

# **Aphasia and Incapacitation**

## **Ganser Syndrome in an Adolescent Female**

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### Summary

*A 14 year old mildly retarded adolescent female with a history of disturbed family relationships, lying and stealing presented with a cognitive disturbance marked by approximate answers (vorbeigehen) and erroneous temporal transpositions. A combination of false recall and lack of insight is characteristic of certain fluent paraphasias. In the presence of a clear sensorium, a circumscribed Ganser's syndrome does not justify deprivation of right to trial.*

### Introduction

In 1898 German psychiatrist Siegbert Ganser (1853-1931) reported a peculiar syndrome of "approximate answers" or *vorbeigehen* occurring in male prisoners with lack of insight into the errors, accompanied by a hallucinatory delirium and hysterical sensory stigmata. Recent trauma or stress; a rapid remission with amnesia for the episode; and depressive recurrence were also observed. Ganser regarded the condition as an "hysterical twilight state" distinct from malingering (Ganser, 1898; Lehmann, 1967). Since that time diagnostic controversy has surrounded differentiation of the core element of "approximate" response to questions from adventitious comorbid mental states and conditions (Cocores, 1984).

### Case of L

L, a 14 year-old -female, was referred for psychiatric assessment of competency to stand trial. She had been arrested at the age of 12 for petty larceny while living at home. At the time of her arrest, family and acquaintances attested to her inaccuracy as a historian, her tendency to tell lies as it suited her, and a significant history of both lying and stealing.

Subsequent allegations of sexual abuse led to placement with a family care provider under the authority of the Dept. of Social Services (DSS). The charge of larceny was not litigated due to a formal finding of incapacity to stand trial based upon psychological examination and test findings of mild retardation. Custody was then transferred from DSS to OMRDD (Office of Mental Retardation and Developmental Disability).

### Mental Status Exam

(1) L first presented with grossly intact memory, orientation and judgment. She appeared her age, a congenial, responsive youthful female with no defects of gait or station. Mildly impaired recall of digits was noted. Although she could recall up to four digits forward and back, she had several ordinal reversals.. No disturbance of mood, affect, thought or speech was noted..

Notwithstanding continued lying and confirmed stealing, L appeared able to understand the nature of the charges and assist her attorney in defence, hence competent to stand trial. Apart from mild mental retardation on earlier test (full scale I.Q.68; verbal 66, performance 72)), no psychiatric disturbance was diagnosed.

(2) One year later the patient was again seen regarding placement. OMRDD felt she could best be served by a transfer to a highly structured residential school under DSS supervision. The week before her appointment, L's foster-mother abandoned her husband and children for a move to California with her lover. Her husband felt that this loss must grieve L deeply. L initially affirmed that she: "was mad and upset that she (foster-mother) hurted [sic] a lot of people and she should have told me. I was the last one (in the family) to hear. Nobody bothered to tell me." She then said brightly "now I get to do what I want, now that she is gone." She spontaneously related how a boy at the swimming pool was "trying to pull down girl's pants," and she "told on him and got him in trouble."

In discussing her role as informer L asserted that she found out about events on certain days (before they actually took place), varying her account even as we reviewed the "facts." She was unable to correctly identify the current year (1986) from the presentation of three options (all in the 1980's). In several instances she misidentified the year shortly after correction. She named "George Washington" as the current president. After this examiner's correction (Ronald Reagan) and a lapse of several minutes she then next chose first "Thomas Jefferson" and then "Abraham Lincoln" from a list which included Reagan.

At this point in the examination I queried L regarding her school performance:

Q. How did you do in school this year?

L. Very good. I got all A's and B's. I got a 99 in English, 75 in history, 100 in Social Studies.

Q. (surprise) That is good. What did you say you got in English again?

L. 98. And an 85 in history, and 75 in Social Studies?

Q.(disbelief) What in English?

