Korsakoff Revisited

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Summary

Currently the presence or absence of alcoholism seems to determine whether or not the diagnosis of Korsakoff Psychosis is made. Failure to recognize Korsakoff's original emphasis on the association of this syndrome with any medical or surgical condition, and loss of his descriptions of anxiety, depression, and mania as part of this syndrome, has led to a failure to recognize it. This paper reviews his last publication on the subject, reviews its use in present practice, and points to stress as the etiology.

Modern references to the work of Korsakoff describe it as either a psychosis or a syndrome, there seeming to be no distinct difference in what is subsumed by either term. Summing up his work under four elements is credited to the writings of Bonhoeffer (Whitty and Langwill, 1966). The four cardinal elements are: memory defects for recent events, retrograde amnesia, disorientation, and confabulation. Lack of insight and lack of initiative are also considered to be part of the disorder. Etiologically this disorder is thought of as being similar to Wernicke's Syndrome, the consequences of alcoholism, especially the avitaminosis of alcoholism. Textbooks of neurology (Wechsler, 1963) and psychiatry (Thompson, 1959; Noyes and Kolb, 1963; Brosin, 1967) ordinarily add other possible etiologies such as head injury and diabetes without attempting to explain how the avitaminosis concept could be applied to these two conditions.

In the opening of his third and last paper (Korsakoff, 1955), summarizing his experience as described in two of his previous papers, Korsakoff called attention to the coexistence of mental symptoms and multiple neuritis in the same patient. (It) "usually develops in the course of other diseases— post partum, during acute infections, and some chronic diseases." In regard to polyneuritis he noted that on some occasions it was the prominent manifestation, whereas in others it was so slight as to escape notice unless it was specifically looked for, noting that its only manifestation might have been pain in the extremities or pleurisy. Not only could the severity of these symptoms vary between individual patients, but could fluctuate in the same patient. Further, the intensity of the polyneuritis was in no way related either in degree or temporally to the manifestation of the mental symptoms.

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In assessing what he meant by mental symptoms it appears that he was referring to delirium (Morse and Litin, 1971) with explicit references to mood as can be seen in reference to irritability, anxiety, agitation, and hypomania. The failure to discuss mood as a separate entity probably was in keeping with the times. In the 19th century considerable attention was given to perception, thinking, association of ideas, and cognition in general, whereas the attention to mood was given by the psychoanalytic school and gained prominence in the 20th century. Thus distinction in the paper should be made between depression of the nervous functions as related to muscular weakness, and those related to mood. Thus his paper dealt with a syndrome consisting of polyneuritis associated with disorders of cognition and mood which accompany a wide variety of diseases.

In this last paper of his there was no attempt to relate this syndrome to alcoholism. In fact, of the 14 cases reported in the paper, which updates his two previous reports, in none of them was alcohol a factor. In the references to typhus, typhoid, tuberculosis and the others one can see the then prevalence of such diseases, rather than a grouping selected because of this syndrome. There was no occasion for inferring that he meant anything other than that the syndrome could be found in association with any disease. His one reference to a surgical case is found in the patient with an intestinal obstruction.

Another consideration that should be made in interpreting this paper in today's patient is the progress in medicine since that time. He postulated that the mental symptoms seemed to appear in a severity proportional to the severity of the underlying disease. Considering the changes in therapeutics with the shorter course of such disorders and in the increase of agents which protect the body's homeostatis, it would be expected that the manifestations of the syndrome would today be somewhat more subtle.

His reference to cognition was weighted heavily in the modality of memory although there was direct reference to obsessions, association of thoughts, abstract reasoning, and illusions. He noted that recent memory was most affected, but also reported that this defect was noted to occur in regard to past events in the more severe cases. Of particular note was the fact that events which had passed only momentarily had left no apparent memory trace. Sometimes events were not lost, but merely displaced to an inappropriate time, and the lack of chronological historicity seemed intertwined with the loss of memory for the event. Thus an uncertainty as to the chronological distorted the memory of remembered events. In the same way a confusion of location or person distorted otherwise correctly remembered events.

