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Confabulation

By N. BERLYNE

Psychiatry suffers from the use of terms widely employed, poorly defined and variously interpreted. Delusion is one such term, but has appropriately commanded a good deal of attention (Hüber, 1955, 1964). Confabulation is another, but has not enjoyed the same critical scrutiny.

Bonhoeffer's contribution to the study of confabulation has been fundamental and has not been eroded in the seventy years since his observations were made. Bonhoeffer (1901) stated that confabulation in the Korsakov syndrome could take two forms: (1) Confabulation of embarrassment, which was a direct result of the memory loss and depended for its presence on a certain attentiveness and activity. The patient tries to cover an exposed memory gap by an *ad hoc* confabulated excuse relating to his recent behaviour (e.g. patient who has been bedridden in hospital for weeks describes in response to questioning how he has been for walks, has returned from business, etc.); he is, however, convinced of the reality of his tales. In a later paper Bonhoeffer (1904) described these confabulations as momentary confabulations. (2) In other cases confabulations exceeded the needs of the memory impairment; the patient describes spontaneously adventurous experiences of a fantastic nature. Bonhoeffer noted their relationship to delirious, dream-like states and felt it was likely that they developed out of such.

Pick (1905, 1915, 1921), in a series of papers, emphasized the suggestibility of the confabulating patient. Suggestibility was dependent on clouded consciousness, weakened judgement and lively fantasy. In some cases confabulations resembled day dreams. The presence of contradictory statements side by side and the absence of a corrective mechanism were also noted, Pick contending that these facts reflected a basic thought disorder in the Korsakov syndrome.

Moll (1915) pointed out that confabulations were commonest at the beginning of the disorder, and as the Korsakov state progressed lost spontaneity and frequently disappeared. The influence of former habits and of emotional complexes was evident.

Van der Horst (1932) sought to explain all the features of the Korsakov syndrome on the basis of a loss of temporal signposts for personal experiences, leading to defective categorization of experiences in time. Confabulations were merely actual experiences taken out of their proper chronological order. Van der Horst further postulated that the individual's wishes and interests guided confabulation in the same way as they controlled dream fantasy.

The resemblance between confabulation and dreams has been noted by other authors. Scheid (1934), on the basis of observations of an alcoholic Korsakov patient, showed the resemblance between confabulation and dream experiences. Memorized material in the Korsakov patient was in a timeless and time-placeless form. The truly experienced and also the confabulated content appeared in the memory as if dreamed. Schilder (1951) considers the loss of correction processes to be important in confabulation, as in day dreams where the loss is temporary. Whitty and Lewin (1957) mention vivid day-dreaming and difficulty in distinguishing fantasy from reality after anterior cingulectomy, and they later described a Korsakov syndrome after cingulectomy (Whitty and Lewin, 1961).

Williams and Rupp (1938) felt that confabulation was related to the personality structure of the patients, this latter feature governing the increased suggestibility.

Zangwill (1953) saw confabulation and

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associated phenomena as a defence against a 'catastrophic reaction', and further (Zangwill, 1966) suggested that in addition to memory defect an extensive psychopathological reaction resembling the denial of illness syndrome (Weinstein and Kahn, 1955) accounted for confabulation and other features of the Korsakov syndrome.

Patients and Methods

Memory falsification was studied in 7 patients displaying the Korsakov syndrome seen in the period 1958–66 and in 62 cases of dementia of various causes seen consecutively in 1963 and 1968–69.

In the Korsakov syndrome the clinical features were noted. Suggestibility was tested by putting to the patient a fictitious episode—usually that the examiner had had tea with the patient that morning. In two cases suggestibility was tested in the post-confabulatory phase. The patient's pre-morbid personality was determined from information of the nearest relatives. All the patients were followed up personally for varying lengths of time, but final outcome was determined in three cases by personal interview, in two cases by interview by P.S.W. and in two cases by detailed reports from relatives. Psychometric testing was carried out on four patients in the confabulatory and post-confabulatory phases.

