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Certain abnormal beliefs are common to diverse cultures, possibly originating in shared fears, experiences or supernatural beliefs. Zoomorphism, a belief in the capacity for human metamorphosis into animal form is prevalent in the myths and legends of many societies. The animal concerned is usually both common and feared and it may also be an important symbolic or religious figure. Since Ancient Greece the fear of transformation into a wolflike animal has been recorded in European literature. Legendary accounts maintain that a true metamorphosis occurred. The Greeks worshipped the wolfgod, Zeus Lycaeus and there are many stories of ordinary men being transformed into wolves and other creatures. In Graves' translation of Greek myths<sup>1</sup> an account is given of the inhabitants of Parnassus who followed a pack of howling wolves to a mountain top where they established a new city, Lycorea. According to the myth, the Parnassians practised Lyacaon's Abomination, a ritual where a boy was sacrificed and his guts made into a soup which was eaten by shepherds, one of whom would then turn into a tormented werewolf who was condemned to wander the countryside for 8 years, regaining his humanity if he refrained from eating human flesh. According to this legend a full recovery was possible as illustrated in the legend of Damarchus who went on to win a boxing prize at the Olympic Games after rigorous training in the gymnasium. The connection with cannabilistic practices is further illustrated in the legend of Lycaon, King of Arcadia, who was changed into a wolf as punishment for secretly feeding Zeus human flesh.

In Ancient Rome the wolf was an important symbolic figure, the constant companion of Mars and the protector of Romulus and Remus. The werewolf was the subject of accounts by Pliny, Herodotus and Virgil<sup>2</sup>. A medical explanation for the affliction was favoured by some early writers, including Paulus Aegineta in the 7th century AD<sup>3</sup>. In Ireland, werewolf stories, remarkably similar to accounts from other cultures, were not uncommon. Giraldis Cambrensis, in Typographica Hibernia<sup>4</sup> tells one of the earliest of these stories: 'An Irish priest met by a wolf in Meath and desired to come and see his dying wife. They were natives of Ossary, whose people had been cursed for their wickedness by St Natalis, and were compelled to take two by two a wolf-shape for seven years, returning to their own at the end of that time. The priest was persuaded to give the she-wolf the sacrament, for the other turned her skin down a little showing that it was an old woman'. St Patrick is also said to have cursed Veneticus, King of Gallia transforming him into a wolf<sup>5</sup>.

The widespread distribution of the tradition is reflected in the number of tongues which have a term

for the wolf-man, including *werewolf*, from *wer*, the Anglo-Saxon for man, the French *loup-garou*, the Italian *lupo-manaro* and the Russian *volkulaku*. In other cultures a different animal may be the focus of fears of transformation including the fox in Japan and the tiger, hyena and crocodile in China, Malaysia and India<sup>6</sup>.

The delusional belief in metamorphosis to animal form was termed Insania Zooanthropica in the 18th century<sup>7</sup>. The diagnosis of lycanthropy referred to a delusion of transformation into a wolf-like animal but it has come to be used with less specificity. According to Oribasius of Pergamus, "The persons affected go out at night time, wander among the tombs till morning, in every way imitating a wolf<sup>7</sup>. They may also become preoccupied with religious themes and symbols and develop a yearning for raw flesh. The peak incidence of lycanthropy occurred in Europe during the 15th and 16th centuries. At this time the mentally ill were seen as valid subjects for interrogation by the forces of the Inquisition. In the 13th century Thomas Aquinas unequivocally stated that good and bad angels had the ability to change the shape of men's bodies<sup>2</sup>. During the late Middle Ages and early Renaissance periods theologians believed that mental disturbance or physical metamorphosis was the result of a Satanic pact or evil spells. These beliefs were adopted with varying degrees of credulity by medical writers. Jean Bodin, a 16th century French physician wrote on the subject of lycanthropy 'the devil can really and materially metamorphose the body of a man into that of an animal and thereby cause the sickness'<sup>8</sup>. However, a minority, including Leloyer in the 16th century and Rhanaeus in the early 18th century<sup>7</sup>, believed that physical transformation was impossible but the devil was responsible for making the individual believe that he was so afflicted<sup>9</sup>. Those accused of being werewolves were brought before the ecclesiastical courts and if found guilty were dealt with brutally. When in human form, the werewolf was suspected of wearing his skin turned inside out, and some of those found guilty had chunks of skin peeled away to search for a coat of fur<sup>10</sup>. Epidemics of lycanthropy, presumably a form of mass hysteria, were not uncommon. Boguet, a French Judge, is reported to have condemned 600 sufferers to death<sup>11</sup>. However, the demonology hypothesis was not always accepted<sup>6</sup> and in some of these cases the accused underwent a rigorous course of treatment which included bloodletting, hot baths, purging with colocynth, aloe, wormwood and acrid vinegar or sedation with opium.

