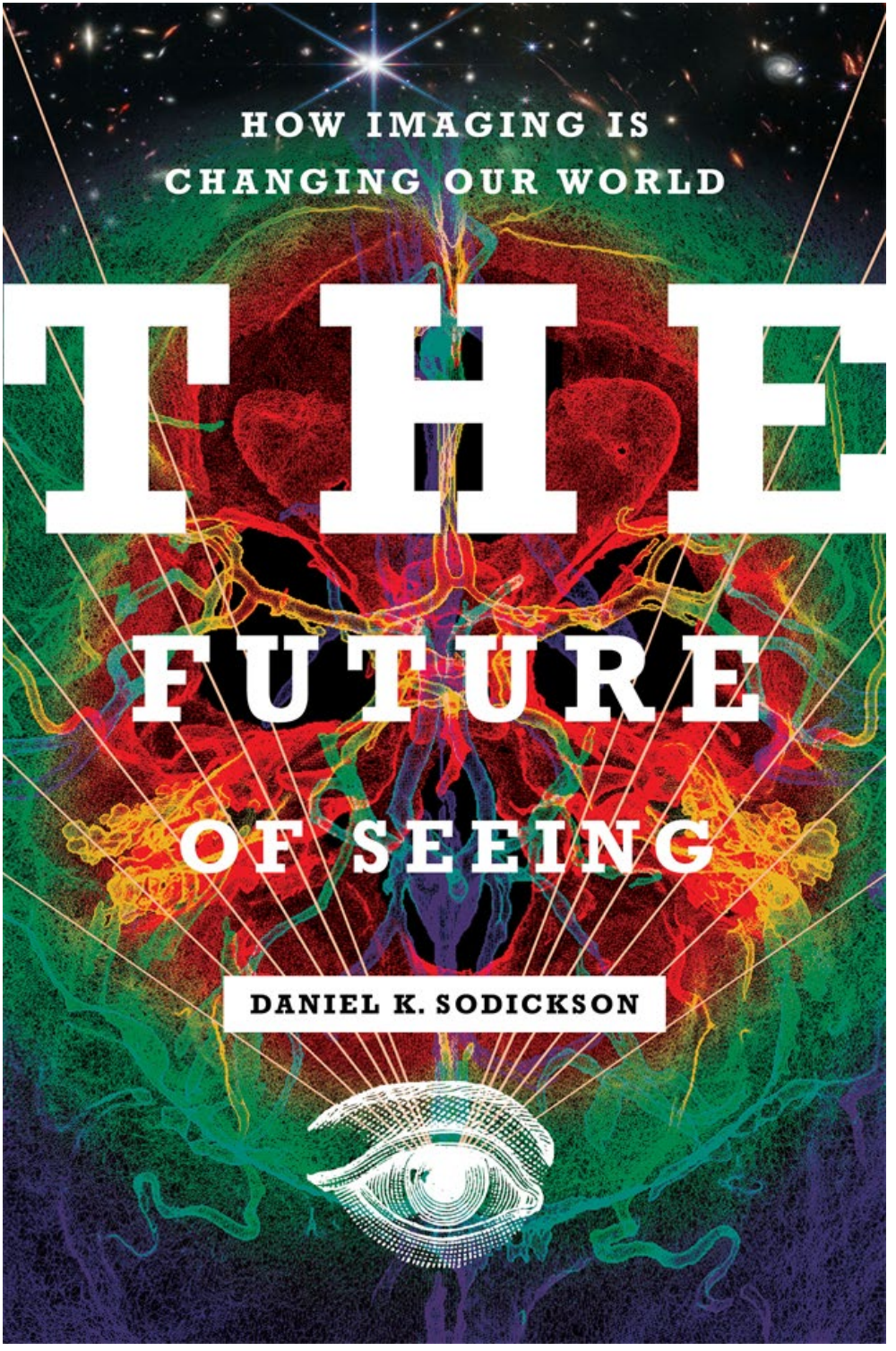
Smithsonian Associates Evening Lecture/Seminar



