

## Was Anna O.'s Black Snake Hallucination a Sleep Paralysis Nightmare? Dreams, Memories, and Trauma

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THE FINAL traumatic event recalled by Anna O. during her treatment with Josef Breuer was a terrifying hallucination she once had of a black snake attacking her ailing father. This event has been variously interpreted as indicating an underlying psychodynamic conflict, as a temporal lobe seizure, and as an hypnotic confabulation. We argue, however, that the hallucination—during which Anna O.'s arm was reportedly "asleep" due to nerve blockage—was probably a sleep paralysis nightmare. Sleep paralysis nightmares continue to be overlooked or misdiagnosed in clinical practice, and, in recent years, have been implicated in the controversy surrounding memories of trauma and sexual abuse.

Although the case of Anna O. was first published more than a century ago (Breuer and Freud 1895/1974), it continues to attract considerable attention (e.g., Merskey 1992; Borch-Jacobsen 1995). This article offers a new interpretation of what Breuer believed was the precipitating event in Anna O.'s illness: a terrifying hallucination of a black snake attacking her bedridden father. We argue that this hallucination was a sleep paralysis nightmare, a relatively common event but one which continues to be overlooked or misdiagnosed by clinicians. We also discuss the involvement of sleep paralysis nightmares in the recent controversy over the reliability of traumatic memories, particularly memories of sexual abuse (e.g., Pendergrast 1995).

### CASE HISTORY AND INTERPRETATIONS

Breuer described Anna O. as a highly intelligent young woman who, prior to her illness, had led an extremely monotonous existence. To enliven her life, she spent considerable time engaging in systematic day-dreaming. "While everyone thought she was attending, she was living through fairy tales in her imagination. . . . She pursued this activity almost continuously while she was engaged on her household duties" (Breuer and Freud 1895/1974, p. 74). Today, she would likely be characterized as a fantasy-prone personality (Wilson and Barber 1983).

According to Breuer's report, Anna O.'s health first began to deteriorate while she was nursing her father, who had fallen ill

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with a peripleuritic abscess. Breuer, one of the most respected physicians in Vienna at that time (Sulloway 1979), was called in to examine her for a persistent cough, but he immediately began to suspect that she was mentally ill. Barred from further nursing duties, Anna O. soon developed a menagerie of symptoms, which included "absences" (trance-like states of delirium), visual disturbances, contractures and anaesthesias of various limbs, dual consciousness, frightening hallucinations, negative hallucinations, disorganized speech, and a transient inability to speak her native language. These symptoms grew worse after the death of her father, whom she adored (Breuer and Freud 1895/1974).

To cope with these disturbances, Breuer and his patient devised various procedures involving the verbal expression of thoughts and memories. Initially, Breuer noticed that Anna became significantly calmer if each evening she could be induced to tell the "stories" she was apparently concocting during her daytime absences. Later, they discovered that a symptom would often disappear if she recounted, in reverse chronological order, each occasion on which the symptom had occurred. Breuer noted that for each symptom the "first provoking cause was habitually a fright of some kind, experienced while she was nursing her father" (Breuer and Freud 1895/1974, p. 91). Eventually, Anna recalled a terrifying hallucination she had once had of a black snake attacking her father as she sat by his bedside one night. Breuer believed that it was this event that precipitated her subsequent illness. He claimed that following her abreaction of the event she was largely cured.

Breuer's treatment of Anna O. greatly influenced Freud's development of psychoanalysis, and is often regarded as the prototype of the cathartic cure (Ellenberger 1970; Gay 1989). In recognition of her role in the development of psychoanalysis, Ernest Jones (1953) revealed that Anna O.'s real name was Bertha Pappenheim. In her later life, Bertha Pappenheim became a renowned social worker and an advocate for the rights of women and children.

Over the years, several problems have arisen concerning Breuer's published account of this case. For example, on the basis of clinical notes subsequently discovered (Ellenberger 1972; Hirschmüller 1989), it is now known that Anna O. soon relapsed, displaying many of her original symptoms. She was institutionalized several times before recovering from her illness. According to Jones (1953), Freud also claimed that Anna O. had developed a strong transference to Breuer, which manifested itself in a pseudocyesis (hysterical pregnancy). Ellenberger (1972), however, uncovered certain discrepancies in this claim, and recent authors (Borch-Jacobsen 1995; Webster 1995) have argued that the pseudocyesis episode is almost certainly an erroneous reconstruction of Freud's, rather than something Breuer actually told him.

