

Hello everybody, my name is Anna Sigridur Arnar and I want to welcome you to “A Critical Conversation on Affect Theory, Neuroscience, and Art-Science Collaborations” that includes James Elkins, Sally McKay, Warren Neidich, Eduardo Kac, and Barbara Maria Stafford, all of whom I will introduce properly in a moment.

The timeliness of this panel cannot be underestimated: This year’s CAA conference alone, for example, featured numerous panels addressing collaboration in art and science, or on perception and affect theory. This is also borne out by the plethora of books on these subjects on display in the publisher’s exhibition hall here at the conference.

Recent exhibitions, moreover, also reflect the timeliness of our subject as curators, artists, and audiences are increasingly invested in the dynamic intersections between art and vision and the nuanced perceptual mechanics of the brain. [SLIDE 2] documenta 14, installed in Athens and in Kassel last summer, for instance, included the art and theoretical writings of Wladyslaw Strzemiński, whose pre and post-war paintings explored the fundamentals of human vision including the rhythmic movements of the eye and the biological reaction of muscles to such stimuli¹. NYU’s Grey Gallery, moreover, has just mounted an exhibition of compelling drawings by Spanish neuro-anatomist Santiago Ramón y Cajal that will go on to other galleries across the country in the coming months.

On the institutional level, an increasing number of university and art school programs have cropped up in the last few years offering interdisciplinary approaches to

studying Art and Science, and in particular art and neuroscience. The University of the Arts in Philadelphia, to name just one example, just announced the creation of a new program integrating the study of “neuroaesthetics” and creativity.

[Slide 3] But today’s panel is not just focusing on the topicality of the subject at hand, but rather it explicitly takes a step back to reflect on the deeper histories of the critical literature and scientific understanding of ideas regarding vision, perception, sensation, mental imagery, and subjectivity from the Enlightenment and beyond.

Equally important is our stated goal of pivoting to the future by proposing new directions of research and collaboration in art and science.

[Slide 4] A catalyst for our conversation today is the pioneering research of Barbara Maria Stafford, who among many other honors over her long career, recently received the inaugural MediaArtHistories award for her contributions in the field of imaging arts, optical sciences, and performance technologies as well as its attendant discourses. | | As early as 1968 when she was at the Warburg Institute in London working with Sir Ernst Gombrich, she began her life-long investigation into the theories of perception and the diverse visual practices and critical languages developed to probe, articulate, and at times overturn such theories. [Slide 5] Building on this early research, she published her first book in 1979 *Symbol and Myth* on the little known figure Hubert de Superville, whose visual schemata were, she argues, “based on a collective fund of affective responses to external phenomena.”

This early work announced one of the central themes that was to characterize her research for the next forty years: the relationship between external and internal

phenomena, or to use her parlance, **the visualization of the invisible**. The remarkable trajectory of ambitious books that followed pursued this theme from a variety of perspectives. [SLIDE 6] Her 1984 book *Voyage into Substance*, for instance, explored the contributions of artists and scientists in the rise of early modern and modern illustrated travel literature. This work was followed by the critically acclaimed book *Body Criticism* from 1991, [SLIDE 7] which triggered vibrant philosophical, scientific and cultural debates regarding the body and the problem of perception. Moreover, this work called on humanists, and especially artists and art historians, to use their unique skills and training to grapple with modern imaging technologies to shape the discourse and scholarship.

In the ten years that followed *Body Criticism*, she published four more books, [SLIDE 8] *Artful Science, Enlightenment, Entertainment and the Eclipse of Visual Education* (1994), *Good Looking. Essays on the Virtues of Images* (1996), *Visual Analogy. Consciousness as the Art of Connecting* (1999); and with Frances Terpak, *Devices of Wonder. From the World in a Box to Images on the Screen* (2001). [SLIDE 9] This last work, published by the Getty Research Institute here in Los Angeles, examined the perennial quest to create apparatuses that extend and augment human perception. These “eye machines,” as Stafford calls them, occupy territories between game and experiment, play and tech. The plethora of devices and social media platforms predicated on vision and visibility that have been developed since this 2001 publication, have only served to strengthen the arguments presented therein.

[SLIDE 10] Last but not least, are the books *Echo Objects. The Cognitive Work of Images* (2007) and *A Field Guide to a New Meta-field: Bridging the Humanities-Neurosciences Divide* (2011) both published by the University of Chicago Press. These books amplify her earlier writings on vision and cognition, but another no less important argument is elaborated: The urgent need for interdisciplinary approaches and collaboration in order to produce the most robust and forward thinking scholarship and initiatives in art and science. And while many **visual artists** have been committed to such endeavors for decades, scholars in the humanities, including art historians, have been reluctant or certainly slower to recognize the advances in the neurosciences.

