



## University of Dundee

### Guest editorial

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## Guest editorial

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### **The first scientific ‘selfie’?**

Photographs taken of oneself have become known as ‘selfies’, and the term received the accolade of ‘word of the year’ by the Oxford English Dictionary in 2013. Selfies are associated with hand-held digital photographs taken either at arm’s length or reflected in a mirror. However, they have a history that stretches back to the very dawning of photography. The first photographic selfie is said to have been taken by an American amateur photographer (Robert Cornelius) in 1839 (Newhall, 1982, page 30). Cornelius removed the lens cap from his camera and posed for some minutes (as would be required by early daguerreotypes) before replacing the cover. At around the same time a more sophisticated technique was applied by a noted scientist who took a photographic self-portrait, which is shown in figure 1. Charles Wheatstone (1801–1875) is best known in visual science for his invention of the stereoscope and the experiments he conducted with it (Wheatstone, 1838, 1852).



**Figure 1.** [In colour online.] Self-portrait photograph of Wheatstone taken in about 1840 (source: Blanchard, Martini, Moreno, & Sezer, 2003).

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Wheatstone's daguerreotype is a reflection in a mirror taken with the camera on his lap. He was involved in photography from its beginnings; he was a friend of William Henry Fox Talbot (who invented the negative–positive process) and had instructed Talbot to take the first photographs for the stereoscope (see Klooswijk, 1991). Wheatstone also experimented with stereoscopic photography as well as with combining sequences of stereoscopic photographs that could be seen in apparent motion (see Wade, 2012). Wheatstone directed the London photographer, Henry Collen, to take what was perhaps the first stereoscopic portrait in 1841, and the sitter was Charles Babbage (Collen, 1854).

Self-portraits by artists are well known, and they became increasingly common from the 15th century when better quality mirrors were manufactured. An example by an artist who made a brief entry in the history of stereoscopy is shown in figure 2.



**Figure 2.** [In colour online.] Detail of a self-portrait by Jacopo Chimenti da Empoli (1551–1640) painted in the period 1590–1595 (source: Pisani, Natali, Sisi, & Testaferrata, 2004).



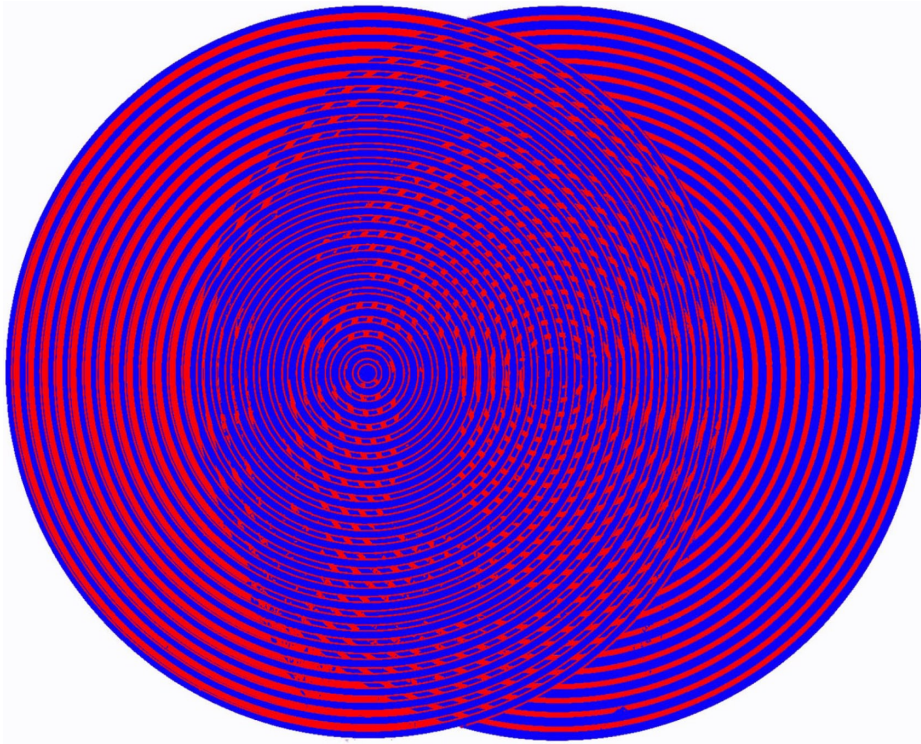
Chimenti was born at Empoli and spent most of his life in Florence. He painted altarpieces in Florence and Tuscany, and was noted for his skills as a draughtsman, particularly in still-life drawings. He produced numerous drawings throughout his life, but was forced to sell them in old age. Art historical accounts of Chimenti's work seldom mention specific drawings, but two of the sketches, when rediscovered in the 19th century, stirred the world of visual science. They were exhibited in the Musée Wicar, at Lille, mounted separately and side by side. It was claimed that they had been made for a stereoscope, but the proposal has proved to be without foundation (see Wade, 2003). The conflict was essentially resolved by Edwin Emerson (1823–1908) who measured the dimensions of the two drawings, and a colleague did so independently. He found “a *mélange* of pseudoscopic and stereoscopic lines, producing precisely the commingled and uncertain effect which a drawing and an ordinary copy of it would produce if adjusted for the stereoscope” (Emerson, 1864, page 204). Emerson was a professor at Troy University, New York, and he was a keen photographer; he might have taken the first stereoscopic selfie (figure 3). He took several stereoscopic self-portraits at around this time.



**Figure 3.** A stereoscopic self-portrait of Emerson for cross-eye viewing, taken around 1861. (Courtesy George Eastman House, Rochester, New York.)

Self-portraits by artists would have been made for several reasons. They did not involve the time and costs of models, and they enabled experimentation which would not have been countenanced by clients. They also honed the skills of observation and representation which were the prerogative of their profession. Painting celebrates the individual skills of artists, whereas science is considered to be more impersonal. Self-portraits by scientists are rare, although their observational skills were often paramount in their science. This contrast is understandable for the period when representations required the hand of the artist, but all that was to change with the invention of photography. Wheatstone's selfie probably represents one of the first scientific self-portraits and the first photograph taken of him, although there are graphical representations of him from before 1840 (see Wade, 1983).

It would seem appropriate to conclude with a self-selfie (figure 4). It echoes the theme of the figures above as it is concerned with binocular vision: the two sets of intersecting circles are centred on each of my eyes. The complete arcs represent the monocular fields for each eye with the intersections corresponding to the region of binocular overlap. The circles centred on my right eye are more prominent, reflecting my right eye dominance. The original image was taken with a hand-held digital camera, and then it was combined with drawn graphics that were scanned and manipulated by computer; the colours were added at the end of the process.



**Figure 4.** [In colour online.] *Selfie portrait* by Nicholas Wade.

**Acknowledgment.** I am most grateful to Serge Plantureux for drawing my attention to Wheatstone's self-portrait photograph long before the word 'selfie' was coined.

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