



The madness of King George III: a psychiatric re-assessment

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Abstract

This research, based on a study of King George III's medical records and of contemporary diaries of his courtiers and equerries, further confirms the considerable doubt on the claim of Richard Hunter and Ida Macalpine that the King suffered from recurrent attacks of acute porphyria. The present study examines the above records from a psychiatric viewpoint, together with some additional reports, to re-assess the nature of the King's maladies. It concludes that he suffered from recurrent mania (four episodes), with chronic mania and possibly a degree of fatuity during the last decade of his life. This is in agreement with previous reports that he suffered from manic-depressive psychosis.

Keywords

Acute porphyria, bipolar disorder, chronic mania, King George III

Introduction

In 1966 Ida Macalpine and Richard Hunter, mother and son psychiatrists and historians, claimed on the basis of the historical records that King George III suffered from acute intermittent porphyria (Macalpine and Hunter, 1966). Following similar studies on his relatives, they altered the diagnosis to one of variegate porphyria, a milder disease (Macalpine, Hunter and Rimington, 1968). In spite of the well-argued objections at the time by acknowledged experts in porphyria (Dean, 1968a, 1968b; Dent, 1968a, 1968b; Eales and Dowdle, 1968), Macalpine and Hunter persuaded historians (Brooke, 1968; Röhl, Warren and Hunt, 1998; Trevor-Roper, 1968) and not a few medical scientists (Goldberg, 1968; Krebs, 1968; Rimington, 1968; Roth, 1967) that their case was proven and stated that *The Royal Malady* was variegate porphyria (Macalpine and Hunter, 1969). Their views have proved very influential and, surprisingly, the claim has been widely accepted and is re-iterated without reservation in most books on porphyria and Georgian history, both academic and popular; Alan Bennett developed it into a highly successful play and film script. However, a recent re-evaluation has thrown considerable doubt on their methodology, and thus their conclusions are likely to be flawed (Peters, 2009a, 2009b; Peters and Wilkinson, 2010).

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The work of Macalpine and Hunter has other implications for the history, and thus the popular perceptions, of psychiatry. They were highly critical of the medical attendants of King George III and contemporary attitudes to mental illness and the separation of medical from psychiatric illness (Macalpine and Hunter, 1967, 1968, 1969). Much of this is related to their beliefs about the nature of psychiatric disease (Porter, 1993) but also has implications for the stigma associated with mental illness.

The present study re-examines the extensive medical records of the King's four, possibly five, episodes of illness and the contemporary diaries of courtiers and equerries relevant to these illnesses. The results of these studies throw further doubt on the claims of Hunter and Macalpine and support the earlier reports that the King had recurrent symptoms of obstructive jaundice with episodes of severe recurrent 'mental disturbance' followed by a decade of chronic mental ill-health prior to his death aged 81. We explore the implications of these findings for the history of psychiatry and consider how the views of Hunter and Macalpine served to reinforce negative attitudes to mental illness.

Background

The young prince was born two months premature. He was not expected to survive and was baptized privately the same evening. It is said that his wet nurse, Mary Smith, was merely the wife of a gardener, George Smith, again implying the unscheduled arrival and break with usual protocol (Hibbert, 1998: 8). However, examination of the credentials of Mary Smith show that she was a servant of Lady Archibald Hamilton and had previously acted as wet nurse to the future Sir William Hamilton (Bland Burges Papers, 1788: f.106).

The Prince survived and was publicly baptized a month later. It is noteworthy that he lived into his 82nd year at a time when the life expectancy was 37 years (Wrigley et al., 1997: 295). His parents were concerned that their five sons and four daughters received a suitable broad education (Wright, 2005: 295). George's childhood is not well documented, but he and his brother Edward appear to have been well educated by a series of distinguished tutors in the arts, humanities and sciences. John Brooke has commented that George III 'was probably the most cultured monarch ever to sit on the throne of Great Britain' (Brooke, 1976: 80). This is reflected by his interest in agricultural, literary, manufacturing and scientific issues throughout his life. These interests were not nominal, and he was actively involved in several organizations including the Royal Society, the Royal Academy of Arts and the Kew and Greenwich Observatories. His many contributions to agriculture are well known; for example, he was largely instrumental in the introduction of Merino sheep to Australia (Carter, 1964).

His father Frederick died when George was 13, so he was precipitated into the role of Prince of Wales, succeeding his elderly grandfather as King at the age of 22. The early years of his reign were marred by the supposed scandal of his mother and his tutor the Earl of Bute, but there is little evidence of any dissipation by the young King (Hibbert, 1998: 22–32).

Professor Jeremy Black (2004: 118) commented: 'George was not the brightest of monarchs, and certainly not the most sparkling. He had, however, several qualities worthy of note, not least diligence.' He had an almost obsessional attention to detail in political and administrative affairs; the Fortescue (1927–8) and Aspinall (1962–70) editions of George III's extensive correspondence between 1760 and 1810 provide ample evidence of this trait.

On the domestic front the King's behaviour was, unlike that of his sons and much of the contemporary aristocracy, irreproachable. He married a German-born Princess soon after his accession, by whom he had 15 children. His marriage was apparently a happy one and he was faithful to his wife. She certainly supported him during his illnesses. He communicated well with all social classes and, although the loss of the American Colonies is laid at his door, he was saddled with a

succession of mediocre ministers until the appointment of William Pitt the Younger (Brooke, 1972). He was the object of much hostile criticism, particularly the caricatures and cartoons of Gillray and his contemporaries (Baker, 2007), but he retained the common touch and was considered a highly popular monarch, especially by the middling and working classes. His mannerisms and extrovert characteristics contributed significantly to this popularity. Unsurpassed mourning by the entire population followed his death (Hibbert, 1998: 409).