January 6, 2026

Columbia University Press
https://politics-prose.com/book/9780231209922

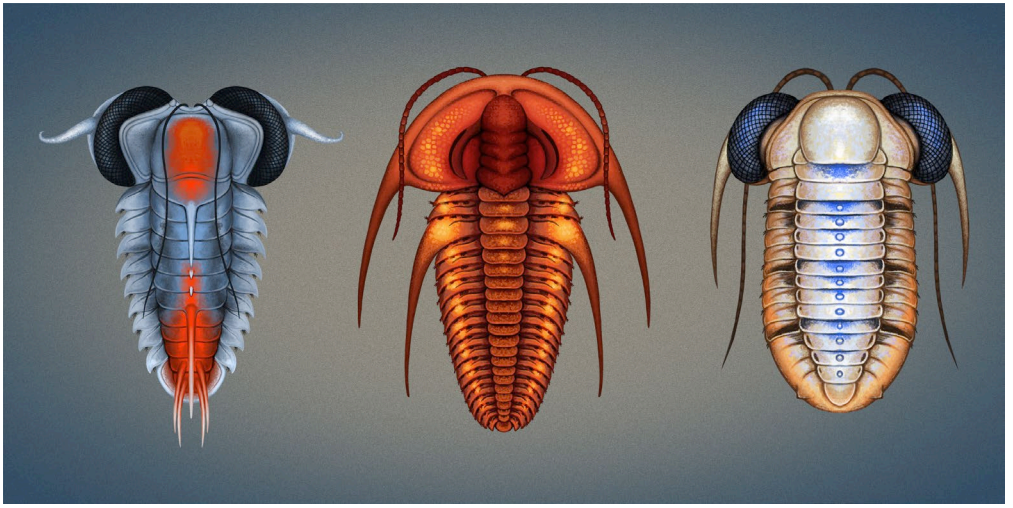


PLATE 1: The nature of seeing. *(Top)* Meet the trilobites, pioneers of vision. *(Bottom)* The startling diversity of animal eyes.

Sources: (*Top*) Courtesy of Franz Anthony (https://franzanth.com/); (*bottom*) Wanderlust2003, CC BY-SA 4.0, via Wikimedia Commons.