This corruption of the context of an event through distortion of time, person, or location is discussed at length by Hans Buerger-Prinze and Martti Kaila (1951) in their work on the amnestic syndrome. They report the account of patient S. in the examining room. "(Why are you here?) 'I was looking for work'. (Who am I?) 'A son of the business.' (What are the other men doing here?) They sleep here.' (Why?) 'Because tiredness prevails.' (What kind of house is this?) 'A bakery.' (Are you not sick?) 'Could be.' (Why are you in the hospital?) 'I broke my leg.' The patient apperceives the examining room as an office. On the ward he takes it for granted that he is in a hospital, but in the examining room it requires suggestive questions before he realizes the situation."

Besides referring to the peculiar quality of the memory disorder, Korsakoff noted the fluctuating intensity of the amnesia. Sometimes amnesia was prominent and accompanied by confabulation. However, confabulation needed not be a total fictitious creation, but could have appeared as real events described with distortion of time, person, or location. He also described situations in which the patient appeared to function very adequately, but with patience and determination the ability to obscure the memory deficit could be undermined and the pathology demonstrated.

Not only did he state that memory deficits could be obscured, but also he demonstrated that in the same patient this impairment

could wax and wane. He noted, further, that fatigue could accentuate this symptom. He stated that generally the memory deficit waxed and waned with the course of the underlying disease, but indicated that it did not necessarily do so. Not only that, but the memory deficit could continue for years after the underlying disease process was itself arrested.

In regard to the onset and course of the mental symptoms he noted that in some cases they could appear abruptly, whereas in other situations the onset was insidious. In some situations the mental symptoms may be ascribed erroneously to the general debility resulting from the disease. In other instances there may be an initial period of agitation followed by an asymptomatic period before the disorder reappears in an identifiable form.

If one looks, then, at the impact of this psychopathology as he described it. in terms of the effect on the process of psychiatric evaluation, it becomes clear why it would be difficult in a given patient to elicit the information and to demonstrate the findings. If the patient has a degree of recent memory loss accompanied by difficulties with time, person, and geographic location with a tendency to confabulate, what seems to be a coherent history may be inaccurate and cover a memory deficit. A lack of continuity of the history and a change in detail from time to time may give the appearance that a patient is lying. Illusions of hearing and vision are easily forgotten or denied. Further, deficiencies of grasp and memory may only become apparent with careful and patient examination.

This mental condition occurs with regularity in present day clinical practice. At one 400 bed general hospital patients are regularly referred from both the medical and surgical services with exactly these findings. Perhaps it is most obvious on the surgical services where a patient has had any kind of procedure and initially does well, but after an interval these manifestations begin to occur just as Korsakoff described them. If one reviews the nurses' notes in such cases one will find the onset of agitation and confusion noted first by the night nurse: this to be followed in two or three days (occasionally longer) with the full blown syndrome. Cases from the medical services are somewhat more difficult to detect because of the confusion of the disease process itself. According to one recent estimate delirium occurs in 15 to 20 percent of general hospital patients (Jones. 1974).

Throughout this review as well as **in** Korsakoff's paper the patients discussed have been hospitalized patients, or at least, non-ambulatory patients. It is especially instructive to review histories of outpatients with this psychopathology in mind. Retrograde amnesia and a general tendency to deny periods of mental clouding especially where amnesia is involved lead to omission of significant data. Reviewing with a patient periods following parturition, injury, hospitalizations, periods of psychological stress for evidence of changes in social functioning will often lead to clear definition of periods of succeeding delirium. Care must be taken not to allow rationalizations which would seem to make the diminished social functioning reasonable to obscure the symptoms. Deficiencies in cognition may last for years leading the patient to omit a complaint about it because it has come to be believed as normal. When recovery has occurred with treatment, the patient can clearly identify the period when impaired cognition was occurring. It is rare to find an adult experiencing these symptoms who has not had many previous episodes. Sometimes when a patient has made a recovery he will report that he does not remember ever before having a clear sensorium.