L. 96.

L's lack of insight regarding her shifting temporal responses and mistaken recall was accompanied by a manner both superficial and talkative. Her responses to questions were offered with facility and imperturbable conviction despite repeated correction regarding errors and inconsistency. At no times did she manifest any appearance of intentional dissimulation. The apparent instability of her memory triggered no concern for its reliability or veracity. She appeared both cognitively and emotionally "blind" to her errors.

Despite inconsistencies, inaccuracies, transpositions, and repetition errors, L hued closely to the categorical bounds implied by the queries, maintaining a high degree of relevance without wandering thought or circumlocution. She evidenced no depression or dysphoria. Her cheerful response set continued through answers right or wrong. There was no loosening of associations, no neologisms, no circumstantiality or other features of a formal thought disorder.

Diagnosis: "marked mnemonic disturbance with a difficulty in sequencing and "near" but inappropriate answers; compatible with the Ganser Syndrome."

### Recommendations

I discussed with the referral source the importance of (a) resolving the charges against her, (b) measuring the responsibilities of the agency versus her own civil rights, and (c) her prognosis. The history of lying, stealing, and parental neglect suggested that DSS was the appropriate agency to deal with the issue of juvenile supervision. Her working intelligence did not appear to imply or necessitate OMRDD involvement.

But L's circumscribed Ganser syndrome raised an important new issue. The disturbance manifested acutely, perhaps precipitated by the unforeseen departure of her family care "mother." It was accompanied by no dyssocial behavior or clinical disturbance of emotion. As compared with my initial examination a year previous, an exacerbation of the disturbance in recall presented with modest year misidentification and inconsistent approximate answers in the presence of a singular defect of insight into her condition. Her history of behavior disturbance suggested a chronic, sub-clinical, and intermittent disorder. Her prognosis for continued social disability was substantial.

A chronic, subclinical Ganser syndrome has not previously been identified. Nor is there specific psychiatric treatment for the Ganser syndrome. Counseling and discussion have little effect upon psychic blindness and variable false recall. Remission of the acute disturbance is spontaneous. Relapse is likely. Highly structured social regulation might well aggravate the disturbance, both as an artifact due to increased data sampling, and by frustration of impulse resulting further misconduct. However, lack of supervision could predictably result in further legal proceedings due to defects in judgment resulting from the memory-paraphrasia defect. I discussed these issues, but could not resolve them. I continued to affirm her competency regarding her understanding of the outstanding charges against her and her ability to aid counsel in her own defense. I also recommended neuropsychological consultation pending further examination.

#### Ganser's Syndrome: What is It?

Some years prior to Ganser, Moeli described "vorbeireden" in psychotic prisoners (Moeli, 1888). Vorbeireden, like "paralogia," refers to facile sliding from one idea or logical category to another, losing the thread of logic which supports the fabric of communication (Hart, 1938). Ganser's term "vorbeigehen," refers to "passing by the point" in such a way that over-arching categories are preserved, and specific questions receive close but inaccurate responses (Goldin, 1955; Enoch, 1961; Weiner, 1955).

Early studies affirmed Ganser's concept of an hysterical "twilight" state distinct from malingering. In 1902 Nissl argued that since "approximate answers" were also observed in catatonia the syndrome was schizophrenic, not hysterical (Nissl, 1992). In 1906 neurologist Wernicke termed a similar condition with no disturbance of consciousness "hysterical pseudodementia" (Wernicke, 1984). By 1913 the syndrome had been occasionally detected in non-criminals (Flatau, 1913). Since then Ganser's syndrome has been noted in numerous conditions including post-partum psychosis (Bender, 1934), schizophrenia (Anderson, 1941), alcoholism, neurosyphilis, epilepsy, meningioma (Goldin, 1955), and infectious, toxic, and traumatic brain injury (McGrath and McKenna, 1961; Anderson, 1959; Anderson, 1941; Uleiner, 1955).