Although Breuer diagnosed Anna O.'s condition as a classic example of hysteria, alternative diagnoses have been proposed. These have included schizophrenia (e.g., Goshen 1952), "borderline condition" (Meissner 1979), and bipolar disorder (Merskey 1992). Orr-Andrawes (1987) argued that Anna O. suffered from a neurological illness, and that many of her symptoms were epileptic seizures (see also Flor-Henry 1983; Hurst 1982; Thornton 1983; Webster 1995). Macmillan (1991) concurred with Breuer's original diagnosis of hysteria, but noted that Breuer's and Anna's expectations may have played a role in the evolution of her symptoms and the development of the cathartic procedure used to treat her (see also Hollender 1980; Weissberg 1993; Borch-Jacobsen 1995).

#### THE BLACK SNAKE EPISODE

Breuer claimed that the precipitating factor in Anna O.'s illness was the terrifying black snake hallucination she had experienced while sitting by her father's bed one night. This episode and its aftermath were described as follows: "In July 1880, while he was in the country, her father fell seriously ill of a sub-pleural abscess. Anna

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shared the duties of nursing him with her mother. She once woke up during the night in great anxiety about the patient, who was in a high fever; and she was under the strain of expecting the arrival of a surgeon from Vienna who was to operate. Her mother had gone away for a short time and Anna was sitting at the bedside with her right arm over the back of her chair. She fell into a waking dream and saw a black snake coming towards the sick man from the wall to bite him. (It is most likely that there were in fact snakes in the field behind the house and that these had previously given the girl a fright; they would thus have provided the material for her hallucination.) She tried to keep the snake off, but it was as though she was paralysed. Her right arm, over the back of the chair, had gone to sleep and had become anaesthetic and paretic; and when she looked at it the fingers turned into little snakes with death's heads (the nails). (It seems probable that she had tried to use her paralysed right arm to drive off the snake and that its anaesthesia and paralysis had consequently become associated with the hallucination of the snake.) When the snake vanished, in her terror she tried to pray. But language failed her; she could find no tongue in which to speak, till at last she thought of some children's verses in English and then found herself able to think and pray in that language. The whistle of the train that was bringing the doctor whom she expected broke the spell.

Next day, in the course of a game, she threw a quoit into some bushes; and when she went to pick it out, a bent branch revived her hallucination of the snake, and simultaneously her right arm became rigidly extended. Thenceforward the same thing invariably occurred whenever the hallucination was recalled by some object with a more or less snake-like appearance. This hallucination, however, as well as the contracture only appeared during the short *absences* which became more and more frequent from that night onwards" (Breuer and Freud 1895/1974, pp. 92–93).

Breuer's hypothesis was that Anna O.'s hysterical symptoms stemmed from various traumas experienced during a "hyp-

noid" or dissociated state, with the black snake episode constituting the initial trauma upon which the subsequent traumas were based (Breuer and Freud 1895/1974). Other writers have offered alternative interpretations of this episode. Freud (1914/1938) contended that the phallic imagery of the snake indicates an underlying sexual basis to Anna O.'s illness. Karpe (1961) believed the imagery also indicates feelings of ambivalence and hostility toward the father. Noshpitz (1984) argued that the black snakes might represent feces, suggesting a possible preoedipal trauma associated with toilet training. By contrast, Orr-Andrewes (1987, p. 400), in keeping with her diagnosis of a neurological disorder, claimed that the black snake episode "conforms to the characteristic clinical picture of a complex partial seizure." Similarly, Merskey (1992), who argued that Anna O. suffered from a bipolar disorder, regarded the snake episode as the strongest competing evidence for a neurological disorder. Borch-Jacobsen (1995), on the other hand, has speculated that Anna O. was in a state of autohypnosis when she recalled the snake episode and that her memory of this event might have been a hypnotically-induced confabulation.

Retrospective diagnoses are necessarily uncertain, and it is of course impossible to discount conclusively any of the above interpretations. A previously overlooked possibility, however, is that the hallucination was a sleep paralysis nightmare—sometimes referred to as an "incubus" nightmare or "Old Hag" attack (Hufford 1982).

