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Self-mutilation in Four Historical Cases of Bulimia

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Current theories suggest that there is a relatively frequent association of self-mutilative behaviour with eating disorders, particularly with the modern binge–purge syndrome, bulimia nervosa. In order to consider this association on a historical dimension, 25 bulimic cases, reported from the late 17th to the late 19th century, were investigated. These were found to include four examples of self-mutilative behaviour, in three males and one female: these cases are described and discussed. The historical evidence lends some support for the suggested connection between eating pathology and self-mutilation.

Current research on eating disorders suggests that there are possible associations between self-mutilation and bulimia. In view of the paucity of background information, this study was designed to investigate manifestations of self-injury in historical bulimic subjects, as comprehensively as the disparate historical evidence would allow. Although usage of the term bulimia is traceable back to classical antiquity (Parry-Jones, 1991), reported historical cases of hyperphagia are very limited (Parry-Jones & Parry-Jones, 1991), in considerable contrast to the number of early accounts of voluntary food abstention which are extant. Historical references to self-mutilative behaviour in the context of bulimia are even more rare. Possibly the earliest literary reference to self-mutilative behaviour in relation to bulimia occurs in Ovid's *Metamorphoses* (Miller, 1984), completed in 7 AD. Erysichthon, scorner of the Gods and violator of the sacred groves of Ceres, was punished by being racked by famine and persecuted by a wild craving for food, which nothing could satisfy. "At last when . . . his grievous malady needed more food, the wretched man began to tear his limbs and rend them apart with his teeth and, by consuming his own body, fed himself" (Miller, 1984). Although Tuke's *Dictionary of Psychological Medicine* (1892) stated that self-mutilation was encountered "not infrequently" by the alienist doctor "both within and without the asylum", it seems likely that such behaviour was observed chiefly in psychotic or mentally retarded subjects. No correlation was made in this comprehensive, and fairly representative, late 19th century compilation between self-mutilation and disordered eating.

Method

A detailed search of printed sources relevant to the general history of eating disorders was undertaken. In the course of this, 25 early descriptions of bulimic subjects were identified, 12 of which have been discussed elsewhere (Parry-Jones & Parry-Jones, 1991). Evidence of self-mutilative behaviour, as seen in some modern bulimia nervosa patients, was found to be present in four 18th and 19th century bulimic subjects. The aberration was reported, in these historical sources, simply as a feature among a range of other presenting symptoms and characteristics, apparently without any perceived connection with the eating pathology. These four case reports constituted the basis of the present study, which set out to describe and evaluate the historical examples in the light of modern theories concerning background factors predisposing to self-mutilative behaviour and the suggested affinity between self-mutilation and bulimic disorders. (Imperial weights are reported below, where 1 lb is equivalent to 0.45 kg.)

Case reports

Case 1 (reported 1745)

A young boy, aged about ten, fell ill with a fever accompanied by unproductive retchings, and his apothecary attempted to induce vomiting with ipecacuanha (Mortimer, 1745; Winslow, 1880). The fever gradually subsided, but the vomiting increased, despite various preventive measures, and a craving appetite set in, "to satisfy which he was indulged in Eating and Drinking more plentifully, but always vomited most of what he had taken, almost immediately" (Martyn, 1745). His appetite kept increasing until it had assumed the proportion of an "extraordinary Boulimia" (Martyn, 1745). The boy, previously healthy and sprightly, continued in this condition for over 15 months, consuming 55–78 lb of food daily. Most of the ingested material was vomited immediately, so his excretory losses remained normal. If "he was not fed as he called out for it, he would gnaw the very Flesh off his own Bones" (Mortimer, 1745). He was described as being cheerful and looking quite well in his face, "but has lost the Use of his Legs and Thighs, which are much emaciated. He is sometimes so hungry, that he says he could eat them all" (Martyn, 1745). Within a few months of the two reports, dated April 1745, the boy died "quite emaciated" (Martyn, 1745). His case was considered to be sufficiently unusual to merit reporting, on two occasions, to the Royal Society of London.