In the dementia group special attention was paid to the presence of memory falsification, and the clinical features were noted. Seven patients (23·3 per cent) of the group manifested a form of memory falsification deriving from illusory or hallucinatory experiences in states of clouded consciousness, and these were excluded from the study. In the case of three patients who presented with a type of fantastic confabulation with paranoid features evidence of pre-morbid personality traits was obtained from relatives.

The following tables summarize the clinical features, and the case reports illustrate each type of confabulation.

Case Examples

(a) *Momentary confabulation in Korsakov group*

L.M. was a 46-year-old chronic alcoholic. He was admitted having been found at home in a very neglected state. He was euphoric, and showed devastation of recent memory. He said that he had been brought to hospital by two Sick Berth Attendants and a Petty Officer and that he was serving at Gosport on M.T.B.'s. (He had in fact been a Chief Petty Officer on motor torpedo boats during the war.) He said that the war was on and the invasion of Europe was imminent, yet he could recollect both VE and VJ Day. He gave the date correctly; when told that this would mean the war had been going on for 20 years he was unperturbed. He scored Grade I on the Raven Matrices. He confabulated for two months only. He was discharged seven months after admission much improved and with little clinical evidence of memory impairment, but when last seen just under two years after he first presented his memory was again significantly impaired. Subsequent follow-up was not possible, as he had left the area and could not be traced.

(b) *Fantastic confabulation in Korsakov group*

J.M. was the only patient in this group presenting with fantastic confabulation:

This 53-year-old housewife sustained a laceration of the scalp and a comminuted fracture of the left tibia and fibula through being knocked down by a motor-cycle. She was unconscious at first, and later confused, irritable and restless. This subsided six weeks after the accident, but then the patient declared that she was in the R.A.F. and that her accident had occurred while flying in France. At other times she talked of the accident having happened whilst she was driving a car; later she maintained that her 'leg trouble' was due to a flying accident and that she was an air hostess. She referred to travels to Egypt, mentioned two accidents (there had only been one), claimed to own a boat and a car (had in fact neither) and to have trained airmen. Intermingled with these falsifications were occasional true memories (e.g. nursing jobs she had held). She continued to confabulate for three months in all, the flying theme remaining prominent throughout. She was discharged home seven months after the accident. Just under ten years later her husband reported that 'she is not the same person as before her accident . . . she has lost all respect in her personal appearance and in her home . . . her memory is not very good'.

(c) *Momentary confabulation in the dementia group*

R.H. was a 49-year-old insurance salesman who sustained severe head injuries in a motor scooter accident. The neurological picture included a hemiplegia. This cleared, but he was left with a dementia. When interviewed six months later,

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following his admission to a psychiatric hospital, he stated that he had been seeing to aeroplane engines that morning. Asked his job, he replied 'Fitter 2A' (he had been in the R.A.F. for 12 years till 11 years before the accident). He gave his age as 15 and said he was married with two children aged 4 and 2½. When it was pointed out that he had said he was only 15 he replied: 'I'm 15½—nearly 16—anyway I will be next birthday.' Four and a half years later he remained euphoric, restless and incontinent and was still producing momentary confabulations.

(d) *Fantastic confabulation in the dementia group*

E.E.L. was a woman of 72 with a history of two years forgetfulness and a few months of nocturnal wandering. On examination she showed a severe memory impairment; she stated she had just been playing cricket for the ladies' eleven, that she was a doctor in charge at Manchester University, and that her son was a Field Marshall and a V.C.

(e) *Fantastic confabulation of paranoid type in the dementia group*

G.T. was a woman of 77, and was referred for a medical opinion when she accused the matron of a private nursing home of stealing £150 off her dressing table and of forging her signature on a cheque for £300. She herself had drawn the cheque for a holiday she had completed ten days before, but she could only vaguely remember the journey. She had a mild memory impairment, but was well orientated in space and in time apart from giving the year as 1956 instead of 1963.

Her son said she had always been 'spiky, and touchy and had not a single friend because of her tongue'.