Whitlock argued that the "presence of vorbeireden alone is insufficient to warrant a diagnosis of Ganser syndrome" (Whitlock, 1965). Henneberg drew attention to the phenomenon of "approximate answers" in normal persons (Henneberg, 1964). A 1973 cross-cultural psychiatric study of 18 prison patients suggested a hysteria-malingering spectrum disturbance. Eleven "suspected" Ganser cases with insufficient symptoms were disqualified from study (Tsoi, 1973). Recent focus on this disturbance has emphasized its connection with changes seen in the presenium and later years, especially in the "pseudodementias" where depression and normal aging mimic some elements of true dementia. (Kiloh, 1961; Caine, 1981).

Ganser noted that his patients were never surprised or irritated despite repetitious questions

and inconsistencies of response, and always made the effort to find an answer (Goldin, 1955). This indifference to error has been corroborated by many authorities (Whitlock 1965). The responses often appear foolish or "ridiculous" (Goldin, 1959; Enoch, 1961), a feature sometimes noted in catatonic "buffoonry" (Beuler, 1939).. More recently this attitude of indifference or cheerful inability to develop insight into one's own behavior has been described as a "functional commissurotomy," a dissociation between right and left hemispheric communication (Hoppe, 1976 in Miller, 1986).

### Verbal Paraphasia (fluent dysnomic aphasia)?

In his discussion of "disorders of insight" Critchley identified a series of disturbances which fall in the borderland between organic and functional disturbance causing significant diagnostic dispute. Disturbances of occipito-temporal-parietal function result in both focal and generalized disturbances of attention, recognition, and recall. L's characteristic "cheerful verbosity" linked her overall response set to the nominal aphasias. Critchley suggested this may appear early in the course of a "jargon" aphasia (Critchley, 1964). Indeed the seminal efforts by Wernicke and Kussmaul on verbal paraphasias supply a neuropsychopathologic basis for word substitution which until recently has been ignored by psychiatry (Eggert, 1977).

Geschwind, in a discussion of the organization of language areas of the brain, directs attention to gross defects in repetition of spoken language with preservation of comprehension, and fluency (rhythm, grammar, and articulation). This "conduction aphasia" is the result of a lesion in the arcuate fasciculus which connects the area of verbal comprehension (Wernicke's area) with speech (Broca's area).. A lesion in Wernicke's area may also produce a severe impairment of understanding, even though recognition of nonverbal sounds and music may be preserved. A patient may demonstrate "phonemic" paraphasia, in which similar sounds are substituted; or a "verbal paraphasia" i.e., the substitution of one word or phrase for\* another, sometimes related in meaning e.g, "knife" for "fork"" (Geschwind, 1972). L appeared to manifest a verbal paraphasia in her transpositions and mistaken identities of U.S. presidents.

In regards to the hypotheses of both Critchley and Geschwind, examination of L for faulty repetitions and near-miss approximations by queries auditory, written, and visual presentation, e.g., selection from pictures of Presidents would be of interest. Such simple tests discriminating written, auditory, and pictorial comprehension do not appear to have been conducted with Ganser patients.

### Pseudodementia and Dementia

The term "pseudodementia" in psychiatry may merely conceal an etiologic dispute between advocates for functional vs. organic conditions. Pseudementia has been differentiated from "real" dementia by contrast between adaptive (real world) and test performance (McEvoy, 1979), and its correlation with depression (Kiloh, 1961). The hallmark of pseudodementia is said to be slowed mental processing, a state mimicking subcortical dementia with decreased attention, delayed mental processing and decreased verbal elaboration (Caine, 1981).

Compared to actual dementia, depressive pseudodementia presents with errors of omission and transpositions (mispairing of specific stimulus/response words), rather than errors of commission and "intrusion" (irrelevant responses) (LaRue, 1982). In a controlled comparison of four groups (normals, those simulating mental illness, pseudodementia, and dementia), pseudodementia was associated with the greatest number of approximate and omission errors, while organics dementias

incurred the highest numbers of transposition and perseverative errors (Anderson, 1959).

Recent articles recognize the potential for cognitive disturbance in a variety of clinical conditions (Koenigsber, 1984; Friedman, 1981; McEvoy, 1979). Of Ganser's original three carefully described patients, only one evidenced clear consciousness (Ganser, 1898). Other Ganser syndrome patients have been reported who have a similar clear consciousness (Nardi, 1977) or "conditions bordering on full awareness" (Goldin, 1955). Findings of contained cognitive disturbance suggest a reappraisal of Wernicke's claim that the Ganser State was a form of hysterical pseudodementia (Wernicke, 1964, (Whitlock 1965)).