Methodology

To provide a background to the source documents, a brief account of the relevant sources and their affiliations is useful. The most detailed and medically and politically important episode of the King's ill health occurred from October 1788 to March 1789 when the establishment of a Regency was a major consideration (Willis Papers, 1788–9). Strongly in favour of the Regency were the Prince of Wales, supported politically by Charles Fox and his colleagues. A leading physician Dr Richard Warren (1731–97), who was also physician to the Prince of Wales, attended the King during this illness. He, as might be expected, declared the King incurably insane and supported the immediate establishment of a Regency.

William Pitt was Prime Minister during the crisis and almost certain to lose power if a Regency was established. He therefore embarked on a series of delaying tactics and was thus bolstered by reports of the King's likelihood of recovery and by his clinical improvements. This strategy was successful, but the Regency Bill was only abandoned during its final passage through the House of Lords (Hibbert, 1998: 293).

The King's leading physician at the time was the highly distinguished Sir George Baker (1722–1809). Although he had some experience of patients with mental illness, he consulted other physicians with expertise in this area when the King's illness progressed from recurrent bilious attacks to frank mania. He was not actively involved with the King's recurrences in 1801 and 1804. Several other physicians were involved in the care of the King during his recurrent illness, most notably Sir Henry Halford (1766–1844) who was his physician during the last decade of his life. Halford's diaries, reports, correspondence and lecture notes are variously available and provide invaluable ancillary data concerning George III (Munk, 1895).

The individuals in overall charge of the King's recurrent mental illness were the Willis family: Dr Francis Willis and his sons John, Thomas and Robert Darling Willis (Haslam, 1997). Dr Francis Willis (1718–1807) was a staunch supporter of William Pitt and keeper of a private 'mad house' in Lincolnshire. Dr Thomas Willis, chaplain to the King, regularly met him during his remission between 1789 and 1801 and Willis's Diary records the progress of the King's illness between January and June 1801 (Willis Papers, 1801).

The Willis brothers were consulted during the 1804 relapse, but the immediate care was by Dr Samuel Foart Simmons (1750–1813) of St Luke's Hospital (Smith, 2007: 79), and the medical records are thus somewhat wanting. During the King's final illness (1810–20), John and Robert Darling Willis were actively involved with his care from almost the outset, and thus detailed records are available both in the Willis Papers (British Library) and the Manners Sutton Papers (Lambeth Palace Library). The recent location of the Memoranda (diary for the years 1782–1833) of Robert Battiscombe (1754–1839), Apothecary to George III and his family, has added further independent information on the nature and treatment of the King's illness.

Although it might be presumed that the medical records would contain more accurate and revealing evidence concerning the King's symptoms than those reported in the personal diaries of his attendants and court officials, this may not be the case. This is especially apparent for the

1788–9 illness. Valuable first-hand information is available from the diaries of Robert Fulke Greville, equerry to the King (1781–97), Fanny Burney, junior Keeper of the Queen's Robes (1786–91), and Elizabeth Countess of Harcourt, Lady of the Queens Bedchamber (1788–9); see, respectively: Greville, 1930; D'Arblay, 1904–5; Harcourt Papers (1880–1905, Vol. IV). The encrypted letters of Sir James Bland Burges MP, a supporter of William Pitt, to his second wife Ann at their home at Nantcribba Hall, Montgomeryshire, during the 1788–9 illness provide additional unique, although secondhand, information. Contrasting views of the King's illness are thus apparent in both the medical and non-medical records. These issues are discussed by Trench (1964: 115)

Results

The King's illnesses occurred concurrently with significant historical events, viz., the initial phase of the American War of Independence, the Irish rebellion and Union with Britain, Catholic emancipation and the French Revolutionary and Napoleonic wars. Whether these events contributed to the King's ill health is uncertain, but at the time it was held to be so. Thus, the Irish rebellion and subsequent Act of Union of 1801 were believed to be linked to the 1801 relapse. Following this episode Pitt agreed not to bring up Irish/Catholic issues again with the King (Colchester, 1801/1861: 255). His final episode was thought to have been precipitated by the death of his favourite daughter Amelia (Halford Diary, 1831, f. 55). It should be noted that the non-psychiatric signs and symptoms are collated and discussed in an earlier paper re-evaluating the diagnosis of acute porphyria (Peters and Wilkinson, 2010). The present paper is largely concerned with the King's behavioural symptoms and his mental condition.

1765

The nature of this illness remains an enigma. Unfortunately there are no extant contemporary medical records. It seems that between February and July 1765 the King had a relapsing illness requiring medical attention with bleeding, blistering and purgation. His symptoms consisted of recurrent cough with chest pain, fever, fatigue and weight loss, and the concern at the time was that the King was suffering from consumption (tuberculosis), a reasonable suggestion and a serious condition that caused the death of some of his close relatives. The King was so concerned over this episode that he made urgent steps to put in place a Regency Bill in May 1765 (George III, 1927–28, I: 73–4).

Macalpine and Hunter (1969) studied this episode in detail but, as we will see later, they had a purpose in finding no evidence of mental health problems. In contrast, Guttmacher (1964: 108) concluded that the King had short periods of depression, agitation and over-activity. It was a difficult time for the King who admitted that he had slept for no more than two hours a night during this period and clearly was having difficulties in making decisions over the appointments of his prime ministers and governments (Hibbert, 1998: 105); this is consistent with the King suffering from a mild depression. This situation is not uncommon in patients who subsequently have a major bipolar disorder (Goodwin and Jamison, 1990: 15–35). Macalpine and Hunter claim that the cough and chest pains were in fact symptoms of a mild attack of acute porphyria! The exact nature of the King's illness in 1765 must however remain indeterminate.