Discussion

This study confirmed the existence of two forms of confabulation in the Korsakov syndrome, as postulated by Bonhoeffer (1904): the momentary or embarrassment confabulation and the fantastic or productive confabulation. This study brought out certain characteristics of momentary confabulation in the Korsakov syndrome. It is the commonest form of confabulation in the syndrome, and in this series occurred in six out of seven cases. It is brief but not cliché-like, in so far as the replies are not stereotyped. It is autobiographical in content and refers to the recent past. Invariably it has to be provoked. The content is a true memory displaced in its time context. Habitual or affectively stamped activities, such as war service, form its usual theme. Its content may vary from minute to minute and can be extended by questioning. One frequently finds contradictions, facile explanations when these are pointed out, and telescoping of events.

Fantastic confabulation is a much less common phenomenon. Only one of the seven cases of Korsakov's syndrome in this group displayed it, and this corresponds to its occurrence in only two of 20 cases of post-traumatic Korsakov Syndromes reviewed by Flament (1957) and its complete absence in Talland's (1961) series of 28 cases. The content of the confabulation shows less change than momentary confabulation and the grandiose theme is sustained. It appeared in the single case in this series without provocation and was not associated with suggestibility. It is autobiographical but entirely invented, and unlike momentary confabulation is not rooted in true memory. The principal content is invariably grandiose and seems to be related to wish fulfilment and prestige seeking. Fantastic confabulation seems to be a distinct entity having nothing in common with momentary confabulation except its appearance against a background of organically induced memory impairment.

This study showed confabulation to be a common phenomenon in dementia, occurring in 23 (37·1 per cent) of 62 cases. Momentary and fantastic confabulation were recognizable, differing little from their occurrence in the Korsakov Syndrome. In demented patients—particularly those suffering from arteriosclerotic dementia—memory falsification is sometimes encountered on a basis of delirious experience. In this study these have been excluded and only falsification of memory occurring in clear consciousness is considered. One particular type of memory falsification found in a setting of clear consciousness is worthy of mention, for it is well known (Roth and Myers, 1969) though no special term has previously been applied to it. This is a form of fantastic confabulation in which the invented material is paranoid in content. It is commonly concerned with memory falsification involving misappro-

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TABLE
Clinical features of Korsakov patients

Patient	Cause of Korsakov syndrome	Occupation	Age	Sex	Type of confabulation	Duration of confabulation	Onset of confabulation
E.P.	Chronic alcoholism	Housewife	58	F	Momentary	11 months	Gross confusion
L.M.	Chronic alcoholism	Salesman	46	M	Momentary	2 months	Not seen at onset
F.B.	Chronic alcoholism	Electrician	43	M	Momentary	3 months	Gross confusion
J.O.	Chronic alcoholism	Brewery checker	57	M	Momentary	1 week	Gross confusion
L.T.	Brain surgery (Anterior ventriculo-cisternostomy)	Housewife	59	F	Momentary	15 months	Gross confusion
J.M.	Brain injury (road traffic accident)	Housewife	53	F	Fantastic	3 months	Gross confusion
J.S.	Cerebral anoxia (following self-hanging attempt)	Merchant seaman	39	M	Momentary	4 months	Not seen at outset

priation by other people of the patient's money and property. Three cases occurred in this series. All were suffering from incipient senile dementia with correct spatial orientation but mild impairment of recent memory and mild temporal disorientation. In all three cases the basic personality was 'sensitive' in the terminology of Schneider (1958), suggesting that paranoid basic personality traits had determined the content of the confabulation. The high incidence of confabulation in the cases of senile dementia is at variance with Bleuler's (1951) statement that confabulation plays little part in senile disorders.