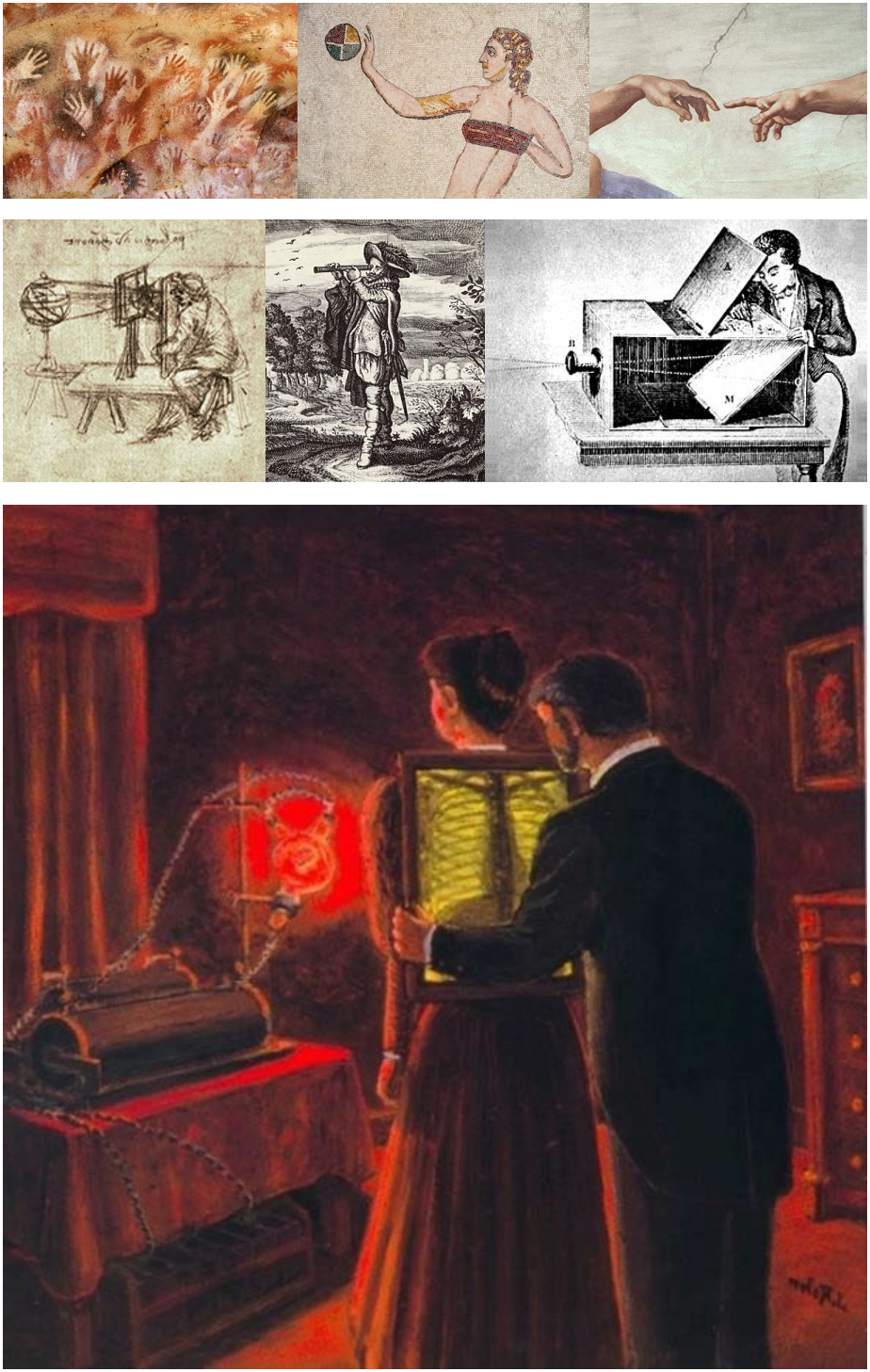


PLATE 2: Augmenting nature and seeing it through. *(Top)* Handmade images. *(Middle)* Imaging with machines. *(Bottom)* Early x-ray imaging.

Sources: *(Top left)* Pablo A. Gimenez, CC BY-SA 2.0, via Wikimedia Commons; *(top center)* Marco Ossino/Shutterstock; *(top right, middle)* public domain via Wikimedia Commons; *(bottom)* 1985 painting by D. Jacques Rohr showing an x-ray fluoroscopic examination of a woman in 1896, courtesy of Centre Antoine Béclère, Paris.