Thus far in this review little has been said of the polyneuritis which was described as part of the syndrome. Korsakoff himself did not give this finding great importance. "In his own words: 'At times. . .the symptoms of multiple neuritis may be so slight that the whole disease manifests itself exclusively by psychic symptoms'." (Korsakoff. 1955). In some of the cases noted by Korsakoff the neurological changes could reasonably be expected to be an accompaniment of the underlying disease, whereas in others it could have been the result of malnutrition. Failure to note it in today's patients may be the result of very minimal symptoms which are ordinarily not looked for. generally

shorter courses of the disease, and better nutrition in severely ill patients. There is also a tendency in a mentally disturbed patient to brush off complaints of vague pains and indescribable weakness or ataxia as "psychosomatic."

Review of Korsakoff's paper and present day cases point etiologically to no particular disease process. These symptoms can develop after illness, surgery, accidents, moving, working long hours, long trips, parturition, or during emotional stress. It would seem wise to use the term "Korsakoff's psychosis" and by that to mean the specific cognitive and mood changes as he described them. The increased incidence in alcoholism should not obscure stress as the more fundamental etiology. Confabulation in its most florid form need not be present. The relationship of polyneuritis to this psychosis is not yet clarified and ought to be further investigated. Such an interpretation would lead to better forms of treatment, and better understanding of the role of the entire process of stress in producing such symptoms.

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BOOK REVIEWS

Holistic Approaches *to* Offender Rehabilitation L. J. Hippchen C.C. Thomas Springfield, 111. 1982,487 pages.

This is Professor Leonard J. Hippchen's second book wherein he synthesizes the factors which make up a true holistic approach to the problem of criminal behavior, its causes and treatment. For the past 100 years two philosophies have dominated how we deal with criminals. Over the past two decades the corrective approach which created a good deal of hope that we could reduce the prevalence of criminal behavior has come under increasing and vigorous criticism from those who believe a punitive approach is best. There are valid arguments for both points of view. There has been a decrease in the relapse rate (termed "recidivism" by criminologists) over the past fifty years, yet the incidence and prevalence of antisocial behavior is very high and has been increasing rapidly. Of course, we may simply be on the ascending portion of a cycle which spans many decades. If true, within a decade or two we may be on a descending phase and crime will diminish.

These types of variable phenomena are common in biology.

Hippchen notes that true correction or rehabilitation can not be criticized for it has so far been used to such a limited degree as to be nonexistent. For it has generally been applied only to the host of psychosocial factors which shape our personality and behavior. It has generally ignored medical, psychiatric and nutritional factors even though the criminal justice system makes allowances for crimes committed while suffering from some forms of mental disease. But this seldom leads to adequate treatment and rehabilitation. True correction uses methods which span all those variables which control personality and behavior. These are the variables discussed in this book by professionals experienced in their field.

One could say that deterrence (an aspect of the punitive approach) has not been tried either for it does not apply the principles of using negative sanctions to change behavior. A proper punitive approach would apply appropriate punishment as soon as possible after the crime had been committed, and every time it was committed. A child addicted to sugar may steal money from his parents or family with which to buy candy. It

is unlikely he would continue to do so if he were caught and punished every time. But if caught ten percent of the time he might consider the odds acceptable. What we do not know is what probability figure is acceptable for criminals. I doubt a zero probability they would not be caught would be acceptable.

If punishment is to be an effective deterrent it is advisable to reinforce acceptable behavior, i.e. after punishment the ex-criminal should be exposed to the social influence of normal people. But prisons provide just the opposite. They provide a community which reinforces criminal behavior. Longer sentences fix this behavioral pattern more efficiently. The condition that released prisoners not associate with other ex-cons is theoretically sound but in practice difficult to live up to and enforce.

Also if punishment is to be effective it should be administered to a person who is mentally alert. There is no point admonishing a person who is asleep. Many criminals appear to be asleep. They are so sick that no amount of punishment can do any good.

The ideal solution is to follow the holistic approach described in this book. That includes healing the person who is ill. providing appropriate punishment which will reform and deter in such a way as to preserve the humanity of the person and minimize the cost to society.

