

## READING GLASS

Paul Virilio has compared the field of vision to the ground of an archaeological excavation. The quote introduces Jonathan Crary's book *Techniques of the Observer*, where he describes how most of the important functions of the human eye are being supplanted by practices in which visual images no longer have any reference to the position of an observer in a "real", optically perceived world.<sup>1</sup> We see through lenses, microscopes, telescopes and cameras. Bottles, vases, carafes, dishes, vases, tankards, bowls, table glass, bowls, jugs, paperweights, candlesticks, dishes, jars. Boris Groys writes that "the logic of the collection is often perceived as the logic of death, as mortal logic, which it should be the highest duty of each individual artist to oppose. But unfortunately life does not make much effort as long as it is not faced with the cultural logic of death".<sup>2</sup> Collecting might, in Perec's words, be compared to writing: "to wrest a few precise scraps from the void as it grows".<sup>3</sup>

Glass has been manufactured for several thousand years. First through vitrification of sand, then in moulded clay casts. In Syria the glassmaker's blow-pipe was invented, and the Romans learned to cut glass. When foundries were re-established in forest areas of Germany in the Middle Ages, the iron in the sand made the glass green.<sup>4</sup> This was known as *Waldglas* - forest glass. In his book *Saker*, Peter Cornell describes how "objects form a second nature in which we move every day, while we may rarely visit the primary nature, the woods, the sea, the mountains".<sup>5</sup> Sara Danius touches on a similar theme in her essay *Konstglasets modernism*. She writes: "Art glass is a 'neither neither nor nor', to borrow a formulation from Gunnar Ekelöf. Art glass is neither art nor craft, neither art nor industry, neither art nor glass, neither art nor art, yet all this together, and equally something else. History compels art glass to hover uncertainly between these terms: tableware and art".<sup>6</sup>

In the book *Svenskt glas* by Elisa Steenberg, published in 1946, I read: "Table glass with parallel cuts, *Juno*, Kosta, 1890. The pattern had maintained much of the solid bourgeois ideals from previous decades. This 'sparkling crystal' became a factor which, not least, provided dining with a representative festivity of nearly international character".<sup>7</sup> Language reveals the passage of hierarchies and values. What then is "Swedish"? If we ignore the connection between glass and alcohol, a complex relation to all things foreign and "non-Swedish" appears. In the publication *Vackrare vardagsvara* from 1919, Gregor Paulsson writes: "Thus 'beauty' has largely come to be equal to 'imitation'. The concept taken in the widest sense, not just so that a Swedish carpet factory imitates Turkey and enamel imitates porcelain, iron, wood, nickel, but also that one object mimics another; a buffet a house facade, an inkstand a seashell, a cast-iron or tiled stove, a garden sofa of iron or a similar one of wood".<sup>8</sup>

Glass is a solid material in which the atoms are bound to each other, but when the glass melts into a viscous mass the atoms slowly move. It is this gradual transition from mass to solid material that enables glass to be shaped. I read: "The glass melt is said to be a sub-cooled liquid on the border between liquid and solid material. The transformation area is the temperature range in which the glass melt passes from the one to the other". As long ago as the 1930s the structure of glass was described as a network. And the blend of raw materials incorporated when melting glass is called batch, from German *Gemenge* - blend. Here, concepts such as segregation and homogeneity of the glass are introduced. "In a loose batch segregation is common during transportation, tremors or transshipments. The drier the batch, the higher the risk of segregation. There is much to monitor and control, for the melting process to work. A homogeneous glass is a glass where the composition is the same in all parts".<sup>9</sup>

Quartz glass, flat glass, insulating glass, self-cleaning glass, plexiglass, laboratory glass, crystal glass, fiberglass, optical glass. The applications and significances of glass for science and modern society are numerous. Glass is found in computers, telephones, glasses and film cameras. We surround ourselves with buildings of glass. The problem with glass in ancient times was that it was not transparent. Through experiments with the addition of sodium plants imported from Syria, the Italian glassmaker Angelo Barovier managed to produce clear glass in Venice in the 14th century. He called it *crystallo*. Even the mirror was invented thanks to glass. Earlier, mirrors had reproduced distorted images, but now, through a mixture of tin and mercury, it became possible to produce an entirely flat mirror. Leonardo da Vinci writes that it was the most important invention for painting. When for the first time you could see yourself, and not just other people, a self-centered society began to emerge.<sup>10</sup>

This may be a historical simplification, but it is a staggering thought. Just as the idea of the lens, which helped us see what the eye can not see; helped us see further and beyond the eye, even into the past. "Lenses are used in the camera obscura, which consists of an internally painted black box, which on one side carries a tube wherein there is a lens or a system of lenses. The opposite wall is a sheet of matt glass. The box consists of two parts which can be pushed into each other".<sup>11</sup> Thus we capture a moment in time, and through film a series of moments. But, as Teju Cole asks in his novel *Open City*: "what are we to do when the lens through which the symptoms are viewed is often, itself, symptomatic: the mind is opaque to itself, and it's hard to tell where, precisely, these areas of opacity are. Ophthalmic science describes an area at the back of the bulb of the eye, the optic disk, where the million or so ganglia of the optic nerve exit the eye. It is precisely there, where too many of the neurons associated with vision are clustered, that the vision goes dead."<sup>12</sup>