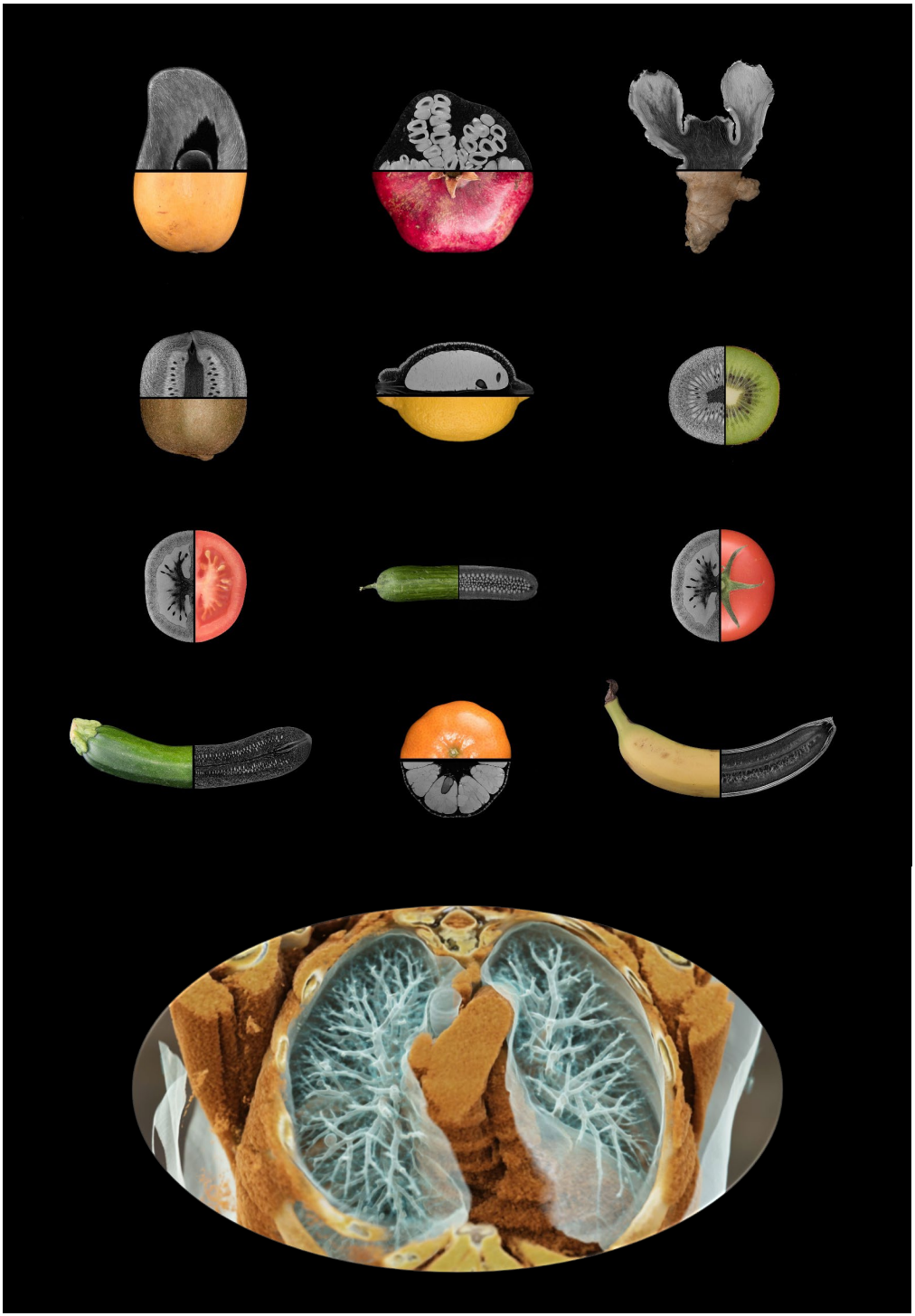


PLATE 3: Slicing without cutting. *(Top)* MRI still life. Slices of assorted fruits and vegetables spliced with color photographs. *(Bottom)* The body in living color. A cinematic rendering of lung anatomy from CT slices.

Sources: *(Top)* Courtesy of Pippa Storey and Pawel Slabiak; *(bottom)* courtesy of Siemens Medical Solutions USA, Inc. The CT data used to create these images were acquired at the Portuguese Institute of Oncology, Lisbon.

PLATE 4: The many faces of tomography. *(Top)* Progressive improvements in prenatal ultrasound. *(Middle left)* MRI, PET, and fused MRI and PET images of the body. *(Middle right)* Tracking blood flow in the heart using MRI. *(Bottom)* Imaging advances featured on the cover of *Science* magazine in the early 1990s.

Sources: *(Top)* Public domain; (middle left) Department of Radiology, NYU Grossman School of Medicine; *(middle right)* courtesy of Rizwan Ahmad (https://u.osu.edu/ahmad/research/); *(bottom)* reprinted with permission from the American Association for the Advancement of Science; *(bottom left) Science* 250, no. 4977 (1990), visualization by Geoffrey Sobering, National Institutes of Health; *(bottom right)* Science 254, no. 5032 (1991), courtesy of the Massachusetts General Hospital-NMR Center.