Case 2: Dr Samuel Johnson (1709–84)

In addition to numerous physical disorders, the celebrated English lexicographer, Dr Johnson, exhibited psychiatric

polymorbidity. His personality featured a complex enmeshment of neurotic, melancholic, obsessive–compulsive, manic–depressive, and hypochondriacal characteristics, accompanied by minor self-mutilative behaviour. Johnson was also a lifelong bulimic and a habitual ruminator, the latter in both physical and psychological forms (Parry-Jones, 1992). At the age of nine, signs of excessive appetite were noted. At school, his intellectual abilities were unrivalled, although his physical appearance was unprepossessing and his gait and mannerisms were already eccentric. Johnson left Pembroke College, Oxford, without graduating, weighed down by his "vile melancholy" (Carruthers, 1852); possessed by a lifelong fear of insanity, he had recurrent suicidal thoughts. Even when literary achievement had ameliorated his personal circumstances, from 1762, his physical and psychological sufferings clouded his life, with little lasting alleviation. As a young man, and occasionally during maturity, Johnson used alcohol immoderately to counteract his profound melancholy and his tormenting "scruples" or self-doubts, a condition described by Hooper (1811) as panophobia. His eating pattern was characterised by excesses of uncontrolled consumption, interspersed by attempts at abstinence or reduced intake, motivated by both religious and hypochondriacal concerns. Johnson's bulimia appears, retrospectively, to fall into the category of bulimia helluonum, defined by Cullen (1780) as a gourmandising form, without overt stomach disorder or vomiting, but having a regular, abnormally strong desire for food. His table manners were crude, his ingestion rapid "like a cormorant" (Black, 1860), and mastication was perfunctory, factors commonly found in subjects with rumination disorder. Recurrent mental rumination gave rise to torturing self-criticism about personal failings and perceived shortcomings.

Minor self-mutilative behaviour occurred, all reports referring to the latter part of Johnson's life, since biographical information is sparse between the ages of 28 and 54 years. Mrs Thrale, the benefactress and mentor who gave Johnson access to her family home at Streatham for 16 years, who admired him and knew him intimately in the context of what Wiltshire (1991) has described as "an early therapeutic friendship", recorded, retrospectively, while discussing Johnson's physical attributes, that his hands were handsome, "in spite of Dirt, and of such Deformity as perpetual picking his Fingers necessarily produced" (Balderston, 1942). The historian Macaulay (1854) also mentioned the dirty hands, with nails "bitten and pared to the quick". Comments by Johnson's principal biographer, James Boswell, were more graphic and explanatory: "such was the heat and irritability of his [i.e. Johnson's] blood that not only did he pare his nails to the quick; but scraped the joints of his fingers with a pen-knife, till they seemed quite red and raw" (Chapman, 1953). A modern commentator (Murray, 1979) additionally interpreted Johnson's "hitting and rubbing his legs continually, and also cutting his fingernails deeply" as "mild self-destructive or damaging behaviour".

Case 3: Anne Denise (1786–1828)

Described as a "case of Extraordinary Congenital Bulimia" (*Medical Gazette*, 1833), Anne Denise had experienced, in childhood, many "misfortunes which influenced much her future health" (Analecta, 1820). Characterised by voracity from early childhood, she had exhausted her nurses by eating as much food as four children, reaching a daily intake of 10–12 lb of bread with her soup by the age of six. Menstruation commenced when she was seven, and, following an attempt at sexual violation by her father, she developed epileptic fits and was abandoned by him in a wood. She wandered from town to town eating fruit, roots and bread, but never consuming meat. On reaching Paris, she lived by begging, scavenging and prostitution, finding it impossible to remain employed owing to her voracity and epileptic fits. She was arrested twice for stealing bread (Galignani & Galignani, 1864).