Barbizet (1963) suggests that confabulation is due to memory impairment. The patient finds his recent memories unavailable and therefore draws upon those that are accessible. But some additional factor must surely be involved. Thus, confabulation was absent in

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in relation to confabulation

Period of follow-up	Condition at end of follow-up	Pre-morbid personality	Life experiences predominating in confabulation	Suggestibility During confabulation	Suggestibility After confabulation	Provocation required to produce confabulation
12 months	Confabulation cleared. Memory still moderately impaired. Still in hospital	Hyperthymic (Schneider 1958)	Shopping	+	—	+
22 months	Confabulation cleared. Memory moderately impaired	Hyperthymic (Schneider 1958)	Wartime naval service: Sales work	+		+
2 years	Confabulation cleared. Memory moderately impaired. Unable to return to work	Hyperthymic (Schneider, 1958)	Wartime army service	+	—	+
4 years	Confabulation cleared. Memory moderately impaired. Never returned to work. At follow-up was again in psychiatric hospital	Inadequate information	Wartime army service	+		+
3 years	Confabulation cleared. Memory slightly impaired. Some apathy	Hyperthymic (Schneider, 1958) 'A Romancer'	Grocery shop work	+		+
9 years	Confabulation cleared. Memory slightly impaired. Some apathy and disinhibition	Extraverted. 'Not a romancer'	Confabulation not based on true experience	—		—
21 months	Confabulation cleared. Memory severely impaired. Severe apathy	Sensitive (Schneider, 1956)	Lumberjack; Wartime naval service; Post-war Merchant Navy service	+		+

cases of pure memory defect described by Zangwill (1966), in the chronic stage of the Korsakov Syndrome where the memory defect was still severe (Talland, 1961), and in patients developing amnesic defects after temporal lobectomy (Milner, 1966). The present study also suggests the existence of an additional ingredient in confabulation apart from the memory failure: whilst confabulation only occurred in a setting of impairment of recent memory, when the confabulation cleared there was still some degree of memory difficulty—varying from relatively slight deficiencies, only obvious to next of kin, to severe anterograde and retrograde loss necessitating long-term institutional care.

With regard to Schröder's contention (Körner 1935) that confabulations cannot be produced for a time further back than the retrograde amnesia, this study confirmed the difficulty

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TABLE II

Psychometric tests in Korsakov patients

Patient	Intelligence test in confabulatory phase	Intelligence test in post-confabulatory phase	Wechsler memory scale test in confabulatory phase	Wechsler memory scale test in post-confabulatory phase
E.P.	*W.A.I.S.* Full scale I.Q. 67 Verbal I.Q. 76 Performance I.Q. 61	*W.A.I.S.* Full scale I.Q. 75 Verbal I.Q. 83 Performance I.Q. 67	Poor performance on logical memory and associate learning tasks filling in defects with confabulated material	Better orientated. On logical memory test remembered main theme but added a lot of fabricated material
L.M.	*Raven's Matrices* Score 49 Percentile 95	*Raven's Matrices* Score 53 Percentile 95	Logical memory score poor. Associate learning: 1 hard association on 3rd presentation	Logical memory score poor. Associate learning: 4 hard associations on 3rd presentation
J.S.	*W.A.I.S.* Full scale I.Q. 86 Verbal I.Q. 93 Performance I.Q. 79	*W.A.I.S.* Full scale I.Q. 93 Verbal I.Q. 95 Performance I.Q. 91	Logical memory score poor. Associate learning: 1 easy association on 3rd presentation	Logical memory score poor. Associate learning: 5 easy but no difficult associations on 3rd presentation
L.T.	*W.A.I.S.* Impossible to evaluate qualitatively. Much better in verbal area. In general achieves no more than borderline grade	*W.A.I.S.* Full scale I.Q. 107 Verbal I.Q. 116 Performance I.Q. 95	Not carried out	Logical memory test very well performed. Associate learning test: 6 easy and 3 difficult associations on 3rd presentation

TABLE III

Diagnostic categories of dementia patients in the study

Diagnostic category	No. of cases
Senile dementia	32
Arteriosclerotic dementia	21
Pre-senile dementia	6
Post-traumatic dementia	2
Dementia due to cerebral tumour	1
Total	62

in demarcating with any certainty the extent of the retrograde amnesia, a finding in agreement with the observations of Victor (1964). In this series patients showed knowledge of certain recent events and at the same time had little recollection of other recent events. Confabulation could not therefore be judged in relation to a strict period of retrograde amnesia, since the boundary varied.