In contrast to depressive pseudodementia, a true dementia may present with indifference to the deterioration, a feature not unlike the hallmark of an hysterical psychosis (Wells, 1988). Indifference in this regard is to the loss of accuracy, credibility, and veridical support. It is not indifference to the recalled or misrecalled event, which may be invested with substantial affect as in any delusional syndrome. The true dementia is typically associated with defects in orientation as well as memory, regressions in the area of intellect and judgment, and later delusions. In its acute stage some features of delirium may also be present such as clouding of consciousness, confusion, and anxiety.

Critchley draws attention to *petit demence* or subclinical states of dementia, especially in conditions which may first appear as functional disturbance and later present with organic confirmation. In viewing the course of a dementia, alterations in consciousness may suggest a diagnosis which features a spectrum illness, rather than disjunctive or exclusionary functional vs. organic categorization (Critchley, 1964). L's lack of insight, disturbance of memory, and temporal disorientation was consistent with such a phenomenon. In contrast with the diagnosis of Pseudodementia, such identification imputes no conclusory element of non-organicity, thus alerting the clinician to neuropsychological investigation and continued neurologic followup of the disturbance.

### Many faces of Error

DSMIII (Diagnostic and Statistical Manual of Psychiatry, 3rd Ed.) specifically refers to Ganser Syndrome as a 'Factitious Disorder with Psychological Symptoms.' Cocores has pointed out this is in clear disregard of the cumulative evidence against malingering (Cocores, 1984). Knobloch also disputes this diagnostic category, but at the same time alludes to some cases in which shift from "malingering to dissociative disorder and back" (Knobloch, 1986).

Kearns has suggested a differentiated taxonomy of falsification (Kearns, 1984). He would restrict the term 'lying' to an intentionally deceptive false statement. L had been accused of frequent 'lying' in the past, but such was not evident in my examination. Momentary revisions in the presence of unconcern for errors suggested neither intent nor motivation for deception. Circumstances surrounding her referral provided no basis for an inference of lying, factitious or otherwise.

Pathological lying' (pseudologia fantastica) is not subject to direct invalidation since it is based on an unverifiable inference as to "unconscious motive." It is much more like a professional "consensus estimate." L's long history of documented inconsistencies supports this possibility. Yet, the instability of her answers in the immediate examination was of a different sort, demonstrating identification and temporal transposition errors rather than structured or repetitive elaborations.

"Confabulation" may be a feature of tertiary alcoholism (Korsokof's psychosis), with detailed,

variable, and easily provoked false "memories" without shame or surprise. But these presentations are also elaborations with near term recall, substantial categorical displacement, and rapid degradation upon suggestion. L stayed within categories, showed marked lapses on immediate recall, and was resistant to suggestion in the sense that it did not alter her immediate opinion. Confabulation in the ordinary sense was not present.

Trauma may produce both retrograde and anterograde amnesias, i.e. loss of memory for both past and future events. The amnesia does not typically result in a dissociation of affect from the sense of responsibility for the accuracy of the answer. L displayed no additional amnesias, other than the momentary objective loss of memory associated with her variable yet "approximate" answers.

A traditional delusional state was ruled out due to requirements for persistence and durability. For example, in the Capgrass syndrome of mis-identification, a false memory (delusion) leads to a mistaken attributions of personal identity which is associated with affect appropriate to that perception. The Capgrass syndrome (aproposagnosia) is now known to be associated with a number of conditions, some of them with a clear cut basis in organic pathophysiology (Haymen, 1977). L displayed a sort of 'mini' or momentary delusion during the acute occurrence of the Ganser symptom. Her subclinical, chronic condition of historically documented falsification might be compatible with an attenuated delusional condition.