1788–9

This was the first episode with well-documented physical and psychiatric symptoms. There are extensive medical notes and reliable non-medical reports. It is generally accepted that on 11 June the

King had an episode of bilious fever with severe abdominal pains lasting two weeks and diagnosed by his physician Sir George Baker as 'Concretions of the Gall Duct', i.e., cholelithiasis (Peters and Sarkany, 2005). He was treated appropriately and on the advice of his physician went for five weeks to Cheltenham to take the waters, said to be beneficial for bilious disorders.

There is discussion as to whether his behaviour during this time (July–August) was his normal eccentric self or whether he was already showing signs of his impending mental derangement, possibly hypomania. Georgiana, Duchess of Devonshire, a loyal supporter of the Prince of Wales, noted in her diary that: 'The early proofs the poor King gave of his Madness are these; ...'. She refers to episodes in May, June and July 1788 (Sichel, 1909: 406). On the other hand Elizabeth, Countess of Harcourt, who accompanied the Royal family during their stay in Cheltenham, states 'I can most solemnly affirm that I never saw the least symptom of mental derangement' (Harcourt Papers, 1880–1905: IV, 9).

The King appeared to benefit from his stay in Cheltenham during which he made extensive visits to various towns, villages and manufactories in the region (Brooke, 1972: 322–3) including inspections of the Thames & Severn Canal then undergoing construction (Phillips, 1805/1970: 214). He returned to Windsor but had a further episode of cramping abdominal pain with clear signs of obstructive jaundice. More significantly, from 22 Oct. Sir George Baker recorded with increasing concern changes in the King's behaviour: 'agitation of spirits bordering on delirium ... he talked with more than usual rapidity & vehemence, and ... he talked continually, making frequent & sudden transitions from one subject to another' (Baker, 1788, f.4). This was clearly the onset of a severe episode of mental disturbance.

Table 1 is an attempt to quantify the King's symptoms during the course of this illness. Throughout November his sleep was increasingly disturbed and his symptoms increased in severity and number. These included: rapid and incessant talking, disturbed rambling, agitation, incoherence, physical violence and bizarre sexual fantasies and behaviour.

The letters of James Bland Burges (1788) provide descriptions of the more turbulent behaviour including sexual indiscretions:

22 Nov. 1788: Yesterday afternoon his disorder took a new turn; the most beastly indecency both of word and actions; with a bodily complaint which I cannot describe, but you will find in the folio dictionary under the article Priapism. (f.80)

27 Nov. 1788: The first symptom of the King's madness was his running naked into the Queen's room, he insisted upon throwing her on the bed and that the women in the room should stand by to see whether he did well. (f.87)

29 Nov. 1788: He seized the Princess Royal, and attempted to ravish her, She was rescued from him with great difficulty and he was in such a rage at his disappointment as to strike the queen. This account comes from Henry Majendie [Rev., Dr] who was at Windsor when the affair happened. (f.90)

Priapism is an occasional feature of acute mania although it is currently believed to be a side effect of medication (Compton and Miller, 2001). In contrast, episodes of acute porphyria may be associated with impotence (Kappas, Sassa, Galbraith and Nordmann, 1989). There is also a report by Princess Charlotte of the King attempting to ravish her mother, Caroline Princess of Wales, during his relapse in 1804 (Glenbervie, 1810/1928: 54–5, 86–7).

The King was transferred to Kew on 29 Nov. where access to the London physicians was more convenient (Reynolds, 1805). On 6 Dec. the specialist 'mad doctor' Dr Francis Willis with his

Table 1. Summary of principal symptoms during 1788–9 episode

Date	Willis Papers (1788–9)	Greville Diaries (1930)
9 Nov.	—	2h. S; Ag; In.
11 Nov.	—	3½h. S; Ag; In; Rb.
12 Nov.	—	<1 h. S; Ag; Rb; VI.
13 Nov.	—	3h. S; Rb.
14 Nov.	—	6h. S; In; Rb;
15 Nov.	—	6½h. Dist. S; Ag; In; Rb.
16 Nov.	—	6h. S; In.
18 Nov.	—	2h. S; In; Rb.
20 Nov.	—	4h. Dist. S; Ag; Tb.
22 Nov.	—	6h. Dist. S; Ag; Ir; Rb; Tb.
24 Nov.	—	6h. Dist. S; Ag; In; Rb.
30 Nov.	—	2h. Dist. S; In; Tb; VI.
1 Dec.	—	1 h. Dist. S; In; Rb; Tb; VI.
3 Dec.	—	1 h. Dist. S; Ag; Ir; Rb; Tb; VI.
6 Dec.	Arrival of Rev. Dr F. Willis	Greville absent for 2 weeks
14 Dec.	3½h. Dist. S.	—
15 Dec.	? h. Dist. S; In; Rb.	—
16 Dec.	<1 h. Dist. S; In; Rb.	—
17 Dec.	5¾h. Gd. S; In; Ir; Rb.	? h. S; Ag; In; Rb; Tb; SW.
18 Dec.	3½h. Dist. S; In; Rb;	? h. Dist. S; In; Rb; Tb.
19 Dec.	2½h. Dist. S; Ag; Ir; SW.	? h. Dist. S; Ag; Rb; Tb.
20 Dec.	5 h. Gd. S; Ir; Tb.	4h. S; Ag; In; Rb; Tb; VI; SW.
21 Dec.	5¾h. Gd. S; Ir; SW.	6h. S; Ag; Ir; Rb.
22 Dec.	1 h. Dist. S; Ag;	2h. Dist. S; Ir; Tb; SW.
23 Dec.	1½h. Dist. S; In; Tb; SW.	1 h. Dist. S; In; Ir; Rb; SW.
24 Dec.	5½h. Vgd. S; Rb; SW.	5h. Gd. S; Rb; Tb.
25 Dec.	? h. Dist. S; Ag; SW.	5h. S; Ag; In; Rb; Tb; VI; SW.
26 Dec.	2½h. Dist. S; Ag; Ir; SW.	2h. S; Ag; In.
27 Dec.	6h. Vgd. S.	6h. Vgd. S.
28 Dec.	5h. Dist. S; Ir; In.	5h. S; Ag; Rb; VI; SW.
29 Dec.	<1 h. Dist. S; Ag; In; SW.	1 h. Dist. S; Ag; In; Rb; Tb; SW.
30 Dec.	3h. S; Ir; SW.	3h. Dist. S; Tb; SW.
31 Dec.	7h. Gd. S; Ag; VI; SW.	7h. Gd. S; Ag; In; Rb; Tb; SW.
1 Jan.	? h. S.	5h. Gd. S; Ir; Rb.
2 Jan.	? h. Vgd. S.	?h. Gd. S; Ag; Rb; SW.
3 Jan.	4h. Dist. S; Ir.	4h. Dist. S; In; Ir; SW.
4 Jan.	3h. S; Ir.	? h. S; In; Tb.
6 Jan.	4h. S; Ag; Ir.	5h. S.
7 Jan.	1½h. Gd. S; In.	1 h S; Ag.
8 Jan.	6h. S;	5½h. Gd. S; Ag.
9 Jan.	? h. Dist. S; Ir.	1 h. Dist. S; Ag.
10 Jan.	3h. Dist. S; In; Rb.	? h Dist. S; In; Rb; Tb; SW.
11 Jan.	? h. S; Ir; Tb.	3h. Dist S; Ag; Ir; Rb; Tb; SW.
12 Jan.	7½h. S; Ir.	7½h. S; Ag; Rb.
13 Jan.	3h. S; Ir; Rb.	3h. Dist. S; Ag; In; Rb.
14 Jan.	4h. S; In; Ir; SW.	4½h. S; In; Rb; Tb; SW.
15 Jan.	4½h. S; Ir; SW.	4½h. S; Ag; Ir; Tb; VI; SW.
16 Jan.	<1 h. Dist. S; Ir; SW; Visit.	<1 h. Dist. S; In; Rb; Tb; VI; SW.
17 Jan.	7h. S; SW; Visit	7½h. Gd. S;
18 Jan.	? h. Dist. S; In; Visit.	1½h. S; Rb; Tb.