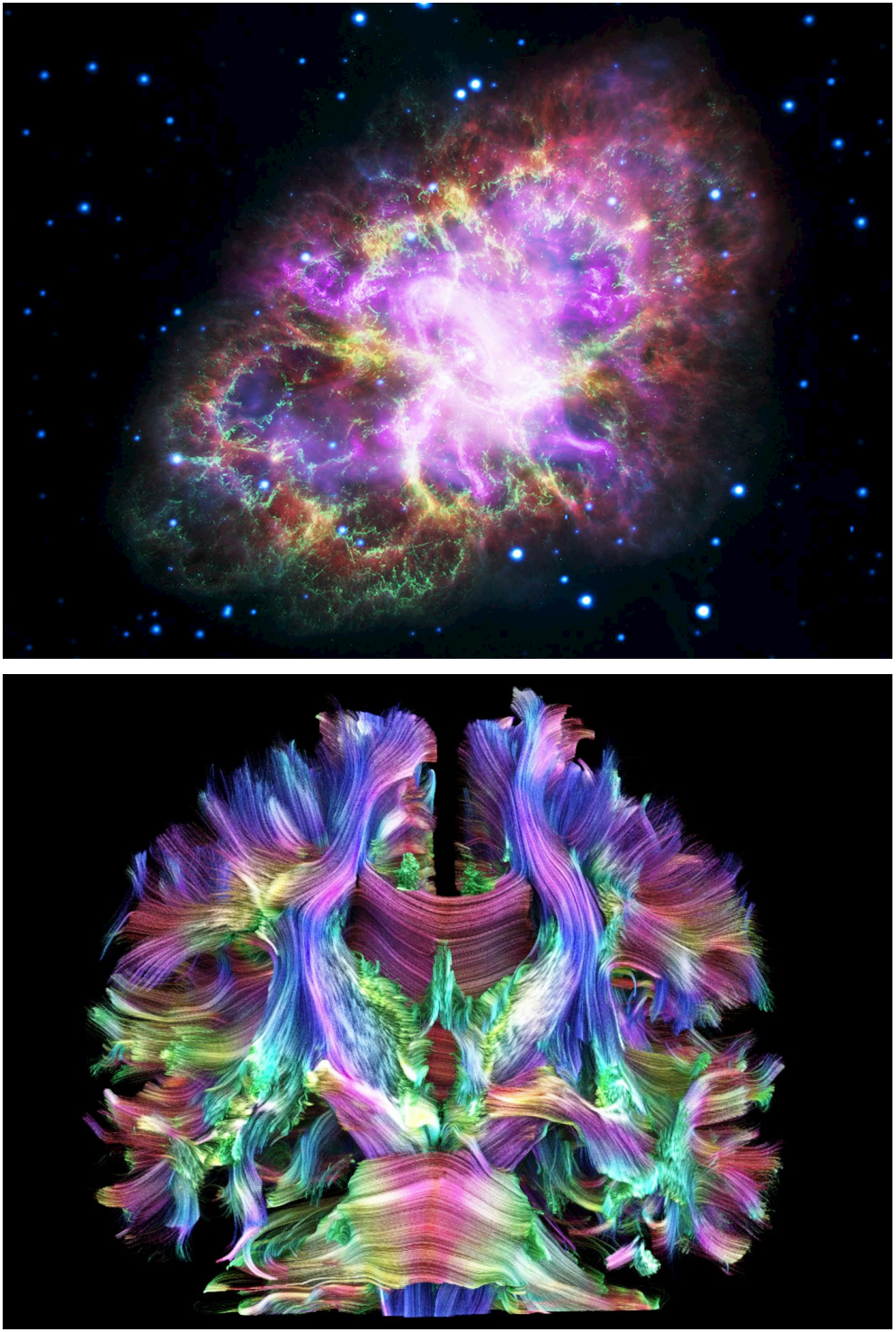


PLATE 5: What's in an image? Outer space and inner space. *(Top)* Harmony of the spheres. A composite image of the Crab Nebula in multiple frequencies. *(Bottom)* Symmetry of the mind. Tracing nerve fiber bundles in the brain using diffusion MRI.

Sources: *(Top)* Public domain via NASA (https://svs.gsfc.nasa.gov/30944). *(Bottom)* Courtesy of Dorin Comaniciu; data from the NYU Grossman School of Medicine; 3-D rendering by Siemens Healthineers.