Illis<sup>2</sup> has proposed that the strange appearance and behaviour of sufferers of severe porphyria may have led them to be accused as werewolves during the Middle Ages. He claims that sufferers of severe 0141-0768/89/ 010037-03/\$02.00/0 ©1989 The Royal Society of Medicine porphyria may have aroused suspicion because of their pigmented, ulcerated and hairy skin. The victim may also avoid light and in advanced cases neurological or psychiatric sequelae can lead to bizarre behaviour. Ancient descriptions of those at risk of metamorphosis lend some support to this unlikely theory. Octius said of sufferers 'You may know those affected by these signs: they are pale, have weak sight and dry eyes, and do not shed tears; their eyes are hollow; they do not secrete saliva; they are always thirsty, and they have inveterate ulcers on the legs'<sup>7</sup>. It is plausible that such patients may have attracted suspicion in medieval communities but there is little documentary evidence from the time to suggest that a significant number of those charged as werewolves had such gross abnormalities of appearance.

The relationship between lycanthropy and psychiatric illness was noted in the Old Testament. In the Book of Daniel, King Nebuchadnezzar is said to have entered a lycanthropic state after a lengthy depressive episode. However, a medical explanation did not become prevalent until the age of the Enlightenment. In the 17th century, Robert Burton heralded a rational examination of lycanthropy in The Anatomy of  $Melancholy^{12}$  where he described the condition as a form of madness. However, 19th and 20th century case reports are exceedingly rare. Attention was turned instead to an examination by psychotherapists of the relevance of dreams and suspicions of werewolves, drawing heavily from classical and medieval accounts. Eisler<sup>4</sup>, in an anthropological study which was heavily influenced by Jungian psychology, claimed that lycanthropy represented the emergence of an archetypal carnivorous beast which is also expressed in sadistic behaviour. Jung believed that the delusion was an expression of a primitive identity from which man struggles to free himself<sup>13</sup>. Jones considered the psychological meaning of superstitious belief in werewolves and their significance in dreams in his volume On the Nightmare<sup>10</sup>, concluding that the figure represents a desire for freedom from compulsion, a wish for heightened potency and an oral-sadistic or cannabilistic impulse rooted in Oedipal conflicts.

Most of the recent case reports adopt a rigorous phenomenological approach where the delusion is no longer seen as a distinct diagnostic entity but as a non-specific psychotic symptom. Within the limited number of reports it is possible to identify some common themes. The delusion may be compatible with the patient's perception of themselves as evil, disgusting or guilty. The cases of two such patients, who believed that they were being punished for crimes or were subject to Satanic influence, are vividly reported in the literature. In 1852 M Morel reported the case of a man who had numerous somatic complaints, delusions of guilt and later became convinced that he had assumed the form of a wolf. He did not recover and died 'in a state of marasmus and in the most violent despair'<sup>14</sup>. A more recent report concerned a 66-year-old woman who also developed the delusion in the setting of a psychotic depression which responded well to a combination of antidepressants and ECT<sup>15</sup>.

In two women the onset of the delusion followed sexual intercourse. In both there was a history of marital difficulties and the abnormal belief was seen by therapists as a vehicle for feelings of guilt and aggression. Jackson<sup>16</sup> reports the case of a 56-yearold woman who began to behave like a wild dog following an attempted reconciliation with her husband through sexual intercourse. She responded to antipsychotics but later developed erotomanic delusions and a Capgras syndrome. A 49-year-old woman had chronically ruminated and dreamt about wolves, culminating in the delusion of wolf-like metamorphosis after sexual activity with her husband and on another occasion, coinciding with a full moon<sup>17</sup>. In two young male cases lycanthropy was a symptom of schizophrenia<sup>6</sup>. One also suffered from an organic brain syndrome of undetermined cause and the other abused hallucinogenic drugs and had a long standing interest in the occult.

In the largest modern collection of cases of lycanthropy, Keck and colleagues<sup>18</sup> uncovered the records of 12 American patients who had reported that they were a particular animal and had behaved in a manner reminiscent of that animal. Six patients were manic, 2 were depressed, 2 had schizophrenia, one had borderline personality disorder and one received the diagnosis of atypical psychosis. Two patients, one who claimed to be a Bengal Tiger and one who hopped around a ward like a rabbit<sup>1</sup> admitted that their behaviour was under voluntary control after confrontation by their psychiatrists and were judged to have a factitious element to their accompanying psychiatric disorder. The lycanthropic behaviour was quite varied and 10 patients identified themselves as specific animals, most commonly wolves, dogs or cats. One case who identified himself as a gerbil had raised these animals as pets for many years. One patient believed himself to be a cat for more than 13 years but in all other cases the behaviour was transient and responded to antipsychotic medication. Symptoms associated with lycanthropy can occur in the absence of a full blown syndrome, as in the case reported by Buchanan<sup>19</sup> of a depressed 60-year-old divorcee who barked, grimaced and growled but did not believe that she was transformed into an animal.

To gain an understanding of certain bizarre psychiatric symptoms it may be helpful to consider the effects of religion and culture. At the time of the Inquisition, when the werewolf was a feared satanic representation, the incidence of lycanthropy peaked. As religious beliefs have changed, the perception of the devil as a wolf or goat-like creature has receded but is not entirely unfamiliar. These beliefs may be revived in those suffering from severe depressive illness where they are incorporated into delusions of guilt and sinfulness. Similarly, the cannabilistic and aggressive qualities of the lycanthrope can be traced back to the content of ancient myth and followed through the centuries when the werewolf retained these characteristics. Despite the passage of time, the werewolf remains a powerful and evocative image. The influence of myth and legend has been filtered and obscured with the passage of time but it is likely that the symptom of lycanthropy will continue to be seen as long as tales of the wolf-man can frighten us.

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