DISORIENTATION FOR AGE.

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It has often been noticed that patients in amnesic states are prone to under-estimate their age. In cases of Korsakov's psychosis this under-estimation may be very gross, and its extent appears to be determined, in part at least, by the duration of retrograde amnesia (Meggendorfer, 1928). A similar, if less extreme, under-estimation of age may also occur in the early stages of recovery after head-injury. In a recent study Weinstein and Kahn (1951) refer to this phenomenon as *disorientation for age* and adduce some striking examples. Thus one of their patients, a woman of over 70, insisted that she was 38. These authors do not, however, attempt a systematic analysis of this facet of disorientation.

In studies of amnesia extending over some years the present writer has been much struck by the frequency of disorientation for age in both acute and long-lasting amnesic states. In the latter, particularly, the phenomenon is often extremely stable, and may be maintained over long periods with the utmost tenacity. One may therefore suggest that it constitutes more than a simple memory deficit and warrants treatment as a phenomenon of denial akin to anosognosia (Weinstein and Kahn, 1950). At all events, one may argue that this aspect of disorientation has been unduly neglected and merits more systematic inquiry.

In the present paper two cases of Korsakov's psychosis will be described in which disorientation for age was remarkably persistent and stable. Although the observations were made some years ago, it is felt that the contemporary renewal of interest in problems of orientation (cf. Paterson and Zangwill, 1944; Levin, 1945; Weinstein and Kahn, 1951; Hécaen and Ajuriaguerra, 1952) justifies their tardy communication.

Observations.

Case 1.—A labourer, aged 55, was admitted to hospital in October, 1939, following an acute delirium of sudden onset. On admission he was confused and disoriented in all spheres, and with a moderate degree of peripheral neuritis. There was a history of chronic alcoholism of many years' duration. When first seen by us three months after onset of the psychosis, the patient had recovered his orientation for time and place but recent memory was grossly defective. There was a diffuse but extensive retrograde memory defect. Confabulations were somewhat scanty.

The patient could state his *year of birth* (1884) correctly on request and had no doubt that the present year was 1940 (correct). Yet he invariably maintained that his age was 39, and this error resisted all attempts at correction. Thus when the patient was asked his age in 1894, 1904 and 1914 respectively, he would always

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answer correctly. When, on the other hand, he was asked his age in 1924, he became evasive and would usually reply " about 30." When we gave the patient a chart with the years from 1884 to 1940 set out in chronological sequence, he agreed at once that the first year was his year of birth and the last the current year. If asked to write his age against each year on the chart, he would respond correctly up to 1924, at which point his attitude would suddenly change. Thus he might exclaim incredulously: " I'm not so old, you see! " If forced to continue after 1924, it was plain that the figures he wrote carried no conviction in his mind. Although the logic of the procedure was never questioned, it convinced him only in the case of the earlier years. If pressed, he might say that he was 55 " according to that paper " but " actually " only 39. This procedure was repeated many times and always gave the same result. No change in the patient's conception of his age or in his tendency to deny his true age was noted during a six-month period of observation.

Case 2.—A woman, aged 56, was admitted to hospital in June, 1939, in a grossly confused condition. Her memory was severely impaired and she confabulated freely. She made frequent mistakes of identity and was disoriented for space and time. The patient was in poor physical health, with peripheral neuritis in both legs.

At the time this patient came under our observation (February, 1940) her orientation for time and place had recovered and she could always give the current year on request. When asked her age, however, she always said that she was in her 47th year, despite the fact that she could give her date of birth (22 July, 1883) whenever asked. The patient could readily subtract 1883 from 1940, but categorically denied that the resulting figure could have anything to do with her age. Very occasionally she could be brought to admit that her age must be 56 (" Figures speak for themselves ", as she would put it) but this fact was forgotten almost at once and the disorientation for age would reassert itself.

With further general improvement in mental state, orientation for age became gradually restored. In May, 1940, the patient might remark that " others had told her " that she was 56 although she still believed her age to be only 46. Experiments with a chart, similar to those conducted with Case 1, would now convince her for a short time of her true age, and this would be remembered for the remainder of the interview, though not from one day to the next. When asked her age on one occasion the patient remarked: " We had this all out before. I remember seeing it all written down." None the less she still gave her age as 46. In June, 1940, correct orientation for age was re-established. Thus when asked her age she said: " According to what you said it seems that I'm in my 57th year. I suppose I said I was 47. I don't feel my age." A few days later her reply was: " I must be in the latter part of the 50's—my 57th year, I suppose. I told you wrong before. It came as a big shock to me. In fact I can scarcely grasp it." Thereafter, orientation for age was maintained without relapse until discharge.