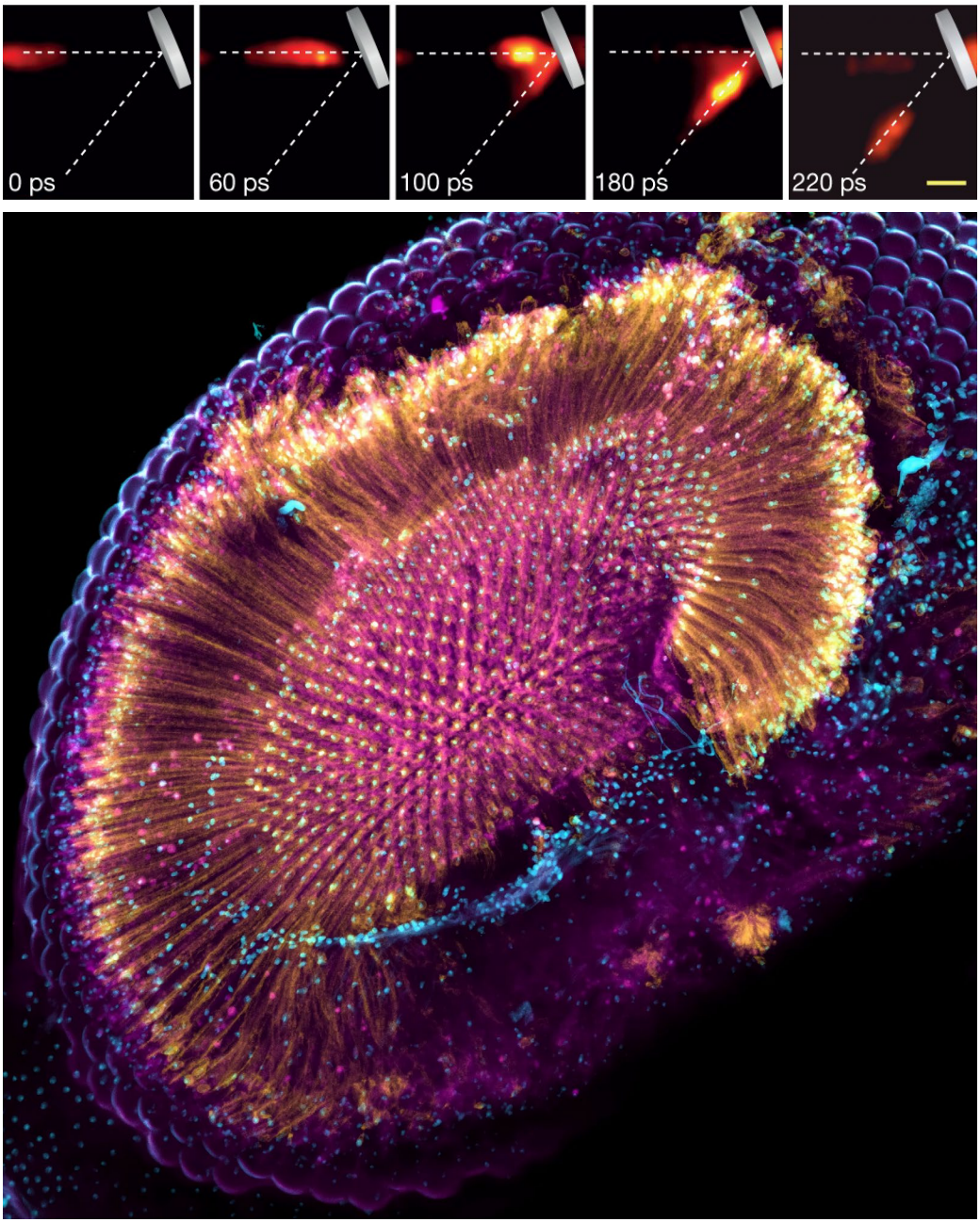
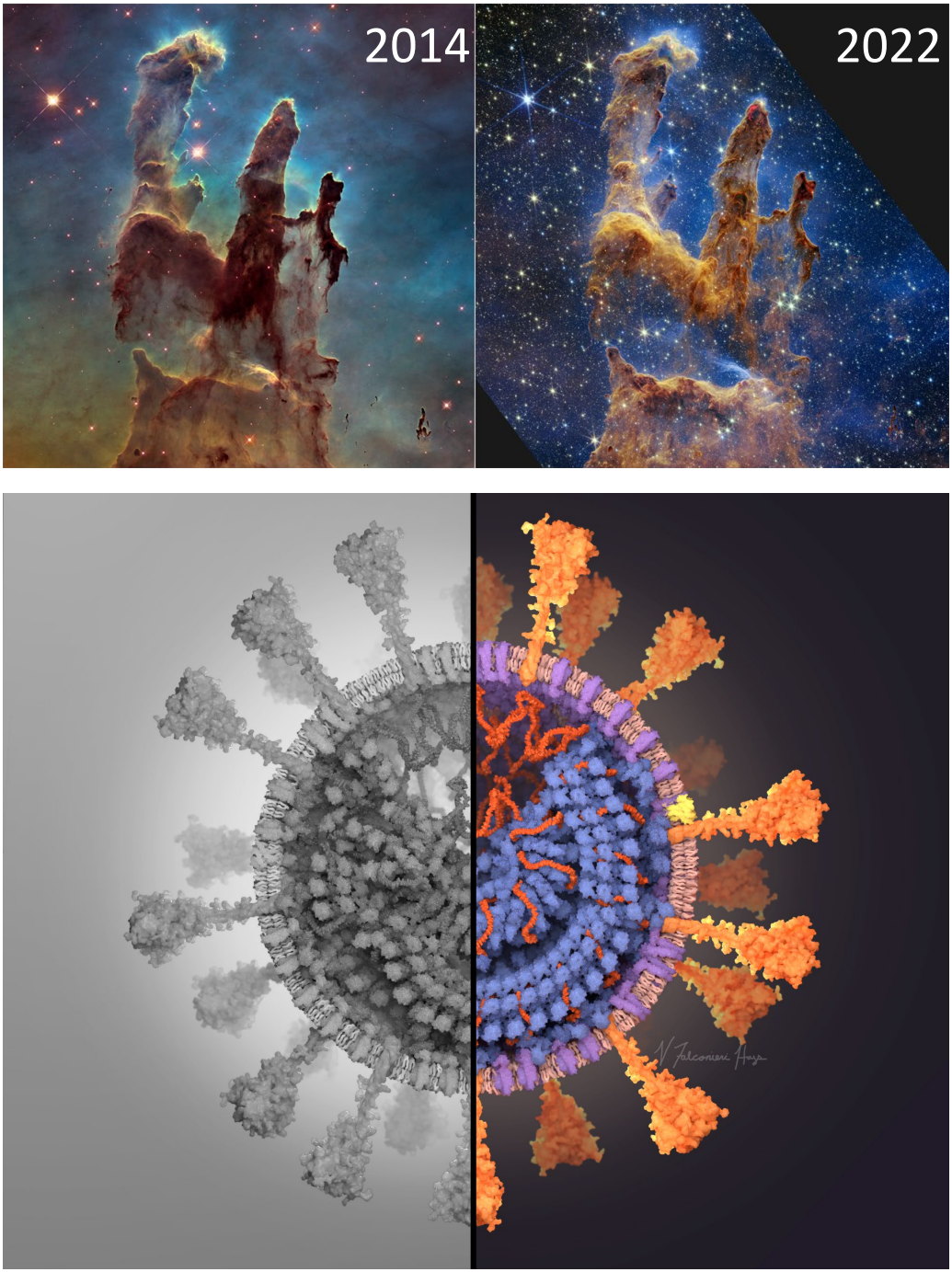