### Course

The duration of the Ganser syndrome has long been at issue, with most authors favoring an acute disturbance featured by rapid spontaneous remission (Corcores, 1984). Yet the occurrence of the syndrome in the prison population (Ganser 1898, Bromberg 1986) and the probable under-reporting of a *form fruste* or sub-clinical variant (Tsoi, 1973) raises an alternate possibility. Malingering and "hysteria" might represent stages in a spectrum cognitive disturbance marked by paraphasic expression and emotional dissociation under worsening circumstance. A clear history and repeated close questions are needed for such identification. Our patient's presentation is consistent with this particular interpretation.

### Relationship to Mental Retardation

The relationship of the Ganser syndrome to mental retardation and developmental disturbance is problematic. Few studies have performed objective testing, perhaps because of the supposed acute and transient nature of the disturbance. Anderson denotes the common element in the Ganser Syndrome and pseudodementia as a "failure in the most elementary knowledge" but goes on to distinguish between them on the basis of chronicity and "the usually obvious exploitation of symptoms in pseudo-dementia" (Anderson, p.395, 1941). Whitlock, with some justification, affirms that "Anderson regards pseudo-dementia as a disorder developing in mentally dull persons who are usually in trouble with authority." (Whitlock, p.21, 1965). Yet, very few cases of either the Ganser syndrome or signs of "approximate answers" have been reported in the retarded. Burd recently reported a Ganser Syndrome in a 15 year old boy, I.Q.58, with coincident Tourette Syndrome, visual impairment and atypical pervasive developmental disorder (Burd 1985).

Latham's detailed study of one case, similar in several respects to our own, offers a table of serial psychological intelligence testing. Early full scale WAIS was 92 with a 10 point discrepancy between verbal and performance scores 26 days after the onset of a post-traumatic Ganser syndrome.

This was followed by "partial" (contrasted to prior very high performance) intellectual recovery with IQ results of 117 and 120 53 and 222 days thereafter, and amnesia for her approximations (Latham,1978).

L presented with a recorded full-scale I.Q. of 68 with & mild discrepancy, not statistically significant, between performance (72) and verbal (.66) I.Q.. Her over-all social and in-school (special education) performance appeared somewhat better than her tested range. She was not tested for I.Q. at the time of the appearance of the Ganser syndrome.

### Occurrence

The Ganser Syndrome has usually been considered to occur at a relatively low rate, and then primarily in male prisoners awaiting trial (Knobloch, 1986). However, review of the literature since WWII supports a much broader occurrence (Latham, 1978). The reporting of unusual cases in a diverse population (Weiner, 1955) vs. typical cases (Tsoi,1973) is a selective filter which may impact incidence/prevalence estimates as well as diagnosis. Tsoi's paper is notable in that he reports 11 suspected Ganser cases and then goes on to reject them without telling us why.

There have been no systematic attempts to study either its prevalence or incidence in other institutionalized populations or in the population at large. Yet the dynamics which underlie unconscious purposeful, avoidant behavior are common enough in many analogous settings, including schools, mental hospitals, churches, and the family (Bromberg, 1986). From a societal perspective, subordinate economic and political roles encourage a spectrum of falsifications. "Little white lies" may be contrasted with "black falsehoods". Gender stereotypes such as the "woman's prerogative" feature a permissive male attitude to female inconsistency. Sexual roles encourage the young female to "use her assets" (physical attractive attributes) or "guile" in marked disregard of intellectual honesty or moral consistency. In the traditional patriarchal family, "conniving" may be useful in order to access money and material desires.

Given the prevalence of such social dynamics, the reported rare occurrence of this disturbance appears paradoxical. Scott, in his commentary on Schorer's translation of Ganser's original text notes that: "neither the symptom nor the syndrome is observed, so far as I know, in juveniles. In some 8,003 delinquents girls and boys personally examined, not one instance has occurred..." (Scott, 1965). Nardi reported a case in a 15 year-old girl previously diagnosed as paranoid schizophrenic (Nardi, 1977). In a case nearly identical to our in several respects, especially with regard to prior delinquent behaviors, Latham found a Ganser syndrome in a woman of 20 (Latham, 1978).