Comment.

The phenomenon of *disorientation for age* is clearly displayed in both these cases of alcoholic Korsakov psychosis. In Case 1 the patient consistently underestimated his age by 16 years, and this disorientation was maintained with complete fixity during the six months in which he was under our observation. In Case 2 the patient under-estimated her age by 10 years at first, but this disorientation gradually cleared up in the course of recovery. Both patients knew their respective dates of birth and could give the current year without mistake. Yet neither could make use of these items of information in correcting the disorientation. Indeed it is not too much to say that both patients actively denied their true ages even when confronted with conclusive evidence which they had themselves supplied. The disorientation was fixed, stable and impervious to logical correction.

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This tendency to maintain a fixed disorientation in the teeth of contradictory evidence may be regarded as a special case of the entertainment of incompatible propositions in amnesic states to which attention was first drawn by Pick (1915). Despite the fact that both patients could easily perform the simple calculation required to ascertain their respective ages, neither could relate the information thus obtained to the content of the disorientation. Although the logic of the procedure was never disputed, it failed to carry any real conviction and was immediately discounted.

The attempts which were made to re-establish correct knowledge of age have a parallel in observations on the recovery of orientation in other spheres. Thus Paterson and Zangwill (1944), in studying the recovery of spatial orientation after head injury, drew attention to cases in which correct and incorrect ideas of locality might flourish side by side, apparently unrelated, or become reconciled through bizarre and facile rationalization. Several of their patients stated that they were in one place (the true locality) "according to the map" but "actually" somewhere quite different. The parallel with Case 1, who stated that he was 55 "according to that paper" but "in fact" only 39 is very striking. Again, Paterson and Zangwill observed that patients in process of recovery might allege that what *they* called their present whereabouts *others* called by some quite different name. This has a parallel with the behaviour of Case 2 when she remarked that "others had told her" that she was 56 though "in fact" she was ten years younger. It would appear, therefore, that conflicting data in regard to age may be reconciled in the same facile and unrealistic manner as are conflicting data in other spheres of personal orientation.

We may now consider briefly the main psychological factors governing disorientation for age. In the normal person, knowledge of age is of course given by arithmetical reasoning. But one may surmise that an individual's conception of his own age is not wholly grounded in logic. The possession of a coherent body of memories, organized chronologically, serves to endow this conception with substance and reality. Now neither of our patients could recall, in connected form at least, events dating from the 10 years or so prior to onset of the illness. Although both were formally orientated for place and time, it is likely that both were treating the current situation, in part at least, in terms of attitudes appropriate to an earlier period of their psychological history. There is no reason to suppose that such attitudes were not likewise entertained by the patients towards themselves. In short, it appears likely that the patients were assessing their ages in accordance with the scope of the retrograde amnesia, and that the latter can be regarded as the principal factor governing the disorientation.

Such an explanation does not, however, fully account for the tenacity of the disorientation or the resistance encountered when attempts were made to dispel it. Amnesia is a negative deficit, and it is difficult to see how it can constrain positive phenomena of denial. One may therefore suggest that, in addition to amnesia, a motivational background should be sought. In other spheres of orientation there is good reason to believe that motivational factors may be relevant (Paterson and Zangwill, 1944; Weinstein and Kahn,

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1951), and, in the case of age, such factors may well acquire proportionally greater importance. In the first place, sensitivity with regard to advancing age is a common human failing (especially among women), and emotional disinclination to accept its full import is often strong. There is every reason to suppose that a factor of this kind may reinforce the disorientation in amnesic states. In the second place, one may argue that the amnesic patient has perforce to develop as adequate an orientation towards both himself and his milieu as his damaged brain permits. Now his lack of insight into the amnesia will obviously constrain him to interpret the present in the light of the past and, under such circumstances at least, under-estimation of age is a consistent psychological response. If, however, the patient is acquainted by others with his true age a fresh inconsistency arises. This can be resolved only by admitting the full extent of the retrograde memory defect on the one hand, or by denial of the true facts on the other. As the first solution is well outside the limits of tolerance of most patients, it is not surprising to find that the second is adopted. Denial of age, therefore, may be viewed as a protective reaction, which enables the amnesic individual to maintain as stable and consistent an orientation towards himself and his situation as his cerebral condition permits.

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SUMMARY.

(1) Two cases of Korsakov's psychosis presenting disorientation for age are briefly described. Age was under-estimated by 16 years in the first case and by 10 years in the second; in both, the fixity and tenacity of the disorientation were very pronounced.

(2) Some psychological factors governing disorientation for age are briefly discussed.

These cases were studied in association with the late Dr. Andrew Paterson.

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