### THE BLACK SNAKE EPISODE AS A SLEEP PARALYSIS NIGHTMARE

#### *Sleep Paralysis Nightmares*

Both sleep paralysis and nightmares are relatively common sleep-related events. Sleep paralysis is a major symptom of the sleep disorder *narcolepsy*, which is characterized by severe daytime sleep attacks and episodes of muscle weakness (catalepsy). Sleep paralysis episodes are also

characteristic of *isolated sleep paralysis*, with infrequent attacks and a negative family history, and *familial sleep paralysis*, with more frequent attacks and a positive family history. Isolated and familial sleep paralysis are not necessarily associated with excessive sleepiness, cataplexy, or other sleep disorders (Diagnostic Classification Steering Committee 1990).

Although this condition is referred to as sleep paralysis and is characterized by an inability to move or speak, persons who experience it often report a subjective sense of wakefulness. For this reason, it is thought that the paralysis is an unnatural intrusion into wakefulness of the muscle paralysis mechanism (muscle atonia) normally active during REM sleep (Giaquinto Pompeiano, and Somogyi 1964; Hufford 1982). In fact, sleep paralysis episodes have been experimentally induced through intermittent sleep disruptions, which facilitate the occurrence of REM periods during sleep onset (Takeuchi, Miyasita, Sasaki, Inugami, and Fukuda 1992). Sleep paralysis episodes typically occur during transitions from wakefulness to sleep (the hypnagogic state) or from sleep to wakefulness (the hypnopompic state). Abnormalities in this transition may allow sleep and waking processes to be superimposed. This is also true for the hallucinatory content that often accompanies sleep paralysis: vivid hypnagogic images seem to combine seamlessly with perceptions of the surrounding environment to produce a bizarre yet unitary experience. Much like being awakened from sleep, most sleep paralysis episodes can be easily terminated by speaking the person's name or touching them lightly.

In keeping with the subjective sense of being awake, the ability to accurately perceive external stimuli during a sleep paralysis attack has been verified in some persons with narcolepsy (Hishikawa and Kaneko 1965). It is unknown, however, whether this sense of wakefulness remains truly objective during sleep paralysis episodes which incorporate hallucinatory images. The entire experience, including the impressions of being awake,

may be hallucinatory in character. Dreaming about an entire reality scene has been referred to as *metachoric dreaming* by Green and Leslie (1987) and *reality dreaming* by Nielsen (1991).

Sleep paralysis experiences are not invariably nightmarish. Some, as noted, may be void of any dreamlike content, while others may be accompanied by pleasant dreams. Most episodes, however, incorporate imagery or sensations which engender fear. Images of threatening humans or human-like figures, such as ghosts and demons, are particularly common (Ness 1978; Hufford 1982), but images of threatening animals can also occur. Honda (1988) found that persons with narcolepsy, who frequently suffer sleep paralysis episodes, experienced images of reptiles in 22.4% of their hypnagogic/reality dreams. Relevant to the case of Anna O., some reported examples have involved snakes. "The patient often reports seeing dreadful reptiles, especially snakes, crawling around his body. He often feels the actual touch of snakes" (Honda 1988, p. 29). "In one case, attacks of powerlessness, preceded by a sensation like an electric shock, usually came on at night, and the patient had a feeling while in the attack that a snake was biting him in his right side or a rat crawling out through his skin in that region. He might also see and feel a snake coil itself about his neck, or see a brightly coloured parrot that called him names" (Daniels 1934, p. 22).

Fear reactions during sleep paralysis nightmares may be extreme, sometimes to the point of constituting a trauma. Our clinical experience with sleep disordered patients has exposed us to many individuals who appear to have suffered long-lasting, detrimental effects from such episodes, including fear of intruders, fear of losing one's mind, and fear of sleep itself. Moreover, sleep paralysis nightmares are also common in psychologically healthy individuals, who seem to suffer no lasting effects from these occurrences (Ness 1978; Fukuda, Inamatsu, Kuroiwa, and Miyasita 1991).