Roth and Myers (1969) contended that the confabulatory ability of the Korsakov patient is a testimony to the intact intellect. The present study did not substantiate this. In every case intelligence test performance was

TABLE IV

Relationship of type of confabulation to type of dementia

Type of confabulation	Diagnostic category	No.	Total
Momentary confabulation	Senile dementia	8	
	Arteriosclerotic dementia	4	
	Post-traumatic dementia	2	15
	Pre-senile dementia	1	
Fantastic confabulation	Senile dementia	6	
	Post-traumatic dementia	1	8
	Dementia due to cerebral tumour	1	
Total patients showing confabulation			23
Percentage of patients with dementia			37·1%

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TABLE V

Fantastic confabulation of paranoid type in dementia cases

Patient	Age	Pre-morbid personality	Diagnosis
E.F.	77	Sensitive (Schneider, 1958)	Incipient senile dementia
B.B.	83	Sensitive	Incipient senile dementia
G.T.	77	Sensitive	Incipient senile dementia

poorer in the confabulatory than in the post-confabulatory phase. Moreover, confabulation has been shown in this study to be a fairly frequent feature of dementia.

Suggestibility has been invoked by some authorities as playing a leading role in the genesis of confabulation (Pick, 1915; Körner, 1935; Ey, 1954). This study showed marked suggestibility to be present in every case of momentary confabulation in the Korsakov Syndrome. The heightened suggestibility had cleared in the two cases tested in the post-confabulatory phase. However, Ey's (1954) contention that the confabulated responses grow out of a framework suggested by the examiner's questions was not substantiated. Questions as to recent activity evoked a variety of replies in momentary confabulation related to habitual or affectively toned pre-illness memories. It seems, therefore, that the increased suggestibility is not directly responsible for confabulation.

If confabulation is related to underlying personality traits, as has been suggested (Williams and Rupp, 1938; Lewis, 1961), this could not be inferred from this study so far as the momentary confabulations of the Korsakov patients were concerned. Five out of seven patients were extraverts before their illness, no less than four showing features of Schneider's 'hyperthymic' personality type (Schneider, 1958); but one patient who showed marked momentary confabulation was a quiet, shy introvert. The only patient known to be given to romanticizing produced purely momentary confabulation. A different situation obtained in relation to fantastic confabulation. It is true that the only Korsakov patient in this series who produced fantastic confabulation had shown no signs of tale-spinning before her illness. None the less she was left with a frontal lobe deficiency syndrome, and this may have played some part in the development of this particular confabulation, noted as the syndrome is for disinhibition and expansiveness. Moreover, the paranoid confabulations of incipient dementia can best be considered a type of fantastic confabulation. There was some evidence that these paranoid inventions were related to underlying personality. Thus, all three patients presenting with this type of confabulation had evidence of an underlying 'sensitive' personality. Fantastic confabulation, as Flament (1957) suggested, may reflect the affects and wishes of the personality. The affects and wishes of the patient may propel fantastic confabulation as in dreams, and the resemblance between confabulation and dreams has been repeatedly noted (Bonhoeffer, 1904; Scheid, 1934).

In this study all cases of the Korsakov Syndrome observed from the outset showed initially a conspicuous clouding of consciousness; however, when the confusion subsided confabulatory behaviour persisted. Confabulation cannot therefore be considered merely as a product of clouded consciousness.