Her case attracted the attention of a charitable protectress and her condition was investigated, successively, at the hospital of St Louis, at a venereal hospital "on the unfounded suspicion she was syphilitic" (Analecta, 1820) and in the epileptic ward at the Salpetrière, under Esquirol, with little improvement. Menstruation generally occurred three times a month, haematemesis featured at intervals, and there were regular episodes of "*grande faim*", during which she devoured, by day and night, about 24–32 lb of bread. "At the commencement of the attack, she loses her consciousness, and becomes so furious, if her wants are not satisfied, that she tears her linen, and bites her own flesh" (Analecta, 1820). Nevertheless, her mind was said to be sound, except during the paroxysms of hunger. She slept little, binged at night and maintained a normal body weight. Nervous excitement brought on convulsions and faintness, followed by epigastric pain, which she described as "resembling the efforts made to break a piece of wood", initiating an indescribable sensation "which leads her to eat, till a feeling of satiety and fatigue are manifested", ingesting up to 15 lb of food. Her subsequent distress was relieved by vomiting blood (Analecta, 1820). Following treatment for intestinal worms in 1823, her hunger diminished markedly, but she became addicted to spirits, which "brought on such a depravation of appetite, that she would devour the raw lights of the slaughtered animals, and afterwards literally brouse upon grass. In July 1828, having gone to her 'favourite pasturage', she collected a quantity of grass and buttercups (*ranunculus aeris*), which she eat for supper . . .. She was seized with torturing pains of the abdomen – jaundice ensued and she died in a few days" (*Medical Gazette*, 1833).

Case 4: schoolboy aged 16 (reported 1815)

A 16-year-old boy returned from school, pale and unwell; he developed a fever with headache, and for five days it was only with great difficulty that he could be persuaded to eat. Then, suddenly, and surprisingly in the context of a "pyrexial disease" (Satterley, 1815), a great desire for food was exhibited, initially regarded as beneficial, and to be complied with in moderation. It became impossible to satisfy the patient with a sick-room diet, and small amounts of animal food were added to the basins of sago and kilograms of biscuits being consumed. His cravings became incessant and he cleared one and a half pounds of beefsteaks, a large fowl or a couple of rabbits at a meal without being in any way satisfied. After devouring "with indescribable greediness,

meat adequate to the support of the stoutest labourer, he would deny his having tasted food, and earnestly entreat for a further supply . . . if he were indulged, it would only to be followed by similar demands; independently of three or four regular meals, he was uninterruptedly eating dry bread, biscuits, or fruits, many pounds of which he daily devoured" (Satterley, 1815).

Attempts to reduce the boy's intake produced great distress and increased febrile symptoms, so he was allowed to eat as much as he pleased. Between meals he was given hard substances that gave the greatest difficulty of mastication, thereby slowing down the rate of consumption. Although animal food remained "the particular object of his desire, it seemed indifferent to him what he eat, substances the most incongrous were greedily swallowed, and when all other things failed, from the bedclothes, or his fingers, he would endeavour to obtain a supply; the latter he often, apparently from hunger, bit so as to make them bleed; the inclination for food came on regularly with the paroxysm of fever, and continued unabated until that subsided . . . he was at other times either sleeping, or dull and torpid . . .. After perhaps ten or twelve hours, both the fever and appetite subsided" (Satterley, 1815). Apart from this incredible appetite, the typhus fever took its normal course, lasted 30 days, and then the boy recovered gradually.

Discussion

The complexities of self-mutilation multiply in the context of the numerically small number of historical cases, with variable detail and largely non-scientific reporting. Any conclusions drawn from the four cases examined, therefore, are tentative, and are aimed at establishing any traceable continuities between the clinical, personal, and environmental characteristics of the historical subjects and those featuring in current presentations of self-mutilative behaviour in association with eating disorders.

It is acknowledged generally that self-mutilation, the severity and frequency of which are affected by environmental factors, by changing levels of self-esteem and by mood swings, fulfils a dual function, within the perpetrator and within the society in which he lives. Self-mutilative behaviour, which begins typically during adolescence, has varying degrees of severity but is, essentially, without suicidal intent. The patterns of self-injury may originate, according to Walsh & Rosen (1988), "as culturally acceptable forms of self-alteration", such as nail-clipping, "but normative forms of self-alteration may subsequently be exaggerated", involving serious disfigurement and incurring social censure. As is the case with other socially unacceptable practices, such as induced vomiting in bulimia and re-mastication of regurgitated ingestae in rumination disorder, self-injury is usually perpetrated in privacy or secrecy and, consequently, its incidence is remarkably difficult to estimate and it is probably grossly underestimated. Favazza (1989) suggested that moderate self-mutilative behaviour is common and epidemiological studies have indicated, consistently, an increased rate in self-mutilative practices in England, Denmark, Canada and the USA from 1960 (Walsh & Rosen, 1988). Since "successful treatment, remains elusive" (Winchel & Stanley, 1991), the behaviour in some circumstances becomes intractable, compulsive, and even permanent, acquiring habit status in some individuals. Johnson's "perpetual" finger-picking, for example, was so well established that his self-inflicted dermatoses and pared and bitten nails became an integral part of the image, both verbal and pictorial, which has been handed down to posterity.