According to some surveys, sleep paraly-

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sis experiences are relatively prevalent, occurring at least once in a lifetime for 20–50% of the population (Dement 1976; Wing, Lee, and Chen 1994; Spanos, McNulty, Pires, and Burgess 1995) and more chronically for 3–6% (Diagnostic Classification Steering Committee 1990; Roth 1978). In special populations, the frequency may be even higher. One survey revealed that 62% of the residents in a Newfoundland village had experienced an “Old Hag” attack at least once (Ness 1978). Wing et al. (1994) sampled 603 Hong Kong undergraduates and found that 40% of the women and 35% of the men had experienced at least one episode of what in Chinese culture is known as “ghost oppression.” The most frequent features of the attack were paralysis (93%), inability to speak (72.5%), and a sensation of weight on the chest (50.5%). Auditory hallucinations and visual hallucinations each occurred in about 20% of the attacks.

### *Similarities Between the Black Snake Episode and Sleep Paralysis Nightmares*

It should be evident from the previous review that Anna O.'s black snake episode can be reasonably considered a sleep paralysis nightmare. The episode contains four major features of sleep paralysis nightmares:

1. The episode occurred during a borderline sleep state. Breuer reported that Anna O. had fallen asleep for a time and then awoken. She was then apparently drifting back into sleep when the episode occurred. “She fell into a waking dream” (Breuer and Freud 1895/1974, p. 93). As previously noted, sleep disruptions can favour the occurrence of sleep onset REM periods and thereby elicit episodes of sleep paralysis (Takeuchi et al. 1992).

2. During the episode, there was a perception of paralysis. It must be acknowledged, however, that Breuer's report did not explicitly describe the sort of general body paralysis usually associated with sleep paralysis nightmares. General paralysis is implied by the statement “She tried to keep the snake off, but it was as

though she was paralyzed” (Breuer and Freud 1895/1974, p. 93). Breuer then goes on to emphasize that it was her right arm that had become paralyzed, apparently due to nerve blockage. It is possible, though, that Anna had simply focused upon her arm paralysis while concurrently experiencing a more general paralysis. Spanos et al. (1995) have proposed that the experience of sleep paralysis might not become evident until the person makes an attempt to move. Thus, if Anna attempted to first move her arm, she might have perceived that it was only her arm that was paralyzed. Breuer then described Anna as attempting to drive the snake off with her paralyzed arm, which suggests that she was able to move other body parts, but it is also clear that Breuer was speculating at this point. “It *seems probable* [italics added] that she had tried to use her paralysed right arm to drive off the snake . . .” (p. 93). (This statement also indicates that Breuer never obtained a full, detailed description of the incident, and is to some extent attempting to reconstruct what happened.) Evidence that the paralysis was more general in scope occurs later in the episode when, following the disappearance of the snake, Anna finds herself unable to pray. As noted earlier, a perceived inability to speak or scream is a common theme in sleep paralysis nightmares (Wing et al. 1994). Finally, although general body paralysis is highly characteristic of sleep paralysis nightmares, victims have occasionally reported periods of limited or laborious movement during the episode (Hufford 1982). Even if Anna had engaged in some movement during the incident, it would not rule out the possibility that she suffered a sleep paralysis nightmare.

3. Concurrent with the experience of paralysis, Anna O. experienced intense terror accompanied by an hallucinatory perception of snakes (Breuer and Freud 1895/1974). As noted earlier, frightening images of snakes are not uncommon in sleep paralysis nightmares (Honda 1988).

4. As often occurs with sleep paralysis nightmares, the black snake episode was

abruptly halted by the intrusion of an external stimulus, namely, the train whistle (Breuer and Freud 1895/1974).

Additional evidence that the snake episode was a sleep paralysis nightmare derives from the fact that Anna was under stress at the time of its occurrence, and possibly somewhat sleep-deprived (Breuer and Freud 1895/1974). Sleep paralysis nightmares occur more frequently under such conditions (Ness 1978; Hufford 1982; Wing et al. 1994; Spanos et al. 1995). Also relevant is the fact that Anna was fantasy-prone; Spanos et al. (1995) found imaginativeness to be the personality factor most predictive of both the frequency and intensity of sleep paralysis nightmares. Finally, the occurrence of the snake episode may have been facilitated by the pressure of the back of the chair on Anna's arm; Nielsen (1991) found that pressure stimulation of a limb during REM sleep in some cases directly evoked a sleep paralysis nightmare.

