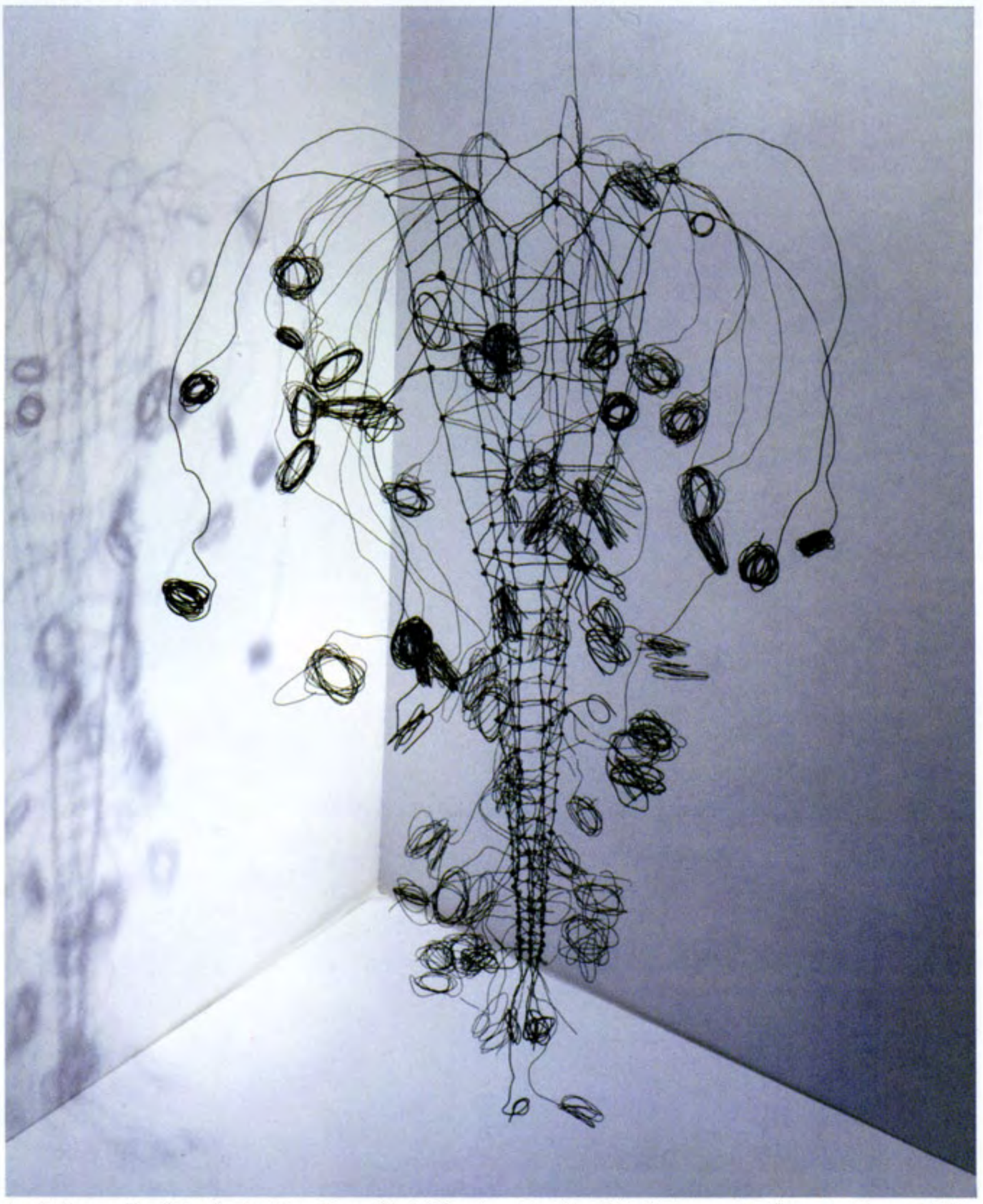
intent was not to produce anything as concrete as a medical or botanical illustration, but on the contrary to generate an elusiveness within a physical presence. Whether the intangible quality of life as opposed to the stasis of inorganic matter or the obscure traces of the hidden sympathy between living things that has generally been described as spirit, this elusive quality accounts for the strangely fragile, almost impalpable nature of *Root*.



Judy Moonelis, Eustache Web, 2003, wire, 30 x 24 x 24". Photograph: Malcolm Varon, NYC.

The particular effectiveness of wire as a medium for conveying the intangibility of structural hypotheses has been exploited by Moonelis in a number of recent sculptures. Among these, the pieces *Campidoglio Folded* and *Campidoglio Expanding* are perhaps the most contextually rich. Having visited the Capitoline Hill (the Campidoglio) during a 2002 exhibition of her work at the Temple Gallery in Rome, Moonelis became intrigued with Michelan-gelo's 16th-century design for the piazza. Based explicitly on the symmetry of human anatomy, the piazza is constructed as an oval form with arcs radiating outward from its center. Moonelis, having recently read Stephen Hawking's *The Universe in a Nutshell*, was captivated by the correlation between Michelangelo's design and diagrams in Hawking's book of various universes in stages of expansion and collapse. This unexpected support for the mystical conviction of medieval theorists that the universe could be understood in analogy to the symmetry and proportions of the human body struck Moonelis as a fascinating link between the rational and the spiritual.

In her most recent sculptures, bolstered by studies made in Great Britain in 2004 while on a research grant from Fairleigh Dickinson University (where she is a faculty member), Moonelis has worked primarily in wire to explore the uncanny connections between the conical diagram of our universe in Hawking's book and the strange stalactite-like pendants and complex radiating patterns of ribs in medieval fan vaults such as those in the Chapel of Henry VII adjoining Westminster Abbey. In the conflux of these Gothic architectural forms and theories about the structure of the universe at the dawn of a new millennium, Moonelis finds not a confirmation of the triumph of human reasoning over the mysteries of nature but, on the contrary, a greater cause for wonder. It is the speculative capacity of science, the ability to hypothesize about the unknown and thereby link it to the human imagination, however tentatively, that interests Moonelis most. This capacity can only exist so long as there is the feeling that something intensely interesting has evaded the rigid restrictions of formulas and the ponderous weight of empirical evidence. For Moonelis, it is their link to the unknown and the awe-inspiring that gives scientific hypotheses their captivating aesthetic quality. Her works reflect upon the beauty of intricately constructed scientific theories, but they are ultimately conceived not as paeans to reasoning but as portals to the sublime. Δ



Judy Moonelis, Westminster Cone 2, 2003, wire, 40 x 24 x 24". Photograph: Malcolm Varon, NYC.

Glen R. Brown is a regular contributor to World Sculpture News *and* Asian Art News. *His is associate professor of art history at Kansas State University.*