DISORIENTATION FOR AGE

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THIS note is intended to supplement Professor Zangwill's communication (1953) under this title in the centenary number of this journal, in which "disorientation for age" as described by Weinstein and Kahn (1950 and 1951) is illustrated as persistent and stable in two cases of alcoholic Korsakov psychosis.

Both these patients are described as orientated for year of birth and current year, yet they underestimate age by 16 years and 10 years respectively. This tendency to maintain disorientation in the face of contradictory evidence is viewed as an example of the entertainment of incompatible propositions in amnesic states, first described by Pick in 1915. Even though able to do the arithmetical reasoning involved, both patients did not accept the result as their "actual" ages. In discussing this phenomenon, Zangwill expresses the view that in both cases the concomitant retrograde amnesia and certain motivational factors were responsible for the disorientation and its tenacity.

Evidence from another, but related, field is presented here to show that similar disorientation for age can occur temporarily, and also that orientation for age can be present, even without the data of birth year and calendar year necessary for the arithmetical calculation.

The evidence is taken from part of a pilot study of the recovery of consciousness after electro-convulsive therapy, somewhat on the lines of the investigation reported by Lunn and Trolle (1949). Examination for autopsychic and allopsychic orientation, perception, memory, etc., was carried out during the recovery period after treatment by standard and diphasic steep-wave electroplexy (Strauss and MacPhail, 1946).

The relevance of observation upon recovery from E.C.T. to Korsakov psychosis is based on the contemporary electro-encephalographic and clinical observations upon the similarity of biological and psychological changes in Korsakov psychosis, post-traumatic states and recovery of consciousness from E.C.T. Such observations are marshalled by Roth (1952) to suggest that the primary effects of E.C.T. are on the diencephalon. Some authors have suggested that a full-blown Korsakov syndrome can be produced by E.C.T. However, in view of the fact that the classical Korsakov syndrome extends beyond such psychological effects, it is perhaps best to speak of a Korsakov-like state, to refer to this condition of patchy amnesia and disorientations. This Korsakov-like state after E.C.T. can be observed transitorily during the recovery from each treatment and sometimes, especially in arteriopathic patients, more prolongedly after a full course of treatment.

Whereas in the investigations by Lunn and Trolle, a series of questions was asked at intervals of 10, 30, 60, and 120 minutes after shock, in the present investigation, testing was carried out continuously from the time that the patient

showed some response to a stimulus, such as a handclap. The whole examination took on the average 45 minutes. Orientation for name and other matters of personal identity were usually first to be established and examination was continued until the prepared set of questions (25 in all) had been answered. Only part of the results are reported here—namely those concerned with orientation for name, age, year of birth, and for the current year. Each question was asked at intervals of 5 seconds and if it was not answered after 15 seconds (3 repetitions) the next question was asked.

The eleven patients reported (7 female and 4 male) were being treated as out-patients. All were of average or above average intelligence, and were diagnosed as suffering from depressive illness. All were subsequently regarded as improved after completing a course of treatment.

The table shows the time to the nearest minute at which each question was answered correctly. In the full-scale investigation, timing was to the nearest 5 seconds. As in clinical examination, a correct answer to the question was taken as evidence of orientation. The view was taken throughout that orientation, once established, would remain intact. This was in general confirmed. The observations quoted were all carried out during recovery from the first treatment of a course. Further observations have shown the tendency for orientation for age to return earlier with each successive treatment. This finding may support the rehearsal effects discussed below.

Orientation for name is given here as a baseline of earliest recovery. This was found to be the case, although in fact ability to count fingers sometimes preceded name. As might be expected, some married women gave their maiden names before married names. This was so in Cases 1, 2, and 4 where maiden names were given at 8, 7 and 6 minutes respectively after shock. These patients had been married for a period of over 10 years.

During questioning, no attempt was made to give clues to the patient. The procedure was adopted of keeping the questions in a standard order of groups of five, and of dropping each question as it was answered satisfactorily. It was noted, however, that the juxtaposition of related questions and answers often did not produce insight, probably reflecting again Pick's state of entertainment of incompatible propositions in amnesias. The following illustrates a commonly found sequence:

Q. What is your name?
A. Mary Smith.
Q. Are you married?
A. Yes.
Q. What is your husband's name?
A. James.
Q. James what?
A. James Brown.
Q. What is your name?
A. Mary Smith.