#### DISCUSSION

##### *Sleep Paralysis Nightmare Interpretation Versus Other Interpretations*

Many features of Anna O.'s black snake hallucination correspond to characteristics of sleep paralysis nightmares, but, this interpretation does not exclude alternative interpretations. For example, the specific hallucinatory content of a sleep paralysis nightmare, like any dream image, might have psychodynamic significance. On the other hand, sleep paralysis nightmares often incorporate commonly feared events such as ghosts, demons, or frightening animals, and Breuer's parsimonious conjecture that Anna hallucinated snakes because they had recently frightened her is reasonable.

Orr-Andrewes' (1987) diagnosis of temporal lobe epilepsy cannot be excluded, insofar as it is possible that sleep paralysis nightmares might sometimes be indicative of an incipient neurological illness. Nocturnal seizures often occur during the transition between sleeping and waking

(American Psychiatric Association 1994, p. 586). Furthermore, Makarec and Persinger (1990) found that signs of temporal lobe lability were associated with a variety of unusual experiences, including sleep paralysis episodes (see Persinger 1992). Also, there is recent evidence that dreams can sometimes foreshadow a terminal illness (Smith 1987). But sleep paralysis nightmares appear to be relatively common in individuals who have no apparent neurological illness (Wing et al. 1994). Therefore, the black snake hallucination, by itself, does not constitute strong evidence of a neurological disorder.

It remains possible that the black snake episode was a hypnotically-induced confabulation (Borch-Jacobsen 1995). However, not all events recalled under hypnosis are confabulations; rather, hypnosis increases recall of both veridical and non-veridical memories (Orne, Soskis, Dinges, and Orne 1984). It is also unclear whether Anna O. had actually forgotten this event prior to recalling it in therapy. There is some evidence that she deliberately fabricated some aspects of her illness at that time, including what she remembered or did not remember (e.g., Borch-Jacobsen 1995, see below). The hallucination might have been an event for which she had full, or partial, memory prior to recounting it in therapy.

It is important to note that sleep paralysis nightmares can be extremely terrifying. In keeping with Breuer's original formulation (Breuer and Freud 1895/1974), the black snake episode may have been sufficiently traumatizing to result in Anna's hallucinatory-flashback reaction to the bent twig the next day, thereby instigating the development of later symptoms. The initial episode might have generated in Anna an expectation that she was becoming mentally unbalanced. Compounded by her ability to become deeply immersed in her thoughts, the stressful circumstances of her life at that time, and various environmental influences—such as a cultural milieu within which hysteria was a common illness among the socially suppressed women of that era (e.g.,

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Kaplan 1984)—these all could have played a major role in her gradual deterioration. But it must be acknowledged that the reoccurrence of the hallucination the next day is also consistent with the notion that the original episode might not have been a sleep paralysis nightmare, and was instead the harbinger of a developing psychiatric or neurological illness.

One proviso to the foregoing is that, as noted earlier, there may have been some element of deliberate fabrication in Anna O.'s illness at the time the black snake episode was recalled (e.g., Borch-Jacobsen 1995). For example, Breuer reported that for several months during the latter part of her illness, Anna "relived" specific events that had occurred precisely, to the day, one year earlier (Breuer and Freud 1895/1974). He was able to confirm the occurrence of these events because they had been recorded in her mother's diary. This sort of mnemonic ability is so remarkable that it forces one to suspect that the patient herself may have had access to the necessary information, either from her mother's diary or a secret diary of her own. Interestingly, Anna herself later claimed that "she had not been ill at all and that the whole business had been simulated" (Breuer and Freud 1895/1974, p. 101). Although Breuer rejected this notion and provided evidence against it, he nevertheless acknowledged in a letter to her subsequent psychiatrist that she may have faked some individual elements of her illness (Hirschmüller 1989, p. 295). Breuer no doubt believed that the memory of the black snake episode was genuine, but the possibility exists that it, or some aspects of it, were deliberate fabrications.