Walsh & Rosen (1988) stated that the earliest attempt to distinguish between categories of self-mutilation was made by Menninger (1938), but this somewhat idiosyncratic work was impaired by the omission of one category in which self-injury occurs consistently, namely the mentally retarded. Ross & McKay (1979) used a behavioural–descriptive approach, dividing all self-mutilative acts into nine groups, according to the process producing the injury. Their grouping included all the forms of injury seen in the historical cases, namely cutting, biting, abrading, and hitting. According to Favazza (1989), self-mutilative behaviour was especially prevalent "in prisoners, the severely mentally retarded, persons with personality disorders, and in association with eating disorders". Neither of the first two classes apply to the historical subjects, whose self-injury, therefore, can be considered only in relation to the latter two categories.

Walsh & Rosen (1988), additionally, considered self-injury in relation to psychosis and autism, categories which also bear no relevance to the historical study. They suggested that the phenomenon may be divided into four categories: intentional self-defacement as an expression of self-hatred; an implosion within the self to reduce intolerable tension or vent inexpressible anger; a form of self-stimulation to escape frightening feelings of emptiness and depersonalisation; and an action to influence or coerce family, friends, or doctors. The historical evidence, therefore, is considered broadly in relation to these categories. The self-mutilative behaviour in cases 1, 3, and 4 shared a common characteristic, in that it occurred in direct relationship with the bulimic episodes. These three cases, therefore, will be discussed consecutively, and case 2, where manifestations of self-injury were not juxtaposed with specifically bulimic behaviour, will be considered subsequently.

Case 1 concerns self-mutilative acts in the context of a severe bulimic episode of about 18 months'

duration, which terminated fatally. As in case 4, the onset of the bulimia was associated with a febrile illness in a previously normal and healthy young male. The self-mutilative incidents, similarly, occurred in direct relation to the overwhelming hunger, taking the form of gnawing the flesh of his limbs, with accompanying claims that he was so hungry that he could consume them all if he was not fed on demand. It appears, retrospectively, that the self-injury could have fulfilled the dual functions of tension-reduction and anger-venting, but it may be construed also as a manipulative act, representing a dramatic cry for help, which exerted considerable pressure on carers and observers. The enormous quantities of food administered presumably fulfilled a temporary palliative function, possibly postponing more serious self-damage. Since most of the ingested food was vomited immediately after intake, the boy presented a classic example of what Cullen (1780) later described as bulimia emetica. Although death occurred fairly rapidly, in a state of extreme emaciation, there is no evidence that the boy's condition was neglected, or that he suffered any hardship in his family setting. On the contrary, it was stated that the services of an apothecary had been summoned at the onset of the fever, and, subsequently, the singularity of the case necessarily attracted considerable medical and scientific interest, but no intervention proved successful.

The medical history of Anne Denise (case 3) contains many elements which are considered, currently, to be significant in the onset of self-injury. Walsh & Rosen (1988) investigated childhood and adolescent experiences associated with the eventual occurrence of self-mutilation, and these included factors such as parental loss, serious childhood illness, physical or sexual abuse, violence, and body alienation. A retrospective analysis of case 3 reveals that all these factors were present, although a causative relationship between all or any of these and the self-mutilative behaviour remains hypothetical. The subject suffered parental loss, being forcibly ejected, as a young child, from her family; she suffered from two chronic illnesses, bulimia and epilepsy, commencing in early childhood, with periods in hospital for investigation; she experienced physical cruelty, being abandoned without means of sustenance; and she sustained the trauma of parental cruelty, rejection, and attempted paternal sexual violation. Numerous modern authors, including most recently Pribor & Dinwiddie (1992), have investigated the correlates of incest in childhood. Shapiro (1987) has drawn attention to the fact that physical and sexual abuse in childhood "increases the potential for self-destructive activity". Although Browne & Finkelhor (1986) found child sexual abuse to have both self-destructive behaviour and substance abuse among its identifiable long-term effects, Pope & Hudson (1992) have contested previous suggestions that it might contribute also to the development of bulimia nervosa during adolescence or early adulthood. However, such abuse, coupled with precocious puberty at the age of seven and enforced juvenile prostitution to obtain food, could have engendered a sense of self-hatred, worthlessness, and body alienation. In adulthood, it was reported that Anne Denise "became intolerably addicted to the abuse of spirits", and had such depravity of appetite that she devoured raw offal from slaughterhouses and ate grass (*Medical Gazette*, 1833).