Our patient was delinquent, charged with thievery, and had a long history of lying and sexual misbehavior. She was first seen for psychiatric examination at the age of 14 regarding competency to stand trial. At that time she evidenced mild mental retardation and a mild form of error prone-ness especially with regard to digit transpositions on tests of immediate recall. She was seen again at the age of 15, shortly after her foster mother had run out on her foster father. At this presentation she demonstrated a marked Ganserian type "vorbeigehen" (proximal answers) with lack of insight regarding her errors and inconsistencies. No other psychiatric disturbance was then present.

### Occurrence in Normal Population

The disproportionate occurrence of the Ganser syndrome in those at risk for legal action may be an artifact attending detailed examination for intent, motive, and memory, all primary factors in

the adjudication process. Henneberg wrote that "approximate" answers are frequently given by normal persons in states of "sleep drunkenness" and also during times of embarrassment or playfulness (Henneberg, 1984). Indeed, corollaries of "approximate answers" are seen in early childhood education as well as in elite political circles, where both "approximate" and not-so-approximate answers serve the function of providing an answer rather than appearing "dumb". Threthowan found the highest number of simple approximate errors in his pseudodementia group compared to a control group, an experimental group "simulating" mental illness, and a group of patients with dementia. But he also found the highest percentage of approximate arid transpositional errors, relative to errors of omission, confabulation or perseveration, in his normal group (Anderson, 1959). Specific follow-up using objective psychological testing may help to resolve these issues (Latham, 1978).

With findings of non-specific mild transposition errors on initial examination, on her second visit one year later L presented with a heightened cognitive/affective disturbance. Not only were her answers proximal and variable in the classic Ganser tradition; they were made with a remarkable emotional dissociation from their accuracy. There was no impression of malingering, nor was any other disturbance of emotion or thought present.

### Legal and Social Issues

My assessment of L's competency was not followed by a trial, despite the lack of evidence for legal incapacitation. The justification for the prior finding of incompetence rested solely upon a finding of mild intellectual disability. Szasz has commented extensively on the use of diagnostic procedures to invalidate legal protections (Szasz, 1970). Even her lawyer protested the delay, when one year after the initiation of legal proceeding L "seems to be much better and much more capable of articulating her situation: and in fact, was very capable of assisting in her defense. She really knew' "what was going on and told the truth." Tsoi reminds us that "for criminal offenders, the Ganser syndrome should not constitute unsoundness of mind." (Tsoi, p.569, 1973)

Because of the patient's juvenile status, her disturbed social history, and her natural family's defects in meeting social standards of care; she was placed in protective custody, first with DSS and then OMRDD (where she was placed in foster care). L continued to display patterns of intermittent misbehavior, including lying and stealing, but in other respects met standards for social approval and indeed respect. When last seen she displayed a forme fruste of Ganser's syndrome, with proximal answers, including temporal transpositions and faulty repetitions, in the presence of psychic <cognitive/emotional) "blindness" to her errors (lack of insight) and good-natured responsivity. Her visit at this time was prompted by the OMRDD need for placement, rather than a recognized need for counseling or therapy, or a review of my prior finding of competency to stand trial.

Placement for a patient with a pattern of behavior involving lying, stealing, and false recall, yet with preservation of many social graces.) abilities, and personal assets, is a major dilemma for any body charged with legal responsibility. OMRDD, no less than the family of origin, was perhaps able to mitigate but unable to constrain this patient's behavior. Indeed, the original larceny charge had yet to receive adjudication. A new placement was sought by OMRDD under a return to DSS jurisdiction. The proposed "school placement" was in fact a euphemism for minimal security detention. While well motivated, this is an unjustifiable case of preventive detention, due to the low social status of the patient. This appears to be a dual failure, both to serve the interests of the patient, and those of the

state.

The standard of proof of guilt and retention of civil rights, should be no less rigorous for a young female suffering from mild intellectual, cognitive, and emotional defects than for any other citizen. In the case of L, the conflicting *parens patriae* and police power responsibilities of the state resulted in premature institutionalization and inappropriate agency jurisdiction.

