

Andrea Henderson, “Magic Mirrors: Formalist Realism in Victorian Physics and Photography.” *Representations* 117 (2012): 120-150.

In this interpretation of the work of the Victorian photographer, Clementina, Lady Hawarden, Andrea Henderson mounts a far-reaching case for the relationship of aesthetic formalism to developments in British science in the mid nineteenth century. Photography plays a key role in the relationship she proposes between formalism and the British physics of Faraday, Maxwell and John Herschel due to the centrality of theories of light in the mid nineteenth-century development of electromagnetic field theory. Henderson interprets these physicists’ abandonment of Newtonian particle-based theory in favour of the wave theory of light as formalistic in its implications, in that it privileges relationships of force over inherent properties. Drawing attention to the manipulation of formal properties in Hawarden’s photographs, particularly as exemplified in her tendency to present photographs in contrasting sets, Henderson presents a reading of Hawarden’s work which sets out an alternative to prevailing feminist accounts, in that she sees Hawarden as responding to her South Kensington social milieu, the home of an influential network of scientists and artists (133).

Noting the important role played by photography in recent critical discussions of nineteenth-century realism, Henderson suggests that photography’s exemplification of the “relational, rather than [. . .] essentialist logic” (121) of British physics can furnish a new critical paradigm for thinking about realism, in terms of correspondences of formal structure rather than content. She shows that Victorian writers about photography did not regard its realism as consisting so much in the reproduction of detail, as in its direct participation in the series of transformations which connected it with physical processes. In this context, realism was not defined in terms of representation, but in terms of structural correspondence. Henderson charts the development of this conception of realism from the emphasis on polar forces in Romantic *naturphilosophie*, stressing that conceptions of photography are assimilated to the model of polarity through adoption of the terminology of negative and positive, and that thinkers such as John Herschel describe the spectrum of light itself in terms of opposition between the polarities of infrared and ultraviolet. Although Henderson sees the tendency among nineteenth-century scientists to explain phenomena in terms of oppositions between forces as leading away from Romantic *naturphilosophie*’s essentialist emphasis on intrinsic properties, she underlines British scientists’ theoretical commitment to the inherent reality of the relationship between scientific models and natural processes, as expressed in their preference for geometry over abstract mathematical formulas and their related assumption that mechanical modelling of physical processes would always ultimately be possible. Mid-nineteenth-century British science thus provides the model for a kind of realism in which formal relationships are paramount, rather than analytic detail.

Henderson draws on Michael Fried’s work to argue that the move in nineteenth-century realist painting from the attempt to convey a supposedly “unmediated” presentation of physical reality, as in the work of Courbet, to the “deliberate exposure of painterly artifice” (132) by artists such as Whistler (who are, for example, prepared to paint inverted images as seen in a mirror rather than transposing them so that they appear real) corresponds to this formalist version of

realism, whose veracity is conceived as consisting in a structural relationship to the real, rather than exact reproduction. She interprets the prominent role played by mirrors in many of Hawarden's photographs as emptying her images of any Romantic symbolic significance, effacing "any world beyond that summed up by the photographic process itself" (134) in a way which confronts the viewer with the physical reality in which the photograph participates. The subject of the photograph becomes the process of its own making, in a way which anticipates later modernist developments in abstract painting.

Henderson's provocative argument suggests a plausible aesthetic alternative to the postmodernist interpretation of modernism which has dominated critical thinking for the past forty years: art can be formalistic and self-reflexive in a way which is not simply arbitrary, in the manner of Saussurean linguistic oppositions, but which is motivated by structural correspondences or homologies. It would have been helpful if Henderson had indicated the relationship of this conception of a formalist realism to the debates about novelistic realism with which many of her critical sources are engaged, but this may represent the next stage in her highly interesting critical project.

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