Winchel & Stanley (1991) have drawn attention to the "substantial number" of modern patients presenting with the triad of symptoms of self-injury, eating disorder, and alcohol abuse, findings which seem relevant in relation to both Samuel Johnson and Anne Denise. The latter's self-mutilative acts occurred concurrently with her regular outbreaks of abnormal hunger, during which, if she was unable to obtain food, she became so violent that she destroyed her clothing and bit her own flesh in what appears to have been a state of almost maniacal frenzy. Possible interpretations of this behaviour, as in cases 1 and 4, were that the biting was, simultaneously, a method of relieving overwhelming tension or venting anger, a manipulative act and a plea for help, influencing those around her to provide attention and, ultimately, a renewed food supply. The paroxysmal character of the self-injury in relation to abnormal pangs of hunger appears to have been similar in cases 1, 3 and 4. So intense was Anne Denise's craving during crises that one source (Analecta, 1820) suggested that a temporary unsoundness of mind occurred and a second source (*Medical Gazette*, 1833) described periods when she was "literally mad with hunger", followed, almost always, by attacks of haematemesis. The latter symptom was regarded by Laycock (1840) as a common feature in "cases of aggravated hysteria", generally occurring in subjects "of considerable *en bon-point*". Anne Denise's personality and physique corresponded closely with Laycock's observations. It was recorded that her "nervous sensibility is so easily excited, that the least moral [i.e. mental] impressions" brought on a train of hysterical symptoms, including globus hystericus and syncope (Analecta, 1820). Like most bulimics, her weight remained within the normal range; a contemporary description, for example, noted that "her limbs are all well-rounded, and of a softness which indicates the excess of cellular tissue to muscular force; her external configuration is perfectly regular" and the

"general *en bon-point* seems to be that of health" (Analecta, 1820). It is interesting to reflect, in view of current interest in seasonal affective disorder (Rosenthal *et al*, 1984) and in seasonal patterns in bulimia nervosa, that Galignani & Galignani (1864) actually observed that Anne Denise's hunger "varied in intensity . . . and for ten consecutive years her appetite was greatly aggravated in spring", when her consumption rose from 12 to 24 lb of bread daily. In contrast, in present-day bulimics, increased seasonal food intake appears to occur in winter (Blouin *et al*, 1992; Kent & Lacey, 1992). The circumstances surrounding her death, aged 42, from eating buttercups are unclear. The *ranunculus* ingestion might have been accidental, due to her indiscriminate grass-eating during her fits of "*grande faim*" or during her frequent states of inebriation, but the possibility of deliberate self-poisoning cannot be overlooked in view of the chronicity and incurability of her condition, despite her willingness to be treated, including voluntarily presenting herself at hospital from time to time.

Case 4 provides a different example, in that the subject had no antecedent history of bulimia. The episode of voracity was related directly to the onset of typhus fever and both the hyperorexia and the self-injurious behaviour appear to have been transient, subsiding with gradual recovery from fever. A particular form of bulimia, developing in response to states of exhaustion following prolonged or acute illnesses, various traumas and events such as protracted labour or convalescence, was recognised in the mid-19th century (Copland, 1858; Quain, 1895). Druitt (1862), for example, acknowledged that "This ravenous sense of hunger is remarkably common after circumstances which create great nervous exhaustion." He had observed the condition after surgical operations, accidents, long confinements, excessive grief, and during the development of breast tumours. The exaggerated hunger was not attributable to debility or to blood loss, nor a corrective to previous food abstinence, but was, essentially, a pathological process, "a disordered sensation", which bore no relationship to any intensification of a normal, healthy appetite. Blachez (1869) put forward a slightly different interpretation, which is particularly cogent in relation to case 4: "There are some circumstances in which an exaggeration of appetite is in some way authorised by a particular need for reparation. The patient who has gone through the hard ordeal of typhoid fever, shows, at the moment of convalescence, an almost insatiable appetite, but whose voracity is for a physiologic requirement of an impoverished organism. This is not, properly speaking, a bulimia." It is relevant to observe, however, that ICD-10 (World Health Organization, 1992), under the criteria for bulimia nervosa [F 50.4], lists a form of overeating, as a reaction to distressing events, such as accidents, surgical operations, and emotionally disturbing events, whose outcome, unlike that in the historical subjects, is obesity.