In *Echo Objects* she addresses this issue, writing: [SLIDE 11] “As scholars of the myriad aspects of self-fashioning we can usefully enlarge, and even alter, our humanistic understanding of culture, inflecting it with urgent discoveries in medicine, evolutionary and developmental biology, and the brain sciences. In other words, the role of culture is **not** just to stand outside, critiquing science, **nor** is science’s position external, and acting on culture.” || Such claims are not based on naïve optimism, for we all know how interdisciplinary endeavors can be fraught with fundamental levels of mistrust or flawed assumptions about the disciplinary practices of those outside one’s own field. Rather than being deterred by such tribalist instincts, however, Stafford challenges the skeptics in us. On more than one occasion I’ve heard her argue that it’s much easier to tear something down than it is to build something up, to make productive connections, bridge divides and open up conversations.

In this spirit then, our panel is today designed to stimulate robust conversation, exploring connections and building bridges. We'll begin with three brief commentaries—James Elkins, Sally McKay, Warren Neidich, followed by responses offered by our two discussants Eduardo Kac and Barbara Stafford in the hopes of opening up the floor for an expanded conversation with the audience.

It's my honor to introduce our first commentator, James Elkins. Once upon a time, he writes, Barbara was one of his dissertation supervisors. Since then, his scholarship focused on the history and theory of images in art, science, and nature and he's published books such as *The Domain of Images*, *How to use your Eyes*, *Why are our Pictures Puzzles*, *And On Pictures and the Words that Fail them*, to name but a few. His interests include microscopy, stereo photography (with a Realist camera), playing piano (contemporary "classical" music), and (whenever possible) winter ocean diving. The title of his comments today is "From Novalis to Neuroscience: Models for Art History".

Our next comments come from Sally McKay, who is an artist, art theorist, and Assistant Professor of Art at McMaster University in Canada. She completed her PhD four years ago in Art History and Visual Culture at York University in Toronto. Sally relied on Barbara Maria Stafford's book *Echo Objects* in her own dissertation titled *Repositioning Neuroaesthetics Through Contemporary Art*, which basically argued that art is as valid as neuroscience for finding out about cognition. Her work continues to engage interdisciplinary questions in art and science, with particular focus on new

materialism and colonialism. Her comments today bear the title: “Knowing and Not-Knowing Matter”

Our next commentary is by **Warren Neidich**, an internationally recognized artist and theorist who has studied photography, neuroscience, medicine, ophthalmology and architectural theory. He’s currently Professor of Art, Weissensee Kunsthochschule, Berlin, and is founding director of the Saas-Fee Summer Institute of Art, Berlin, and is currently serving as Visiting Scholar at Otis College of Art and Design. Dr. Neidich has recently published *Neuromacht*, [Merve Verlag] and *The Psychopathologies of Cognitive Capitalism*, Part 3. Moreover, his *Color of Politics* is forthcoming in 2018. The title of his commentary today is: The Manifesto of Neuro-materialism.

--Having introduced the work of Barbara Stafford in my opening remarks, allow me to introduce Eduardo Kac [katz], who in addition to Barbara, will offer comments and questions today.

Kac is an artist and writer whose works explore the limits and possibilities of light, life and language. In 2017, he created "Inner Telescope," an artwork realized in outer space aboard the International Space Station. Primarily known for his bioart works, such as as Genesis and GFP Bunny, Kac is also an author whose books include Telepresence and Bio Art -- Networking Humans, Rabbits and Robots, published by University of Michigan Press, and Signs of Life: Bio Art and Beyond, published by MIT Press. Kac is a Professor and Chair of the Art and Technology department at the School of the Art Institute of Chicago.

“The movement of the eye, the trace of the sliding glances, the muscles that contract and distend link the shapes seen in nature and form a uniform rhythm ... The rhythm is mostly the rhythm of autonomous movements that emanate from the nervous-muscular system. A physiological rhythm that connects the content of separate glances. This falling and rising rhythm of pulsating lines, which results from the biological reaction of the muscles, subordinates the visual acquisition of separate glances, transforms them, and creates a constantly changing rhythm of irregular symmetry.”

—Władysław Strzemiński

Władysław Strzemiński (1893–1952) was born in Minsk in present-day Belarus. He was one of the key figures of the avant-garde movement in Poland. Crippled in a freak accident during military service in the First World War, Strzemiński developed an interest in the arts and went on to study and work in Russia with his wife, sculptor Katarzyna Kobro, before moving to Poland in the early 1920s. Strzemiński’s practice fundamentally explored of the underlying principles of human vision.

Strzemiński spent the Second World War in Łódź where from 1940 he witnessed mass deportations of the city's inhabitants and the atrocities in the Jewish Ghetto established by the Nazi occupants. These events are reflected in the two series of works on paper in which the contours of human figures float and dissolve beyond recognition