Table 1. (continued)

Date	Willis Papers (1788–9)	Greville Diaries (1930)
19 Jan.	4½h. Dist. S; Ag; SW; Walk; Visit	3½h. Dist. S; Ag; In; Rb; Tb; SW.
20 Jan.	8½h. S; Ir; SW; Walk	8½h. S; Ag; Ir; VI; SW; Walk.
21 Jan.	? h. Dist. S; Ir; SW.	2½h. Dist. S; Ir; Tb.
22 Jan.	? h. Gd. S; Ag; SW.	5½h. S; In; Rb; Tb; SW.
23 Jan.	4h. S; Ir; Visit	4h. S; Rb; Walk; Visit.
24 Jan.	? h. Gd. S; Ir.	6h. S; Ir; Tb; VI; SW.
25 Jan.	3½h. S; Walk.	3½h. S; In; Walk X2;
26 Jan.	? h. Dist. S; Ag; SW.	1¼h. Dist. S; Rb; Tb; VI; SW.
27 Jan.	? h. Vgd. S; Ir; Walk.	7h. S; In; Ir; Tb; Walk.
28 Jan.	?h. Gd. S;	6½h. S; In; Rb; VI.
29 Jan.	? h. Dist. S; Walk.	2½h. Dist. S; In; Rb; Walk.
30 Jan.	? h. Gd. S; Ir; SW.	5½h. S; Tb; VI; SW.
31 Jan.	? h. Vgd. S; Walk X2; Visit.	6½h. S; In; Rb; Walk X2; Visit.
1 Feb.	? h. Vgd. S; Walk X2; Visit.	? h. Gd. S; In; Rb; Walk X2; Visit.
2 Feb.	? h. Gd. S; Walk X2; Visit.	6h. Gd. S; Walk X2; Visit.
3 Feb.	? h. Vgd. S; Ir; Walk X2; Visit.	5½h. S; Ag; Rb; Walk X2; Visit.
4 Feb.	? h. Gd. S; Walk; Visit.	5h. Gd. S; Walk; Visit.
5 Feb.	4h. S; In; Walk X2; Visit.	4½h. S; Rb; Walk X2;
6 Feb.	? h. Vgd. S; Walk X2; Visit.	? h. Vgd. S; Ag; Walk X2; Visit.
7 Feb.	? h. Vgd. S; Walk X2; Visit.	? h. S; Walk X2; Visit.
8 Feb.	? h. Gd. S; Walk; Visit.	7h. Dist. S; In; Walk; Visit.
9 Feb.	? h. Gd. S; Visit.	? h. Vgd. S; Rb; Walk X2; Visit.
10 Feb.	? h. Gd. S; Walk X2; Visit.	? h. S; Visit.
11 Feb.	? h. S; Other Visit.	? h. S; Walk X2; Visit.
12 Feb.	4h. S; Walk X2; Other Visit.	4h. S; Walk; Visit.
13 Feb.	? h. S; Walk; Other Visit.	? h. S; Rb; Walk; visit.
14 Feb.	? h. S; Other Visit.	7½h. S; Ag; Other Visit.
15 Feb.	? h. S; Visit.	? h. S; Walk; Other Visit.
16 Feb.	?h. S; Walk; Visit	5½h. Gd. S; Walk X2; Visit.
17 Feb.	'State of Convalescence'	?h. Gd. S; Ag; Walk; Other Visit
26 Feb.	'Cessation of Illness'	?h. S; Walk; Other Visit.

Abbreviations: S = sleep (hours; refers to complete night and whether disturbed (Dist.), good (Gd.) or very good (Vgd.)); SW = strait waistcoat (confined; coercion); Ag = agitated; In = incoherent; Ir = irritable; Rb = rambling; Tb = turbulent; VI = violent.