The subject's finger-biting, described as frequent in occurrence and sufficiently severe to draw blood, appears to have been a direct expression of frustration and anger at the unavailability of a continuous food supply, during a brief bulimic episode which was characterised by a particularly strong yearning for animal foods, a feature of many of the historical cases of bulimia. The boy's appetite, at times, became indiscriminate, amounting to a manifestation of pica, during which he consumed those non-edible materials most readily available, namely, his bed-linen. This latter behaviour, and the self-injury, appears to have occurred, as in cases 1 and 3, in response to his paroxysmal, overwhelming urge for food; if sustenance was withheld, his acute distress produced an exacerbation of febrile symptoms, which, inevitably, had a manipulative effect on carers. Using modern interpretations of self-mutilation, the finger-biting can be seen both as a tension-reducing and anger-venting strategy in response to the stimulus of mounting, intolerable hunger sensations in the absence of food, and as a forceful method of attracting attention within the boy's social milieu to the deficient supply. The historical source provides little supplementary information on the social environment, other than that the "young gentleman" (Satterley, 1815) still attended school at the age of 16 years. He was cared for by an aunt and received prompt medical attention from two doctors for his typhus fever, which suggests that there was an appropriate response to the medical emergency, and, thereafter, considerable concern was expressed about his dietary excesses.

In contrast to the three other historical subjects, Dr Johnson (case 2) exhibited several forms of self-mutilative behaviour: continually picking the skin of his fingers, biting or paring his nails to the quick, scraping the knuckles of his hands with a penknife until they became inflamed and raw, and hitting and rubbing his legs. Unlike the other subjects, his self-mutilative behaviour did not occur in juxtaposition with the bulimic episodes, as an overt demonstration of frustration at the lack of food during a phase of acute hunger. In the context of his multiple physical and psychological disorders, therefore, it presents far greater interpretational complexity.

Surviving accounts of Johnson's self-mutilative behaviour are derived from general biographical

sources, in contrast to the specifically medical reporting of the other cases. They all relate to Johnson during his maturity, from his mid-50s onwards, and there is no means of establishing whether such manifestations had occurred during his earlier years. However, it is possible, in the light of modern theories, to view certain factors in his early life as being conducive to the development of self-injurious behaviour in a vulnerable personality. The parental relationship was unhappy, with frequent paternal absences, and a moralistic upbringing by an elderly mother filled the young child with fears of sinfulness and of divine retribution for his misdeeds. There was some jealousy of a younger brother, and poor peer relationships, both at school and at university, where Johnson's superior intellect, physical peculiarities, impoverished circumstances, and unkempt appearance singled him out from contemporaries. He developed into a large, clumsy young man, with multiple curious movements and mannerisms, subject, like his father, to fits of profound melancholy (Porter, 1985), and with intermittent suicidal thoughts and a deep-rooted fear of insanity. He resorted to bouts of over-indulgence in alcohol and has been described by Madden (1967) as a "prodromal alcoholic". His excessive appetite was punctuated, in adulthood, by unsuccessful attempts at reduced intake or total abstension, since moderation was wholly unachievable (Parry-Jones, 1992).

Throughout his life, Johnson was subject to marked mood fluctuations, and literary output was characterised by weeks of considerable activity interspersed with periods of complete indolence, as in a manic–depressive disorder. He ruminated on his shortcomings and his recurring impious or blasphemous thoughts with self-deprecation and self-blame, lamenting his own "sensuality", particularly in relation to the opposite sex (Hibbert, 1971). Johnson sought to block these obsessive ruminations and self-doubts by various means, including physical exercise, new intellectual pursuits, various compulsive routines involving touching, counting and avoiding, and by striving never to be alone. He was not particularly selective about his entourage and supported, charitably, in his successive London residences, a strange assortment of persons including a negro servant, a frequently inebriated doctor, a blind gentlewoman, and a succession of pet cats, seeking to extinguish recurring unpleasant thoughts by having continual company and distraction. In aggregate, these features suggest that a retrospective diagnosis of the controversial borderline personality disorder included in DSM–III–R (American Psychiatric Association, 1987) would not be inappropriate.

