FROM COPILIA TO ANYWHEN

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In the summer of 1963, knowledge of the technology behind TV images instigated a significant zoological discovery. A group of researchers led by British neuropsychologist Richard Langton Gregory spent a few weeks in the bay of Naples examining, drop by drop, sea water hauled from 200 meters depth. Their hope was to find a rare animal described in 1891 by zoologist Selig Exner, but never seen since. The team had almost given up when "she"—the object of the researchers' desire—suddenly appeared under the microscope, "incredibly beautiful, perfectly transparent—so no veil hid the secrets of her eyes."[1]

The secret of the eyes that was now finally revealed—at the historical moment of television's breakthrough into general culture—was that they seemed to be televisual eyes: "possibly single channel scanning eyes, like a simple mechanical television camera, feeding information of spatial structure down a single neural channel in time." Copilia, a copepod of about 3mm in length who lives in subtropical waters, is remarkable for an eye structure that consists of an anterior lens connected by a delicate cone-shaped membrane to a posterior lens far inside the animal's body. This posterior lens is attached to a bow-shaped structure that contains the photosensitive elements, and that is engaged in a continuous lively movement independent of the static anterior lens.

It was this independent movement in the posterior part of the eye that made Gregory and his team understand it as a form of scanning, swiping across the image plane of the anterior lens. Selig Exner had described the double lens system and the peculiar movement, but at first had not seen it as an eye, since he did not understand how it could possibly function. In 1891, the principle of image scanning invented seven years earlier by Paul Nipkow was still an esoteric knowledge—it was only in 1930, with John Logie Baird's first successful television experiments, that the implication of Nipkow's invention was fully understood. By the early sixties however, the concept of televisual scanning was familiar enough and contributed significantly to the excitement about Copilia—not least because scanning functions are highly *unlikely* in the optical systems of living beings. The retina of a human eye is a densely packed mosaic of more than a hundred

million light-sensitive receptors that transmit patterns of retinal images *simultaneously* through the million fibers of the optic nerve. This principle of simultaneity contrasts greatly with televisual "seeing," which is based on scanning a scene and sending the information on a timeline down a single channel. This operation requires a type of fast-acting components which are generally not found in living organisms but are standard in electronic engineering.

The discovery of Copilia's scanning system was a scientific event, but one could equally call it a media event. Copilia was, so to speak, discovered by television, and also seemed to provide a tangible link between the realm of live signal-based feedback technologies and that of living organisms. Imaginations of a televisual body did in fact already exist (related to the tendency to see video as an avatar of the human eye and the seeing subject). But Copilia demonstrated that there was no reason to see the televisual body as specifically human. In fact, Copilia's perfect transparency seemed designed to support ideas about the technicity at work in the production of alien life forms. To the biologists, her body presented itself like a technical drawing or a circuit diagram, all internal functions clearly visible in the electron microscope without the need for dissection. Moreover, she did not eat, but appeared to run on stored energy, like a battery. And even more strangely: she had no heart. When she was not scanning, she was impossible to distinguish from dead specimens.[2] For Copilia, life was in other words tantamount to scanning: the scanning movement—which was linked to her reproductive capacities—outlined a strange form of existence constantly at the brink of life and death. Her life was, in fact, not unlike that of a piece of electronic equipment that would be turned off when not receiving or disseminating signals. Seeing, in this animal, would have to be understood in terms of technical operations rather than visual representations. Just as in video, its "images" would have to be understood as living forces.

Some fifty years later, an aquatic animal inserted in a museum context is describing itself to me in videographic terms. "This is me now—this is me 100 frames later," it says, through the voice of a famous ventriloquist. It also speaks of semiconductors, biochemistry, standardization, miniaturization, information, bacteria, sound-to-light conversion and realities beyond the "photo logic"—to quote just a few fragments of its dreamily autobiographical discourse. In other words, its discourse evokes a modern techno-logic that has evolved historically from discovering

the strangely life-like properties of video and computer feedback to exploring the continuities between genetics and computer codes, between the wet "in vitro" world of organic samples and the "in silico" world of information processing.

The bag-like eyes of this animal—the protagonist of Philippe Parreno's digital film *Anywhen* (2016)—are nothing like mine. She is a cephalopod and is also distinguished by the fact that her mental images—thoughts and feelings—show up directly on her skin, as if this skin was simply a digital interface layer whose shifting expressions indicate real-time operations in some underlying computer layer. But then again, her brain is not a centralized organ, but distributed across the body in a way that makes it possible to suggest that each of her arms has a mind of its own. In fact, it may keep functioning, searching for food, even when severed from the main body. Her brain is, in other words, evocative of the type of distributed digital networks that we now depend on for rapid communication and organization. In the half-century that has passed between the (re)discovery of Copilia and the exhibition of *Anywhen,* the storyline has shifted. Where image technologies once allowed us to discover what animals might be like, animals, today, are given the task of telling us what our images might be.

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1 R.L. Gregory, H.E. Ross and N. Moray, "The Curious Eye of Copilia," Nature 201 (1964): 1166–1168. The story of Copilia and its relation to new concepts of video life and video ecology is discussed in Chapter 4 of my 2016 book *The Autobiography of Video* (Berlin: Sternberg).

2 R. L. Gregory, "See Naples and Live," in Odd Perceptions (London: Routledge, 1986), 162.