Walk = walked in Kew Gardens; Visit = visited by members of Royal Family; Other Visit = additional visitors.

son John and colleagues arrived from Lincolnshire and progressively took over the management of the King's illness. The blistering, bleeding, purging, etc., were reduced and a regime of moral management introduced.

The Memoranda (1782–1833) of Robert Battiscombe, the King's apothecary, indicates that he 'sat up with the King' every 4–7 nights between 5 Nov. 5 1788 and 27 Feb. 1789. It is noteworthy that he bled the King and applied blisters quite intensively during the first week of November but this was discontinued with the arrival of the Willises. He did however perform regular dressing of leg blisters during December and early January. This would confirm that with the Willises present, the more aggressive medical treatments were largely discontinued.

From this time it is possible to compare the reports of Dr John Willis and the King's equerry Robert Greville. Although the purpose of each of their diaries was distinct and their experience of insanity differed, their reports are in good agreement. The King was at his worst during the latter

half of December, frequently requiring confinement to his strait waistcoat and restraining chair. In the New Year there was progressive but irregular improvement with improved sleep and fewer features requiring restraint. From mid-January he was taken on increasing numbers and lengths of walks in Kew Gardens and from mid-February the Queen and other members of the Royal family were allowed regular visits. He had increasing numbers of visits by ministers and other officials from mid-February. He was declared recovered by the Willis team at the beginning of March and was able to resume his duties albeit at a reduced intensity from mid-March.

Retrospective diagnosis

The concept of retrospective diagnosis divides opinion among historians of psychiatry. At one extreme are those who hold that diagnoses are sociocultural constructs which merely reflect the attitudes and preoccupations of a particular historical period. Retrospective diagnosis is thus seen as an anachronistic activity of little value. At the other extreme is the view that medical conditions are timeless entities that endure unchanged throughout different cultures and historical eras. We aim to chart a middle way which recognizes the influence of cultural factors in the framing of psychiatric diagnoses, but, at the same time, dismissing the notion that diagnoses are ‘merely’ social constructs (Beveridge, 2004).

For the 1788–9 episode, we read the Willis Papers (1788–9) against the *DSM-IV-TR* criteria for mood disorders (APA, 2000) and the *ICD-10* criteria for bipolar disorder (WHO, 1994). It should be noted that these systems reflect current concepts of bipolar disorder and do not necessarily reflect contemporary concepts of mania in the late 18th and early 19th centuries.

DSM-IV criteria

The King meets the criteria for a manic episode, we read the Willis Papers (1788–9) during his illness in 1788–9. The following quotations are from the notes of Dr John Willis, the ‘mad doctor’ most closely involved in his day to day management at that time:

- Criteria A: The King’s illness lasted for 5 months, well over the one week of Criteria A.
 Criteria B: The King met at least three of the necessary requirements, i.e.:

- 16 Dec. 1788: The English Constitution, he thought, the finest system in the world; if it had a fault it was that of its not being fit for a King: he was only the slave: yet he admired it, and thought it worthy of its having been formed by Heaven. [Grandiosity; possible?]
- 15 Dec. 1788: Thro’ the whole of the day in too high spirit ... inclining to mimicry ... Among other things, He talked of the use of the lounge for Horses. [Racing thoughts]
- 23 Dec. 1788: Slept an hour after He was in bed – wak’d disturbed – had but little more sleep. [Decreased need for sleep]
- 5 Jan. 1789: His Majesty can talk of, and be kept to, any subject in general much better and for a longer time than heretofore: but He is more subject to Gusts of passion upon trifling contradiction. [Distractibility]

- 13 Jan. 1789: His My. would not be shaved – touchy & irritable ... – more passionate through the day – talked incessantly. [Pressured speech]
- 28 Feb. 1789: After I left them The King talked foolishly upon the subject of Lady P [Pembroke]. He wou'd now correct an error he had been guilty of all his life – when he professed love for [Lady Pembroke]. [Sexual indiscretions]
- 17 Mar. 1789: He showed a degree of impatience at times – after he arrived at Kew he walked thro' Richmond to Lady Pembroke's in the Park. Her Ladyship was not at home, but the King went over the whole house. [Psychomotor agitation]
- Criteria C: The King did not meet the criteria for a mixed episode.
- Criteria D: His mood disturbance was sufficiently severe to cause marked impairment in occupational functioning (Regency arrangements were almost fully implemented).
- Criteria E: The King's symptoms were not secondary, as far as we are aware, to substance misuse, a general medical condition or antidepressant treatments.

ICD-10 criteria

The King meets the criteria for Mania with Psychotic Symptoms (F30.2), although if the illness in 1765 was mild depression the category changes to F31.2. He would seem to meet the criteria for congruent delusions. These are best illustrated by reference to the Greville *Diaries* for 1788–9 (see Greville, 1930):

Saturday 22 Nov.: In the course of this Conversation with the general [Budé] he related to Him some phantoms of his delusion during his delirium – Said He had thought there had been a deluge – That He had seen Hanover through Herschells Telescope – That He had thought Himself inspired &c. &c.

Thursday 25 Dec.: Among his extravagancies of the Moment He had at this time hid part of the Bed Clothes under his bed, had taken off his Night Cap, & got a Pillow Case round his head, & Pillow in the bed with Him, which He called Prince Octavius, who He said was to be new born this day.

Wednesday 14 Jan.: He continued to talk much of Lady Pembroke – who He now called by the New Name of Minerva. While playing at Piquet He distinguishes her by the Queen of Hearts, kissing it whenever He saw it. A ridiculous incident happen'd to The King this evening ... He had the King of Hearts himself & said "Oh if the Queen of Hearts would fall to The King." It so happened that Doctor Willis was obliged to play his Queen – The King was quite delighted, and He commented afterwards on the circumstance & his good fortune.