Johnson's self-mutilative behaviour may well have had a tension-reducing effect, but it would be entirely in keeping with his wider psychopathology to interpret them as expiative and self-punitive acts, expressive of self-abhorrence. His contemporary, Sir Joshua Reynolds, commenting about Johnson's unusual actions, actually suggested that some appeared to be undertaken "to reprobate some part of his past conduct" (Chapman, 1953). Tuke (1892), for example, endorsed this latter aspect of self-mutilation: "Sometimes the motive for self-torture has been remorse, self-hatred; the offending senses or members must be chastened for their sins." Although most of Johnson's self-mutilative actions were directed at his hands, there is no direct evidence that his self-punishment was related specifically to manual actions. However, recent commentators (Meyer & Rose, 1986) have drawn attention to Johnson's struggles with strong sexual impulses and masturbatory fears. Moreover, the discovery of a padlock, marked "Johnson's padlock, committed to my care in 1768", among the personal effects of his benefactress, Mrs Thrale, after her death, together with the survival of a letter (Hibbert, 1971; Wiltshire, 1991) which indicated that Johnson requested her, periodically, to place him under mechanical restraint, raises various interpretational possibilities including mental instability, strong sexual urges, masturbatory fears and suicidal impulses. Johnson's own writings reveal his agonised aspirations to remain "chaste in thoughts, words and actions" and to resist recurring "inordinate desires" and "wicked thoughts", and one of his personal diaries, seen by his official biographer, Hawkins, shortly before its destruction by Johnson, was said to have shown Johnson's "strong amorous passions" (Hibbert, 1971). Such circumstantial evidence assumes greater significance, in relation to Johnson's self-mutilative acts, when modern theories concerning the latter phenomenon are considered. Favazza (1989), for example, stated that current psychological explanations "attest to the influence of sexual or aggressive conflicts" and reported that one of the effects of self-mutilative behaviour mentioned, consistently, by current patients was the enhancement or, conversely, the diminution of sexual feelings. Additionally, the findings of Vela *et al* (1983) have suggested that there is a higher prevalence of self-mutilation in personality-disordered patients with sadomasochistic tendencies, often associated with neuroticism, introversion and depression. Such traits were reflected, lifelong, in Johnson's personality.

The interpretation of Johnson's self-mutilation as self-punishment for self-indulgence or as a device to relieve mounting anxiety seems all the more plausible

since his behaviour did not appear to have been employed as a means of eliciting solicitous concern. His self-harm did not, apparently, procure any concerned intervention from his associates, either lay or medical. His biographers, with the exception of Boswell, who sought to explain the self-harm as due to Johnson's choleric temperament, simply placed on record these self-injurious habits, accepting them, apparently, as some of the accoutrements of genius.

Another important fact which needs to be considered, in relation to Johnson's self-mutilative acts, is the current, but controversial, suggestion (e.g. Murray, 1979; Trimble, 1983; McHenry, 1985; Wiltshire, 1991) that he suffered from Tourette's syndrome, an acknowledged feature of which is self-destructive activity such as scratching or abrading skin areas, biting the nails to the quick and deliberately hitting the body or limbs. Johnson's contemporaries were familiar with his odd movements, gesticulations, repetitive actions and routines, and even in the 18th century there was dissension as to whether he suffered from a convulsive disorder, specifically St Vitus's dance, causing a variety of involuntary, tic-like movements, or whether these were habits or mannerisms, over which he could exercise some control (Chapman, 1953). Johnson himself referred to some of his strange mannerisms, including his ruminative mouth movements, as "bad habits" (Ellis, 1889), and Reynolds noted that, in the course of prolonged portrait sittings, Johnson was able to suppress all his abnormalities and maintain the same pose for long periods. However, it still seems plausible to explain a proportion of Johnson's abnormal movements by considering a retrospective diagnosis of Tourette's syndrome, and, therefore, the theory that some of his self-mutilative acts might have been associated with that disorder is by no means invalidated. In view of his self-punitive mentality and self-recrimination (which, curiously, did not appear overtly to extend to his overeating), it is perhaps wiser to attribute his self-injurious behaviour to the interaction of a variety of clinical, personal, and environmental factors, possibly including Tourette's syndrome, rather than attributing it to Tourette's syndrome alone. No evidence of organic neurological disorder was noted at post-mortem (Brain, 1961); this may, however, have been attributable to the limitations of 18th-century post-mortem procedures and is not necessarily conclusive.