There are four sections. In the first, following Hippchen's discussion, offender classification is described. In the second section diagnosis is discussed. It includes an outline by Dr. P. Bonnet of biochemical diagnosis used by orthomolecular psychiatrists, a discussion of growth maldevelopment by Dr. E. L. Rees, and outline of the team approach by Dr. G. Von Hilsheimer.

The third section outlines treatment approaches ranging from nutrition to religion and social attitudes while the last section discusses a few special problems.

This book should become a classic and probably will, for criminologists must turn to alternative approaches if they are to salvage any of the corrective approach. If they ignore the medical/nutritional factors they risk destruction of the correctional philosophy which can work, but only if one is dealing with persons whose brains are normal.

Already there are major changes in several areas of the United States led by dedicated workers such as Barbara Reed and Alexander Schauss.

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I am very sorry to have to announce that Professor Leonard J. Hippchen died suddenly. He was a pioneer in introducing orthomolecular psychiatric techniques into the field of criminology and he was at the height of his ability to make these contributions.

Biological Aspects of Schizophrenia
Kjell Flekkoy
Universitetsforlaget, Oslo
Bergen, Tromso; 1981
140 Pages (including references)
$22.00

Though still far from being readily accepted as articles of faith, biological psychiatric theories have recently made significant inroads into the general epistemology of contemporary neuropsychiatry (cf—*Psychology Today*, Feb. '81). Yet the belief that biochemical deficiency can cause illness is not a latter day epiphany: this interrelationship was demonstrated by Hopkins and Fink as early as 1912. More recently, the enlightened research of pantheon clinicians Hoffer and Osmond, has illustrated a link between schizophrenia and vitamin deficiency. (Their ground-breaking work led to the establishment of *The Journal of Orthomolecular Psychiatry.* This quarterly has become a major conduit in what was once considered unorthodox and dubious alternative psychiatry, but which is more and more growing to be accepted by the scientific community as common sense).

Schizophrenics currently occupy approximately one quarter of the hospital beds in the United States ! Clearly, any rational data aimed at remedying the personal suffering

and devastating social expense surrounding this phenomenon, must be embraced warmly. To this end, Kjell Flekkoy's ***Biological Aspects of Schizophrenia*** is a welcome contribution to our growing knowledge of this debilitating mental condition.

Flekkoy is a Norwegian clinical psychologist extremely well-schooled in the nuances of neurophysiology. In his studies he explores the realm of schizophrenia from numerous allied perspectives, including those of psychology, genetics, biochemistry and neuropathology. While Flekkoy's findings are too delicate and detailed to be discussed herein, they do appear credible, often original, and certainly thought-provoking. Suffice to say that, though the actual text of this book runs a scant 102 pages, it is still one of the most diligently researched pieces available on these topics.

In addition to covering valuable personal research data, Flekkoy has collated findings from dozens of eclectic scientific studies of schizophrenia. Serious researchers will find this book worth its somewhat lofty price, if only for the exhaustive bibliography.

While confident of his hypotheses, the author is wisely cautious. To Flekkoy's credit, his writing is refreshingly devoid of the doctrinfaire pontificating of some less informed physiological psychologists.

Stylistically, Flekkoy's treatise is quite lucid and well-structured; but as the author concedes, this is no book for those persons totally unacquainted with the complex field of neurophysiology.

It seems fitting at this time to interject a general criticism surrounding biological psychiatric theories: many persons hold that these theories have become their own worst enemies due to the scientific jargon in which they are couched. Despite the logically coercive nature of these theories, many lay and professional persons alike are inclined to disregard these intricate hypotheses on account of their rarefied and indecipherable nature. In the preface to Flekkoy's book, G. Allen German discusses this principle of parsimony:

Biological research ... is now highly technical and often beyond comprehension of the average practitioner—a fact not uncommonly evidenced by the rejection of the role of biology in these disorders, and flight into the safer, more speculative world of philosophy, psychoanalysis and liberal humanism.

Finally, many readers will find this book overexpensive. At $22.00 only the most enthusiastic, committed clinicians will make this somewhat esoteric purchase. It is hoped, however, that they will circulate it among their peers, as it does contain a wealth of information.

G. Charles Brown