Further episodes of illness

The Rev. Dr Thomas Willis, the clerical son of Dr Francis Willis, at the King's request met him on a regular four/six weekly basis for the twelve years between the 1788–9 and 1801 episodes. Willis was with the King on 31 Jan. 1801 and reports: 'I have no recollection of ever having seen his Majesty at any time in a better state of body and mind, as far as I may be supposed capable of judging, than he appeared to me this evening of 31st January' (Willis papers, 1801).

A relatively short-lived episode started, as in 1788, with a bilious attack in mid-February and continued with fever, sleeplessness, irritability, agitation and confusion. Thomas Willis notes on 21 Feb.:

My fears upon seeing him were immediately confirmed ... He now rose up from his chair in great agitation, and asked me whether I thought him in his senses. ... At this time he threw his arms around my shoulders and pressed me to him with great anxiety for the space of two minutes, weeping the whole time: and asking are you sure of what you say? God bless you, you have given me comfort what I have been wanting for some days.

His Majesty shewed himself to be in a feverish a state as wholly to render him incapable of getting through one anecdote without digressing first to another. He was in short constantly promising that he would treat me with no more episodes as he called them, yet was he every moment varying to fresh matter, and hardly ever coming to the point immediately proposed. And all this time his Majesty, holding my arm very fast, walked eagerly about the room.

On 6 Mar. he records:

His Majesty had a composed night with little sleep ... The restlessness and irritability which his present state of nerves occasioned was such, if he attempted to play at the game of drafts, he unconsciously turned the board about incessantly; ... in the same manner his state of nerves seemed to compel him to roll up the handkerchiefs as soon as given him: of which, I believe some days he had not less than 40 or 50.

The King improved and had insight into his illness so that on 10 Mar. Willis reports: 'The King was much better this morning. He said he hoped he should be more humble after this illness than the former one: and hence show more gratitude to God for his many blessings towards him.'

There are few detailed descriptions of the state of his mental condition apart from the above but it is likely that this was a further but milder episode of mania. The King was emotionally labile: 27 Feb.: 'The next morning he begged to see Her Majesty which was permitted on condition that he would suffer her to retire at her own time ... It produced floods of tears' and on 15 Mar.: 'he opened a Box, in which was a letter from Prince Adolphus ... He wept over the letter very much, as he was like to do, Prince Adolphus being one of his favourite sons.'

He had recovered sufficiently well to preside over a meeting of the Privy Council on 17 Mar. although this precipitated a minor relapse: 'He was very hurried – in consequence, no doubt, of the business of the morning and The King had but little sleep as was to be expected from the business of the preceeding day'. On 2 May Willis was able to note: 'The King had a remarkably good night – He walked out at 8 with my brothers and Dr. Gisborne. They did not return 'till 12 and in half an hour he walked again.' Battiscombe notes on 26 May: 'The King came and only he returned to Kew ... felt his pulse – appeared perfectly well.'

The exact duration of this episode is not entirely clear. The Willis brothers were in attendance certainly until the end of June. In the protracted discussions over payment with Mr Addington, the Prime Minister, it was suggested that they were in attendance with 'three months great anxiety' and 'two months of very extreme anxiety' (Willis papers, 1801).

A further minor episode occurred in 1804 but medical notes are unavailable (Macalpine and Hunter, 1969). The symptoms were described as a bilious fever with again great agitation and hurries from early February. The Willis family was consulted but Dr Samuel Simmons of St Luke's Hospital, London, provided the immediate care. Regular use of the strait waistcoat appeared to be necessary. Contemporary accounts indicate that the illness was a recurrence of his former complaints and it is

presumed he had a further manic episode. Battiscombe, in his Memoranda, notes on 1 Feb. 1804: 'The King much disposed'.

He made a good recovery and again went to Weymouth between 24 Aug. and 2 Nov. for his convalescence. He subsequently remained estranged from his wife and there was concern about his age and its implications for the long-term prognosis. He subsequently developed bilateral cataracts probably exacerbated by a severe attack of conjunctivitis (Phipps, 18??) and was blind by September 1808 (Dyott, 1781–1826/1907).

His final illness (1810–20) soon led to the establishment of the Regency in 1811. There are excellent medical reports on the course of the illness and the reports are more reliable; as the Regency had been established, his illness did not have political ramifications. However, there were the inevitable disagreements between the physicians and 'mad doctors' as to how best to manage the King's illness.

With the establishment of the Regency, the King was placed under the care of the Queen and a Queen's Council was established. The Archbishop of Canterbury (Charles Manners Sutton, 1755–1828) was head of the Council, and its records are part of the Manners Sutton Papers deposited in Lambeth Palace Library. The Willis's were largely in charge of his care, and a full account is also to be found in the Willis Papers. In addition, the Diary of Sir Henry Hallford is available in the Royal Archives for the period between October 1811 and February 1812. There are also uncatalogued copies of Physicians Reports for 1788–1819 with almost daily letters from individual physicians to the Prince of Wales / Prince Regent (Reports of the King's Physicians, 1811–20).

The King was held in almost full isolation without the benefit of equerries, and there is no 'Greville Diary' to provide the necessary detail for this period. A French Traveller (1815) to Windsor comments in his journal:

Windsor Castle, 24 Mar. 1811: Being informed the King was walking, we went that way. His majesty was on the terrace, but the public was not allowed to approach, with a gentleman (General Manners [Equerry]), holding him under the arm. He was dressed in a plain coat, – his hat flapped over his eyes, – stooped a little, – looked thin, and walked fast; talking continually, and with an appearance of earnestness. We could at times distinguish his voice at twenty yards distance; – this does not look like recovery.