The cause of confabulation remains obscure, and no explanation is entirely adequate. Difficulty in changing the mental set, postulated by Grünthal (1924) as a central feature of the Korsakov Syndrome and confirmed experimentally by Lidz (1942) and more extensively by Talland (1965), may explain the failure of the corrector mechanism. There is some evidence in cases of hippocampal damage that new material is not laid down in the long-term memory store (Drachman and Arbit, 1966), and therefore appropriate recent memories will not be available. This study suggests that memories in the long-term store which are most easily available are those with a strong affective stamp or those which have been grossly overlearned. These memories form the substance of momentary confabulation. In fantastic confabulation, recent memories being unavailable, fantasies are selected presumably based on strong affects. In both types

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of confabulation, because the mental set cannot be shifted, the incongruity and contradictions are not perceived.

The duration of confabulation is variable: it may appear as an evanescent phenomenon or it may last for years. Its disappearance is as ill-understood as its genesis. In many cases—particularly the dementias—this may be related to increasing apathy and the loss of the mental liveliness and reactivity that some writers (Bonhoeffer, 1904; Körner, 1935; Schilder, 1951) consider necessary for its emergence. In other cases its disappearance may be associated with improvement in the Korsakov Syndrome, with better memory function and increased ability to adjust the mental set.

This study has concerned itself with confabulation in the Korsakov Syndrome and in dementia. A variety of memory falsifications are also found in such diverse conditions as schizophrenia and depressive illness, in prestige-seeking psychopaths and even in obsessional compulsive states; they were ably reviewed by Schneider (1928). Kraepelin (1919) described a confabulatory form of paraphrenia, and Jaspers (1913–46) included under the heading of confabulation the delusional pseudo-reminiscences of paranoid schizophrenia, but these conditions have little in common with the confabulation of organic brain disease. There may be an element of wish fulfilment in the fantastic confabulation of organic brain disease, and a similar mechanism may be present in 'fantast' and 'pseudologue' psychopaths (Kahn, 1931) and in some of the grandiose delusional pseudo-reminiscences of paraphrenia, but the fantastic confabulation of organic brain disease is always associated with a fundamental memory defect. The term confabulation has indeed been applied to the normal (Bumke, 1948) or where no memory falsification is implied, as in confabulation associated with anosognosia (Critchley, 1953) or in non-verbal behaviour such as pictorial reproduction (Bender *et al.*, 1938). The variety of clinical concepts of the term confabulation suggests that a generally accepted definition might be of value.

There have been several attempts at a working definition. Talland's (1961, 1965) attempts were thorough, but the definitions he evolved are cumbersome. Bleuler's (1916) plea for the term to imply organic psychosis seems to touch on what must be the keypoint of any definition. The falsifications of delirious states require specific exclusion, and the presence of the basic memory defect needs special mention. Hence confabulation can be defined as 'a falsification of memory occurring in clear consciousness in association with an organically derived amnesia'. This description is brief, avoids a complicated descriptive element, includes both momentary and fantastic forms, and excludes memory falsifications not associated with organic memory defect and those due to delirious states.

Summary

(1) Confabulation is described, and the clinical features outlined, in seven patients suffering from the Korsakov Syndrome and in 23 out of a series of 62 unselected cases of dementia.

(2) In the Korsakov Syndrome it was possible to distinguish momentary and fantastic confabulations. The former are temporally displaced true memories, the latter wish-fulfilling fantasies.

(3) In dementia the same two forms of confabulation were identified. The incidence of confabulation in 37 per cent of cases of dementia suggests that it is commoner than has hitherto been recognized.

(4) Psychometric testing carried out on four patients with the Korsakov Syndrome in both the confabulatory and the post-confabulatory phases showed that cognitive function was always better in the post-confabulatory phase, in regard to both intelligence and memory.

(5) In the Korsakov cases no relationship could be found between pre-morbid personality, heightened suggestibility and clouding of consciousness on the one hand and confabulation on the other.

(6) In three cases of fantastic confabulation in incipient senile dementia where paranoid features were marked the basic personality was 'sensitive'. This suggested that fantastic confabulation might be related to underlying personality traits.

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(7) Confabulation always arises against a background of defective recent memory, but additional factors must operate for its emergence. These factors are briefly discussed.

(8) A working definition of confabulation is suggested.

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