According to Winchel & Stanley (1991), the association between eating disorders and self-injury was first postulated by Yaryura-Tobias and Neziroglu, in 1978, and findings of subsequent authors have lent some support to this theory. Garfinkel *et al* (1980), for example, noted the occurrence of self-mutilation in a group of 68 anorexic patients, who were also bulimic and displayed various kinds of compulsive behaviour, including stealing, drug and alcohol abuse, and suicide attempts; and Harris (1983) noted the higher incidence of both self-injury and attempted suicide in patients with binge–purge syndrome. Garfinkel *et al* (1980) indicated that the rates of self-mutilative behaviour appeared to vary within subgroups of eating-disordered patients, suggesting that its incidence was higher among bulimic anorexics (9.2%) than among restricting anorexics (1.5%). Moreover, the researches of Mitchell *et al* (1986) indicated that the rates of self-injury were higher among laxative-abusing bulimics (41%) than among those not abusing (26%). Winchel & Stanley (1991) concluded that, "Just as there seems to be a high rate of histories of eating disorders among samples of individuals selected for the presence of self-injury, there also appears to be a high rate of self-injurious behaviour among patients selected for the presence of eating disorders."

The four historical cases were selected originally for the presence of bulimia, and the self-injurious behaviour was noted, in historical terms, as an incidental accompaniment to the eating disorder, occurring in only four of the 25 early bulimic cases investigated by the authors (16.7%). This is broadly in keeping with the 14% incidence of self-injury reported in a group of 59 normal-weight bulimics by Garner *et al* (1985). In two of the historical cases (1 and 4) the self-mutilation appears to have been related directly to the onset of an acute bulimic disorder and to have featured throughout the course of the illness. The situation is less clear in case 3, where the self-injury occurred, similarly, in juxtaposition with successive bulimic episodes, but against a background of multiple childhood traumas, with suggestions of personality disorder, poor impulse control (including stealing food), and known substance abuse. In case 2, the self-mutilation appears to have had no direct link with the lifelong bulimic eating patterns, and is complicated by its association with recurrent severe depression and obsessive–compulsive behaviour, together with the possibility of a retrospective diagnosis of Tourette's syndrome and the possible applicability to this subject of the diagnostic category of borderline personality disorder or impulse control disorder.

Current opinion (e.g. Winchel & Stanley, 1991) suggests that it is feasible "to consider that self-injurious behaviour in various conditions may have a common organic component", and that there may be underlying biochemical explanations, such as dysregulation of dopaminergic activity and dopamine-receptor sensitivity or alterations of serotonergic

function, for the self-mutilation seen in Tourette's syndrome, Lesch–Nyhan syndrome, obsessive–compulsive disorders and, as has been suggested recently (Blouin *et al*, 1992), in bulimia nervosa. In their recent investigation of self-mutilation in personality disorders, Simeon *et al* (1992) have not only demonstrated "the contribution of severe character pathology, aggression, impulsivity, anxiety, and anger to self-mutilation", but have provided "preliminary support for the hypothesis of underlying serotonergic dysfunction facilitating self-mutilation". In view of the increasing acceptance that there may be organic factors in bulimia, it is possible to speculate that some of the self-mutilative acts which occurred in the historical cases, like those reported regularly in modern presentations of the disorder, may have derived from a similar biochemical imbalance, or from a combination of this with personal and environmental precipitants. Certainly, there seems to be considerable correlation between some of the background factors reported in the historical cases with those regarded as factors predisposing to self-mutilative behaviour at the present time. The principal interest of these historical case descriptions, however, lies in their demonstration of continuity, over two centuries, of an association between self-mutilative behaviour and bulimic disorder.

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