## Notes

1. *Techniques of the Observer*, Jonathan Crary, October Books/MIT Press, London, 1992, p. 1-2
2. *Avantgardet och samlingsens logik*, Boris Groys, Site Editions/Axl Books, 2012, p. 114
3. *Rummets rymder*, George Perec, Modernista, Stockholm 2013 (Original, *Espaces d'espèces*, Paris, 1974)
4. "Det svenska glasets historia", Gunnel Holmér, 2011, from *Boken om glas - Hantverket, tekniken och konsten*, Glasforskningsinstitutet, 3:e uppl., p. 209
5. *Saker - Om tingens synlighet*, Peter Cornell, Gidlunds, Hedemora, 1993, p. 84
6. "Konstglasets modernism", Sara Danius, 1998, from *Husmoderns död och andra texter*, Albert Bonniers förlag, Stockholm, 2014, p. 364
7. *Svenskt glas*, Elisa Steenberg, Forum, Stockholm, 1946, p. 76-77
8. *Vackrare vardagsvara*, Gregor Paulsson, The Swedish Society of Crafts and Design, Stockholm, 1919, p. 9
9. *Boken om glas - Hantverket, tekniken och konsten*, Glasforskningsinstitutet, 3:e uppl., 2011, p. 15, 47-51
10. *How We Got to Now: Glass*, PBS / BBC, British-American science documentary in six parts, 2014, SVT: *Så byggde vi världen: Glaset*, 2015
11. *Naturen och dess krafter*, H.O.G. Ellinger, Expeditionen af ljus, Stockholm, 1899, p. 392
12. *Open City*, Teju Cole, Random House, New York, 2012, in Swedish: *Öppen stad*, Natur & Kultur, 2013, p. 279

In her film *Reading Glass*, Malin Pettersson Öberg explores glass as an idea and association surface with a background in the art glass collection around which the museum of The Glass Factory in Boda has been built, a collection bought by Emmaboda municipality in 2009. In glimpses from one single take with a moving camera, we follow tableware and art glass stored on the shelves of the archive. The glass is designed by artists such as Elis Bergh, Hertha Hillfon, Erik Höglund and Monica Backström. Together with a reading of quotes and notes on glass and its history, as well as a musical interpretation, we are submerged into an audiovisual flow. In equal parts document and subjective reflection, Pettersson Öberg wishes to raise questions about the significance of glass. How did it affect Swedish identity and culture, and what impact did it have on the shaping of modern Western society? The film points to various difficulties inherent in seeing and interpreting, and reflects on the role of science and technology in our understanding of the world and ourselves. Concepts such as vision, collecting, imitation and origin appear next to terms such as control, segregation and homogeneity; often used to describe glass manufacturing. The impossibility of *objectively* depicting a place or a historical event, or, for that matter, the experience of loss and disappearance, gives rise to the film's floating character.

*Reading Glass* has been filmed in the archive of The Glass Factory in Boda, 2015, and feature glass designed in the glassworks of Kosta, Boda and Åförs by the following artists: Elis Bergh, Oscar Dahl, R.A. Hickman, Paul Hoff, Anna Ehrner, Klas Göran Tinbäck, Ann Wählström, Hertha Hillfon, Monica Backström, Erik Höglund, Gun Lindblad, Bengt Edenfalk, Signe Persson-Melin, Rolf Sinnemark, Fritz Kallenberg, Gabriel Burmeister, Kjell Engman, Ann Wärrff, Göran Wärrff, Ulrica Hydman-Vallien, Bertil Vallien, Gösta Linderholm, Åsa Jungnelius och Ludvig Löfgren.

## PRODUCTION

Music: *Reversed Bloom*, composed by Samuel Nicolas 2015

Voice: Malin Pettersson Öberg

Voice recording: Samuel Nicolas, Conservatoire Maurice Ravel de Villemomble

Camera and light: Axel Diedrichs, Kalmar

Post production: Nils Fridén, Velourfilm

Translation: William Jewson and Malin Pettersson Öberg

Produced with support from: the Swedish Arts Council, Swedish Arts Grants' Committee

Kalmar konstmuseum, The Glass Factory, Nybro Municipality

as part of the project and exhibition *Moving Mass*

Distribution: Filmform - The Arts Film & Video Archive

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## THANK YOU

Emma Karlsson, collections and documentation, The Glass Factory, Boda

Agneta Gustavsson, journalist, author and filmmaker, active in the Kingdom of Crystal

Monica Backström, glass designer and artist, Monica Backström Design, Kalmar

Gunnel Holmér, glass antiquarian, Kulturparken Småland / Sveriges glasmuseum, Växjö

Åke Bergkvist, artist and former glass engraver at Strömbergshyttans glasbruk, based in Växjö

Maja Heuer, museum director, The Glass Factory, Boda

Kira Carpelan, MinMamma Produktion

My Lindh, Slakthusateljéerna

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The artists behind *Moving Mass*