### Conclusion

Patient L, a 14 year-old white unmarried -female, presented with a history of lying, stealing, sexual adventurism, and a tested I.Q. of 68. On initial mental status exam she demonstrated a mild memory disability, with a defect in sequential ordering. One year later she exhibited a marked disturbance of recall, including memory transpositions and "near-miss" answers in conjunction with indifference to her moment-to-moment alterations in response. She was cheerful and voluble, while maintaining a clear sensorium. A disparity between tested I.Q. (F.S.68) and adaptive performance was noted. The patient was neither depressed nor psychotic. Intentional lying, pathological lying, and malingering were considered unlikely. Strong consideration of an dementia forme-fruste or subclinical aphasia of the conduction variety was hypothesized in conjunction with theoretical dissociation of right and left hemispheric communication.

This case is similar to earlier cases described in the prison population. It is also remarkably similar to the case of Miss A described by Latcham, et.al., characterized by chronic lying and stealing, as well as sexual promiscuity and transitory, shallow relationships (Latcham, 1978). It differs, not only from Latcham's Miss A, but also from the original descriptions of Ganser in that it marks a rare occurrence in a mildly retarded adolescent female, with an initial sub-clinical presentation followed one year later by an acute Ganser syndrome with a clear sensorium in the presence of no other psychiatric disturbance. The tendency of such a patient to be deprived of the right to a speedy trial resulting in substitute restrictive special placement is discussed.

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## References

1. Anderson EW and Mallinson WP. Psychogenic episodes in the course of major Psychoses. *J Mental Science* 87:383, 1941
2. Anderson EW, Trethowan WC and Kenna JC. An experimental investigation of simulation and Pseudodementia. *Acta Psych et Neurol. Scan. Supp.*132 to Vol. 34, pp.1-42, 195?
3. Azorin JM and Mattei JP. Pseudodementias. Clinical and pathogenic Problems. *Encephale* 9(2):175-91, 1983
4. Bardu TJ and DiScipio WJ. The Ganser syndrome in an adolescent hispanic-black Female. *Am J Psychiatr* 134:453-4, 1977
5. Bender L. Psychiatric mechanisms in child Murderers. *J Nerv Ment Dis* 88:32-47, 1934
6. Bleuier .E. Lehrbuch der Psychiatrie (I) 6th ed. (Berlin, 1937), cited in Anderson, 1941
7. Bromberg W. The Neglect of Ganser Syndrome. *Am J Psychiatr* 143(7):937-7, July 1986
8. Bulbena A and Berrios GE. Pseudodementia:Facts and Figures. *Brit J Psychiatr* 148:87-94, Jan 1986
9. Burd L and Kerbeshian J. Tourette Syndrome: atypical pervasive developmental disorder and ganser syndrome in a 15-year-old visually impaired, mentally retarded Boy. *Can J Psychiatr* 39:74-76, Feb 1985
10. Caine ED. Pseudodementia. current concepts and future directions. *Arch Gen Psychiatr* 38:1359-1364, 1981
11. Critchley M. Psychiatric symptoms and parietal disease. *Proc Roy Soc Med* 57:422-428, 1964
12. Cocores JA, Wilfredo 6S, Patel MD: The ganser syndrome:evidence suggesting its classification as a dissociative disorder. *Int'l J Psychiatr Med* 14(1):47-56, 1984
13. Eggert G H: Wernicke's Works on Aphasia: A Sourcebook and Review (Hague: Mouton, 1977), pp.49-54
14. Enoch MD and Irving G. The Ganser Syndrome. *Acta Psych Scand* 38:213-22, 1962
15. Flatau G. *Zeitschrift fur die Gesamte Neurologie und Psychiatrie* 15:122, 1913 in Goldin, 1955
16. Ganser SJM. Uber Einen Eigenartigen Hysterischen Dammerzustand. *Arch Psychiatr Nervenkr* 38:633-648, 1898. (English translations in Shorer CE. *Brit J Crim* 5:120-126, 1965; also in Hirsch SR and Shepard M, ed. Themes and Variations in European Psychiatry (U Press of Va) pp68-73, 1974)
- 17 Geschwind N. Language and the Brain. *Scientific American* 226(4) :76-83, Apr 1972
18. Goldin S and MacDonald JE. The Ganser State. *J Ment Sci* 101:267-288, 1955
19. Hart B. The Psychology of Insanity (MacMillan :NY. 4th Ed, 1938) p.123 for discussion of "vorbeireden"
20. Hayman MA and Abrams R. Capgras' Syndrome and Cerebral Dysfunction. *Brit J Psychiatr* 136:68-71, 1977
21. Henneberg R: *Zeit. fur Psychiatr* 61:621, 1904 ( in Anderson, 1959)
22. Kerns LL: Falsifications in the Psychiatric History: a Differential Diagnosis. *Psychiatr* 49:13-17, Feb 1986
23. Kiloh LG. Pseudo-dementia. *Acta Psychiatr Scan* 37:336-351, 1961
24. Knobloch F. Ganser Syndrome and DSM-III. *Am J Psychiatr* 143(3):393, Mar 1986
25. Koenigsber AU. Manic Pseudodementia. *J Clin Psychiatr* 45(3):132-4, Mar 1984