### *Sleep Paralysis in Present-Day Trauma Therapy*

Ironically, while a sleep paralysis nightmare may have been central to the case of Anna O. (the prototypical example of cathartic treatment for a trauma-induced illness), the issue of sleep paralysis nightmares has again arisen within the context of modern-day trauma therapy. Haga

(1989, p. 519), for example, has speculated that sleep paralysis nightmares may "reflect real sexual traumas to a greater extent than hitherto recognized." Sleep paralysis nightmares can resemble sexual traumas, insofar as victims sometimes feel that someone is sitting or lying upon them (Ness 1978; Hufford 1982). However, several lines of evidence suggest that sleep paralysis nightmares are not strongly associated with a past history of sexual trauma. First, although sleep paralysis nightmares have sometimes been associated with PTSD resulting from severe sexual assault (Hudson, Manoach, Sabo, and Sternbach 1991; see also Hogben and Cornfield 1981), Spanos et al. (1995) found no correlation between the frequency or intensity of such episodes and reported history of sexual abuse. (Reported history of physical abuse was significantly correlated with the intensity, but not the frequency, of such nightmares). Second, contrary to popular conception, sleep paralysis nightmares rarely contain explicit sexual elements. Instead, any perception of being assaulted is more likely to involve feelings of strangulation or suffocation (Ness 1978; Hufford 1982; Wing et al. 1994). Finally, sleep paralysis nightmares are a frequent symptom of narcolepsy, a largely neurological disorder with strong evidence of a genetic component (Lee, Blwise, Lebret-Bories, Guilleminault, and Dement 1993). This suggests that sleep paralysis nightmares in general have a mostly neurological basis, with psychological elements, apart from general stress level, playing a relatively minor role in their occurrence (Spanos et al. 1995). In support of this, Kettlewell, Lipscomb, and Evans (1993) found that subjects who had experienced sleep paralysis nightmares showed a significantly different profile of scores on the Cognitive Laterality Battery. They argued that these results support the notion that propensity to sleep paralysis nightmares is a function of biological variables rather than "psychosexual" variables.

Sleep paralysis nightmares have also been implicated in the recent controversy

over false memories of trauma. The most striking examples involve reported memories of UFO abductions (e.g., Mack 1994), which critics have claimed are often based upon sleep paralysis nightmare experiences (Spanos, Cross, Dickson, and DuBreuil 1993; Newman and Baumeister 1996). Pendergrast (1995) described several instances in which sleep paralysis nightmares were interpreted as indicating repressed or dissociated memories of childhood sexual abuse. Similarly, Hays (1992) described four people who reported being sexually assaulted on repeated occasions, but who were eventually diagnosed with narcolepsy. He argued that the assaults, often accompanied by feelings of paralysis, were probably hypnagogic hallucinations associated with their disorder. Insofar as narcolepsy often goes undiagnosed, Hays recommended that clinicians should be alert to its possibility in such cases.

A further example involving possible misinterpretation of a sleep paralysis nightmare can be found in a recent case reported by Stein, Solvason, Biggart, and Spiegel (1996). They described a female patient diagnosed with several ailments, including schizophrenia, who under hypnosis recalled a sexual assault by her landlord while she lay in bed. She reported that she was "afraid to move" and "unable to wake up though she knew what was happening to her" (p. 549). The authors speculated that this recovered memory was either real, partially real, or a hypnotic confabulation. Another possibility, however, especially given that she was also diagnosed with narcolepsy, is that this was a veridical memory of a sleep paralysis nightmare, perhaps sufficiently trau-

matizing to have contributed to her condition.

Until there is greater awareness among clinicians of the subtleties of sleep disorders, sleep paralysis nightmares and similar sleep-related phenomena will continue to be overlooked or misdiagnosed among psychiatric patients. More research is needed concerning the extent to which sleep paralysis nightmares may be related to trauma, both as an outcome of trauma and as trauma-inducing events themselves. For example, Hudson et al. (1991) noted that the terrifying sleep paralysis nightmares reported by their PTSD patient essentially replayed the severe sexual assaults to which she had been subjected. Do sleep paralysis nightmares associated with trauma usually incorporate elements of the trauma-inducing event? What is the relationship of such nightmares to the prognosis and treatment of trauma? Finally, to what extent might sleep paralysis nightmares indicate that a traumatized patient is actually narcoleptic, and that a remembered traumatic event is actually a hypnagogic hallucination or reality dream?

As for Anna O., her black snake hallucination may constitute the first report in modern psychiatric literature of a trauma-inducing sleep paralysis nightmare. Insofar as she became a staunch critic of psychoanalysis following her recovery—possibly because of the manner in which Breuer and Freud had falsely claimed that her analysis had been largely successful (Borch-Jacobsen 1995)—it is possible that she would have had a more favorable view of this alternative interpretation of her significance in psychiatric history.

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