From the table it is seen that in Cases 1, 2, 6, 7, 8, 10 and 11, the order of return was year of birth, age, current year. In these cases the correct answer to the question "What age are you?" succeeded the correct answer to "In what year were you born?", but preceded the correct answer to "What year is it now?" Cases 4 and 9 were orientated for age before they were orientated for current year and year of birth. In case 3, age and current year are given correctly by 23 minutes after shock. In actual fact, to the nearest 5 seconds, the correct

TABLE

		Time (minutes) after shock of orientation for			
		Name	Age	Year of Birth	Current Year
Females	1 aged 51	12	28	24	35
	2 „ 46	15	18	17	19
	3 „ 34	10	23	22	23
	4 „ 42	14	14	18	17
	5 „ 48	7	29	20	26
	6 „ 50	8	22	15	28
	7 „ 46	9	26	24	28
Males	8 „ 38	6	26	7	32
	9 „ 28	9	11	15	20
	10 „ 35	10	16	14	21
	11 „ 31	12	18	17	24

answer to age was given at 22 minutes 40 seconds and to year at 22 minutes 50 seconds, but where such a short time has elapsed between correct answers, the order of questions must play a large part in determining the priority of recovery. Case 5 is the only case in this series in which the facts of year of birth and current year were known before age was known.

Such measurements are too crude and the number of cases too small to support any conclusion beyond the demonstration that in these cases at least, orientation for age could occur without the knowledge of year of birth and current year.

It may well be that knowledge of age is not mainly dependent upon arithmetical inference, but stands as an isolated fact, changing through time and being maintained by rehearsal. Motivational factors, as Zangwill suggests, must also be considered. Results in a larger number of cases show that men on the whole tend to be able to give their correct ages sooner after shock than women. Further, it seems that women are more likely to show disorientation by saying they are 10 years younger than they actually are, whereas men express their disorientation by not knowing or not remembering their ages. Even on the basis of rehearsal effects, this difference may arise from the cultural fact that men, on the whole, are more likely to rehearse in their occupations (e.g. wage-scales linked to age, etc.). However, if this rehearsal effect were entirely true, then an age-difference in orientation for age might be expected, because the younger person with more likelihood of changing his employment or entering into contracts, such as insurance, marriage and so on, will have had more opportunity to rehearse age. Again the wider investigation has not yet shown a clear age-difference.

As in so many clinical discussions of negative symptoms the psychology of the normal positive features is lacking. The absence of any specific psychology of knowing one's age is a handicap in the discussion of the pathology of not knowing one's age. In general terms it could be speculated that factors of personal identity, such as age, would have stronger psychological force than the mere result of an arithmetical calculation. Zangwill points out that the denial of age in amnesic individuals has a protective function of allowing the individual to maintain as stable and consistent an orientation to himself and his situation as his cerebral condition permits. In terms of ego-psychology, the individual is trying to maintain the greatest possible intactness or integrity of his ego.

However, if we assume an organized body of memories which can be ordered in time as one requirement of the integrated ego, then it is difficult to

reconcile the fact that during recovery from E.C.T. it is quite common, for example, for a married woman to give her correct address, say that she is married, yet give her maiden name and her age as younger than at the date of marriage. If the desire to maintain intactness of the ego were wholly operative, then one would expect that all her answers would be relevant to her situation before or after marriage, depending upon the state and degree of her recovery. This point, however, may be merely the marginal point of which the psychological changes occurring in the temporarily produced and rapidly resolving organic state of E.C.T. are no longer comparable to the relatively more permanent and severe organic pathology of, say, the Korsakov psychosis.

Summary

The times at which orientation for name, age, year of birth and current year was re-established after E.C.T. are listed for 11 depressive patients treated by standard steep-wave electroplexy. It is suggested that orientation for age is not entirely dependent upon the presence of the ability to reason arithmetically, as in most of these patients orientation for age returned before orientation for both facts needed for such arithmetical inference, namely year of birth and current year.

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