26. LaRue A. Memory Loss and Aging. Distinguishing dementia from benign senescent forgetfulness and depressive Pseudodementia. *Psychiat Clin N Amer* 5(1):89-163, 1982
27. Latham R, White A, Sims A. Ganser Syndrome: the Aetiological Argument. *J Neurol Neurosurg and Psychiatr* 41:851-854, 1978
28. Lehman HE. Situation-Specific Syndromes. Comprehensive Textbook of Psychiatry, Freedman and Kaplan, eds. (Baltimore: Williams & Wilkins Co., 1967) pp.1150-1151
29. McEvoy J and Wells CE. Conversion Pseudodementia. *J Clin Psychiatr* 40:447-449, 1979
30. McGrath S D and McKenna J. The ganser Syndrome; a Critical Review. *Proc 3rd World Cong Psychiatr* Vol I, p.156, 1961 (in Whitlock, 1965)
31. Moeli C. Ueber Ihrer Verbrecher. Berlin, 1888 (in Weiner, 1955; Anderson, 1959)
32. Nardi TJ and DiScipio WJ. The ganser Syndrome in an Adolescent Hispanic-black Female. *Am J Psychiatr* 134:453-454, 1977
33. Nissl F. Cbl f Nervenheilk u Psychiatr. 13:2, 1902 (in Anderson, 1959)
34. Phillips MR, Ward NG, Ries RK. Factitious Mourning: Painless Patienthood. *Amer J Psychiatr* 146:426-425, 1983
35. Scott P D. Commentary on "the Ganser Syndrome" (trans. by CE Schorer of Ganser's 1898 article.) *Br J Crim* 5:127-131, 1965
36. Stern EE and Whiles WH/ Three Ganser states and Hamlet. *Journal Mental Sci* 88:134-141, 15-42
- 37 Szasz T. Psychiatric Classification as a Strategy of Personal Constraint. *Ideology and Insanity* (Anchor: NY, 1970), pp.196-217
37. Tsoi WF: The Ganser Syndrome in Singapore: a Report on Ten Cases. *Brit. J. Psychiatr* 123:567-72, 1973
38. Wells CE and Duncan GW. Neurology for Psychiatrists: Table 5-4, p.93 (Davis:Phil, 1980)
39. Weiner H and Braiman A. The Ganser Syndrome, a Review and Addition, of some Unusual Cases. *Amer J Psychiatr* 11:676-773, 1955
48. Ulernicke C: Grundriss der Psychiatrie. Leipzig, 1966 (in Whitlock, 1967; see also Anderson, 1941)
41. Whitlock. FA: The Ganser Syndrome. *Brit J Psychiatr* 113:19-29, 1967