The initial reports in the Willis Papers date from 27 Oct. 1810 and describe the King as being 'very disordered & irascible, exceedingly talkative & impatient, turbulent & incoherent' over the next month. He was having no more than two hours restless sleep at night. He continued in this vein for much of his later years. There were, however, better days, for example, on 12 Jan. 1811: 'The King pass'd a quiet day chiefly amusing himself with the Harpsichord & German flute'.

A series of Reports to the Queen's Council summarize his situation:

5 Sep. 1811 Thursday: His Majesty has scarcely passed any day with so little apparent bodily illness, and so much real mental disorder as to day. We have seen His Majesty sometimes in a state of delirium, sometimes strongly impressed by some false images, neither of which states has characterized this day so much as a degree of irritability, which could only be met but by coercion, and which was only varied by occasional exclamations and noises without meaning. (Willis Papers, 1811a)

There were episodes of incontinence:

3 Nov. [1811]: His Majesty was in high spirits during dinner today, singing and laughing immoderately – near the conclusion it was suspected from His conversation that He was wetting himself; but nothing

appeared, and he refused to make use of the pot. In the course of half an hour a quantity of water was seen running thro' the chair ... (Willis Papers, 1811b)

He continued to show features of mania:

13 Apr. 1812: The excitement, which was represented to The Queen's Council yesterday, continued without any abatement throughout the day. His Majesty talked almost incessantly, and His discourse had occasionally a mixture of grossness with it, so unlike The King's naturally chaste manner when in health, that it afforded in itself a melancholy proof of the disease condition of His mind ... (Manners Sutton Papers, 1812a)

He retained his long-term memory:

23 Sep. [1812]: ... Amidst an immense mass of error, His Majesty made some pointed and very sensible observations relative to the Treaty of Amiens [1802], which showed that notwithstanding His long indisposition, there was still no fatuity of mind. (Willis Papers, 1812)

But persisted in his delusions:

4 Apr. [1816]: His Majesty's disorder supplies abundant amusement to Him, in fancied conferences with friends, in reviews, arrangements, buildings, and ceremonies, and all this at present without excitement or irritation. (Willis Papers, 1816)

This final episode lasted approximately ten years with exacerbations and partial remission of symptoms. The King however was never able to resume his duties to any degree. The duration of this last episode differed from the earlier ones in its duration and would be classified as chronic mania, certainly by nineteenth-century alienists. This variant is not listed in either *DSM-IV* or *ICD-10* as a distinct disorder, and has been little studied in recent times.

The King's malady in the light of modern-day knowledge of bipolar disorder

It is relevant to consider how the characteristics of the King's psychiatric diagnosis of bipolar disorder with recurrent manic episodes compares with the description given by the standard text (Goodwin and Jamison, 1990). The peak age of onset in males is approximately 30 years, but the distribution graphs are skewed with a 'shoulder' at 45–55 years. It is claimed that late-onset mania (50 years or above) is a distinct subgroup and that these patients are less likely to be genetically vulnerable but more likely to be organically impaired than the early-onset group (Moorhead and Young, 2003). Of late-onset patients, 80% have a recurrence compared with 20% of patients presenting at 20–30 years of age.

The average duration of a manic episode is reported to be 4.5 months, shorter than depressive episodes but of a more abrupt onset (Goodwin and Jamison, 1990). This is consistent with the three acute episodes reported for George III, with a duration of five (1788–9), four (1801) and three (1804) months, respectively. It is generally agreed that the cycle length decreases with episode number, and mean cycle lengths for the first five episodes were reported for bipolar patients as 50, 30, 25, 20 and 18 months. The data for the King is only in broad agreement, with cycle lengths of 300, 144, 48 and 72 months for the five episodes.

Bipolar disorder is consistently reported to occur more commonly in individuals of the higher social classes. Its onset is somewhat more common in summer months: George III's episodes commenced in early winter (Oct., 1788, 1810) or mid-winter (Jan., 1801, 1804), contrasting with these epidemiological studies. However, a large study of Italian patients with mood disorders identified sub-types with either spring-summer or autumn-winter onset of depression/mania (Faedda et al., 1993). It is of interest that the spring-summer onset manic patients had significantly longer episodes (4.9 months) than the autumn-winter onset mania patients (3.6 months). Thus the King's illness is in good agreement with the generally accepted features of bipolar disorder with respect to both the specific clinical features and the epidemiological aspects. This conclusion is in agreement with the four previous analyses of the King's mental health disorders (Brownstein, 1997; Guttmacher, 1941; Jelliffe, 1931; Ray, 1855) who confidentially diagnosed manic depressive psychosis.

There is currently considerable interest in the role of neuro-developmental disorders in the pathogenesis of adult psychiatric disorders (Murray et al., 2004). George III was born two months prematurely and was not expected to survive. Although some reports suggest that obstetric (Kinney et al., 1993), and pre- and peri-natal (Kinney et al., 1998) complications are risk factors for bipolar disorder, a recent systematic review did not find any robust evidence that overall exposure to obstetric complications was associated with the subsequent development of bipolar disorder (Scott et al., 2006). Unlike patients who develop schizophrenia, patients with bipolar disorder have normal pre-morbid cognitive function (Gilvarry et al., 2000) consistent with the intellectual and cultural attributes of the young King (Wright, 2005). The indications (Plumb, 1978) that the King had an obsessive-compulsive personality is consistent with his subsequent development of bipolar disorder (Goodwin and Jamison, 1990).

Differential diagnosis

There does not appear to have been a formal attempt at differential diagnosis of the King's psychiatric illness. Macalpine and Hunter (1969: 350) dismiss mania 'as no more specific a description of an abnormal mental state than "fever" was of an abnormal physical one'. Their differential diagnosis was merely a passing reference to lead poisoning as it was an interest of the King's physician, Sir George Baker (Macalpine and Hunter, 1969: 4).

