

How ne disease artist's v



Figure 1 Giorgio de Chirico.
Lithograph from *Calligrammes*.
(1930) © DACS 2004

Neurological disease can affect an artist's work

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INTRODUCTION

A great deal has been written about the relationship between art and disease. Apart from the depiction of diseases in works of art, a subject often generating considerable debate, there is also the problem of how disease can influence what an artist paints, and particularly how it is painted. This has been much researched with regard to psychiatric conditions (MacGregor 1989; Jamison 1993) and eye disease (Trevor-Roper 1988), as well as to various disabling conditions (Sandblom 1992; Emery 1997). Here, however, I will focus on some neurological conditions that have afflicted various artists and how these affected their work.

MIGRAINE

Several artists have suffered with migraine including the British artists Sarah Raphael (1960–2001) and J.J. Ignatius Brennan (b. 1949). But the best known example is the Italian surrealist painter Giorgio de Chirico (1888–1978) (Fuller & Gale 1988). All three artists depicted the zigzag motifs characteristic of fortification spectra and this is well illustrated for example in Chirico's lithograph from *Calligrammes* of 1930 (Fig. 1).

INTRACRANIAL TUMOURS

Percy Wyndham Lewis (1884–1957), an English

artist who founded vorticism (a variety of cubism) in the early part of the last century, developed a pituitary tumour that he refused to have removed and which eventually resulted in blindness and ultimately his death (Farrington 1980). Early in the course of the disease when he could still see, but with some difficulty, he had to hold his face close up to the canvas when painting. He nevertheless produced at the time a very fine portrait of T. S. Eliot (Fig. 2).

MULTIPLE SCLEROSIS

Although a relatively common disorder, there appears to be only one well-documented case of the disease in a professional artist. This was Peter MacKarell, an English artist who suffered from the disease during the last 8 years of his life and who died in 1988. How it affected his art is graphically illustrated in his book (MacKarell 1990). At first his left hand became paralysed so he trained himself to paint with his right hand. Particularly revealing is a series of paintings depicting the development and later recovery of a right central scotoma (Fig. 3).

MOTOR NEURON DISEASE

Once motor neuron disease (MND) has progressed it would generally be very difficult for an artist to continue to paint. But some have, and



a good example is John Paterson, a Scottish artist who graduated from the Glasgow School of Art in 1983. In 1996 he was diagnosed as having a combination of MND and an apparently associated chronic inflammatory demyelinating polyneuropathy. His earlier paintings reflected his love of the countryside. However as the disease progressed his work became particularly revealing in his personal relationships (Fig. 4) and there is an understandable neglect of detail. With his family he founded the Dochas Fund ('dochas' is Gaelic for hope), a charity to raise funds for research into MND and related disorders. He died in 1998.

PARKINSONISM

Salvador Dali (1904–89) was certainly eccentric in his behaviour (Critchley 1992) and also suffered from mild depression throughout most of his life. However in later years he also developed parkinsonism like his father before him. It is very difficult to assess how this might have been reflected in his later work. To the casual

Figure 2 Percy Wyndham Lewis. *Portrait of T. S. Eliot*. ©Wyndham Lewis and the estate of the late Mrs G A Wyndham Lewis by kind permission of the Wyndham Lewis Memorial Trust (a registered charity).

Figure 3 Peter MacKarell. *Self portrait – recovering from a right central scotoma*. Reproduced from *Depictions of an Odyssey* (1990) Corsham, UK: National Society for Education in Art & Design (NSEAD), 1990, with permission.



observer, he continued to depict rather unconventional themes throughout his life. A severe tremor would of course have precluded any serious artistic endeavours.

CEREBROVASCULAR DISEASE

A hemiplegia resulting from a stroke might cause a painter to learn to paint with his other hand. The result, if unacceptable to the artist, might well generate considerable frustration. Such frustration and anger is well illustrated in *The Blinded Samson* (1912) painted by the German artist Lovis Corinth (1858–1925) when he was slowly recovering from a stroke (Fig. 5).

However, the results of a stroke are sometimes more revealingly displayed in *how* an artist depicts subjects. This is well illustrated in the phenomenon of 'hemineglect', where there is defective representation of subjects on one side of a painting with subjects on the other side being normally represented (Vigouroux *et al.* 1990). Hemineglect occurs in around 80% of patients with acute right hemisphere strokes (the right pa-



Figure 4 John Paterson. *Space in Between*.
Reproduced by kind permission of The Dochas Fund.