PLATE 6: "I have seized the light. I have arrested its flight." *(Top)* Compressed ultrafast photography depicting light bouncing off a mirror at 100 billion frames per second, delivering in the twenty-first century on Daguerre's exuberant nineteenth-century proclamation. *(Bottom)* A light microscope image of a fruit fly retina with its photoreceptors highlighted in yellow.

Sources: *(Top)* Reproduced with permission from L. Gao et al., "Single-Shot Compressed Ultrafast Photography at One Hundred Billion Frames per Second," *Nature* 516 (2014): 74–77, figure 3a. © Springer Nature; *(bottom)* Guillaume Thuery, CC BY-SA 4.0, via Wikimedia Commons.



The Future of Seeing

PLATE 7: Farther, smaller, clearer: imaging marches on. *(Top)* The Pillars of Creation as viewed by the Hubble *(left)* and Webb *(right)* space telescopes. *(Bottom)* A composite image of a SARS-CoV-2 virus, combining information from electron microscopy, cryoelectron microscopy, x-ray crystallography, and magnetic resonance.

Sources: *(Top)* NASA, ESA, CSA, STScI, Hubble Heritage Project (STScI, AURA); *(bottom)* © 2020 Veronica Falconieri Hays.

PLATE 8: The future of seeing. *(Top)* Bat eyes and ears. *(Bottom)* What does DALL-E see? The output of OpenAI's image-generating system following the prompts "A woman holding a miniature MRI machine in her hand" *(left)* and "The future of seeing" *(right)*.

Sources: *(Top)* aaron007/iStock.com; (bottom) images generated by the author using DALL-E 2 (OpenAI).