Physical symptoms in bipolar disorder

One of the reasons for the claim of acute porphyria as an explanation of the King's complaint was the combination of mental and physical symptoms that he experienced. Our recent analysis has provided alternative explanations for the physical symptoms that do not implicate acute porphyria (Peters and Wilkinson, 2010). Physical symptoms may also relate to his bipolar disorder although these are not well documented in the standard texts. Hansell (1990) has reported the results of a survey of physical symptoms in 302 hospitalized manic patients: 143 (47%) showed a major physical symptom. These were commonly (72%) muscle pains, headache, and neck, back and chest wall pains. Digestive and abdominal symptoms were found in 70%; these are the very symptoms that Macalpine and Hunter were attributing to acute porphyria in the King.

Late onset bipolar disorder is more likely to be a consequence of physical illness. This is well documented in Goodwin and Jamison (1990: 112); note that porphyria is not included in the list of causal metabolic disturbances. Infections including influenza are known causal agents. At the onset of each episode the King suffered a head cold or a 'bilious fever' probably due to recurrent cholelithiasis, and thus his illnesses may fall into the category of secondary mania (Krauthammer and Klerman, 1978).

Cognitive impairment in bipolar disorder

Cognitive dysfunction with structural changes is a feature of bipolar disorder, both the acute and convalescent phases, and in patients in full clinical recovery (Chamberlain and Sahakian, 2005). There is some evidence that episodes of acute mania are 'neurotoxic' with increasing numbers of episodes increasing the likelihood of developing dementia: five or more episodes are associated with a three-fold rate of dementia (Kessing and Andersen, 2004).

It is difficult to assess this retrospectively in George III although the impression from reading the 10,000 letters from the period 1760–1810 in the Fortescue and Aspinall collections is that there is a loss of the breadth and innovation in the later letters, particularly those after his first major episode in 1788–9. This aspect of the King's serial intellectual functionality requires a more detailed and quantitative analysis.

Chronic mania

The King's final illness lasting from 1810 to his death in his 82nd year in 1820 would be classified as one of chronic mania, a feature more common in late onset bipolar disorder (Perugi et al., 1998). The question remains whether during this final lengthy episode the King exhibited frank dementia. In evidence to the Committee appointed to examine the King's health in 1810, Dr Reynolds commented (17 Dec.): 'His memory is as strong and correct as ever it was', and Sir Henry Holland stated: 'so far His Majesty's perception is clear and keen; his memory, which is the first faculty usually observed to be influenced and to be injured by this disease ... is sound and strong' (Committee Reports, 1810).

This was again raised in January 1812 by Dr Baillie who noted that: 'His memory seems to be impaired', although Reports to the Queen's Council in September 1812 comment: 'that notwithstanding His long Indisposition, there was still no Fatuity of Mind', and 'there is no tendency to Fatuity of mind' (Manners Sutton Papers, 1812b). The detailed Case Consultation dated 4 Aug. 1811 in the Willis Papers confirms an orientation for time, place and person but emphasize the broad and intense nature of his delusions (Willis Papers, 1811c).

During the last year of the King's life the daily reports mention his continued delusions, passions and repetitive activities. A report dated 13 Jan. 1819 states: 'His Majesty's health continues very good. ... He spoke, more than we have lately heard Him to do, of his own situation, of his confinement, of his taking no exercise, and some other particulars which might have been considered as indications of a natural state of mind, had they not been combined with palpable delusions' (Manners Sutton Papers, 1819). These comments are compatible with mild but not with a severe degree of dementia. Brownstein (1997) suggested that the various medications (antimony, mercury, quinine) administered to the King over a 30-year period or longer may have contributed to his symptomatology during this phase of his illness.

Concluding remarks

The present study has adopted some novel approaches to the evaluation of the King's symptomatology. A time line of the signs and symptoms during his illness of 1788–9 has been established and, in particular, we have compared in a semi-quantitative manner the reports of Dr John Willis and Colonel Robert Greville. The similarities of certain aspects of their reports strengthen our clinical conclusions concerning the nature of the King's illness. Macalpine and Hunter's failure to use such an approach weakens their case; they merely quoted selected features that appeared supportive of their claims.

Another important innovation has been the use of both the ICD and DSM criteria for bipolar disorder in the diagnosis of the King's mental health disturbance. Macalpine and Hunter also did not use this approach in their attempts to undermine the previous reports of a diagnosis of manic-depressive psychosis in the King. *DSM-I* (1952) and *ICD-7* (1955) classifications were available to them and their supporters and their use would have exposed the fallacies in their claims. The re-assessment of George III's episodes of illness is not merely an academic exercise. It has implications for how a key episode in the history of British psychiatry is perceived, and it also highlights our attitudes to mental illness.

In the summary to their first paper concerning the nature of the King's illness, Macalpine and Hunter (1966) state: 'This study allows the certain conclusion that George III's malady was not "mental" in the accepted sense ... this diagnosis clears the House of Hanover of an hereditary taint of madness.'

These comments by practising psychiatrists are surprising. They were criticized at the time by correspondents in the *British Medical Journal*. Atkin (1966) commented: 'An impression one receives ... is that it is somehow more respectable to undergo a spell of hallucinations, delusions and rambling over-talkativeness when such a mental state is caused by porphyria than when the cause is a manic-depressive disorder. Why should this be so?' Ahrenfeldt (1966) wrote: '... I would strongly question the implication that it is necessary to "clear" a family of an "hereditary taint", ... this is a concept, or rather a misconception, semantically loaded with subjective moral values.'

In an article as part of a series on the 'Stigma of Mental Health' in *The Lancet*, Roy Porter (1998) refers to this aspect of Macalpine's work with the comment: 'Macalpine made much of the notion that the King had at last been rescued from what she called the taint of madness – he had, thank goodness, been suffering all the time from a nice clean, respectable, organic disease.' Sadly only some of the hopes expressed in *The Lancet* series have seen fruition today.'

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