Figure 5 Lovis Corinth. *The Blinded Samson* (1912).
Reproduced by kind permission of the Staatliche Museen, Berlin.



Figure 6 Left hemineglect after stroke. Vigouroux *et al.* 1990.

rietal areas being particularly involved in space perception) with failure to represent objects on the left side (Halligan & Marshall 1997). It can occur in those without visual field defects. Several artists have suffered right hemisphere strokes with subsequent hemineglect of varying degrees and duration including Lovis Corinth (1858–1925), Otto Dix (1891–1969) and Anton Räderscheidt (1892–1970). As recovery from a stroke occurs so may impairment due to hemineglect (Fig. 6).

A related condition is simultanagnosia: the patient appears to pay attention to only part of an image with an inability to perceive the entire visual scene. It results from unilateral or bilateral damage to the posterior parietal cortex. The phenomenon has been described in several patients including recently a professional artist who suffered from a basilar artery embolic stroke (Smith *et al.* 2003). Prior to the stroke she painted scenes entirely from memory. But following her stroke her paintings revealed selective attention only to certain areas with an inability to perceive the overall meaning of a figure or scene. Detailed studies, including imaging, of artists with this condition could be very instructive in helping our understanding of how we interpret visual memories.

DEMENTIA

Much has been written about the effects on artistic endeavours of psychiatric illnesses as well as drugs and alcohol (for example Critchley 1987; Post 1994). Most of these studies have

centred on how disease affected perception and image representation. But as Anthony Storr has argued, in severe mental illness creativity, rather than being enhanced in some way, is often significantly impaired (Storr 1989).

In recent years there have also been several reports of the effects of various dementias on the work of artists. Mervyn Peake (1911–68), a brilliant English artist and writer, suffered from a chronic neurodegenerative disease, probably dementia with Lewy bodies (Sahlas 2003). His illness began in his forties and he was confined to hospital for the last 4 years of his life. His cognitive decline was associated with a tremor and with visual hallucinations that he portrayed in several sketches and which often depicted expressions of fear and apprehension. Though he was investigated at various centres, including the National Hospital, Queen Square, London, no definitive diagnosis was ever made. At the time there were no imaging techniques available, nor any brain pathology.

More recently the Dutch–American abstract expressionist painter Willem de Kooning (1904–97) developed a dementia in his sixties but continued to paint throughout the rest of his life (Espinel 1996). As the disease advanced his art became progressively more abstract and difficult to understand yet continued to attract the attention of critics.

Interestingly another recent professional artist, but whose premorbid work was more conventional, developed frontotemporal dementia

(Mell *et al.* 2003). As the disease progressed language and executive skills declined but her paintings became freer and more original suggesting that language is not required for certain types of visual creativity.

Finally, the progressive effect of Alzheimer's disease on the work of a contemporary artist, William Utermohlen, has been graphically displayed. He was diagnosed with the disease in 1996 and created a number of self-portraits over the last few years (Crutch *et al.* 2001). These demonstrate very clearly the changes in his self perception (Fig. 7).

Because of the progressive nature of dementia, the neurologist has an opportunity to study how the disease affects an artist's work over time and to correlate such changes with the results of neuroimaging. In this way it affords a unique way of studying how detailed changes in perception can be linked to localized cerebral functions.

CONCLUSIONS

Apart from psychiatric illnesses, which have been much studied in the past, a number of artists have been afflicted by certain neurological disorders including migraine, intracranial tumours, multiple sclerosis, motor neuron disease, parkinsonism, cerebrovascular disease, and various dementias. All of these conditions have, in various ways, affected their work. In the case of the dementias, correlating such changes over time with the results of neuroimaging could help throw more light on our understanding of the relationships between cognitive and visual pathways.

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Figure 7 William Utermohlen. Series of Self-portraits. Painted at age 60 (A), 62 (B), 63 (C), 64 (D), pencil drawing at 66 (E), and abstract self-portrait at 65 (F). In Crutch *et al.* 2001, reproduced by kind permission of the *Lancet*.