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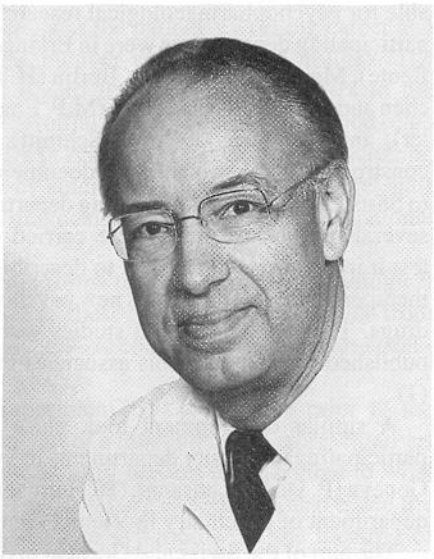
THE AMDP SYSTEM

Hanfried Helmchen and Bernd Ahrens



Hanfried Helmchen

The introduction of chlorpromazine, a neuroleptic, in psychiatric therapy was the starting point for the development of the new science, psychopharmacology. With supporting research from other disciplines such as biochemistry and neurophysiology, psychopharmacology as neuropsychopharmacology has become one of the most active areas of basic research in pharmacology.

Shortly after the introduction of chlorpromazine in 1952 in France, a steadily growing number of potentially effective psychotropic drugs were developed. As this process continued, it became increasingly apparent that there was a need for a comprehensive evaluation of these new drugs, as well as for studies which compare the newly developed drugs with the older ones having proven value in treatment.

It also soon became apparent that studies were needed that were specifically designed to evaluate the efficacy of new psychotropic drugs. The studies required methods (assessments, tests) that could generate reliable and standardized data on benefits and drawbacks.

Psychotropic drugs not only quantitatively affect a psychopathological condition but may also induce important qualitative changes. Therefore, the development of a comprehensive inventory covering a wide spectrum of clinical symptoms was of utmost importance. Much

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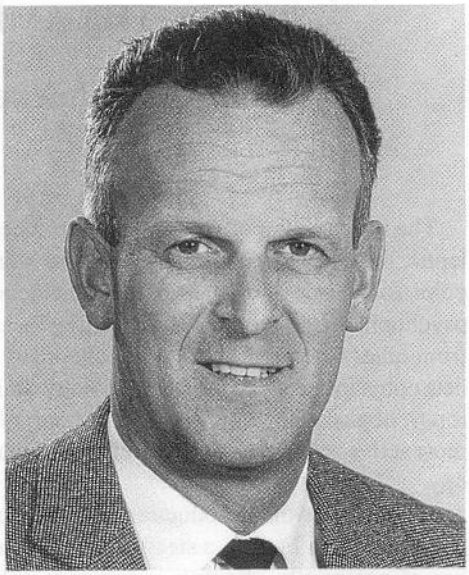
Helmchen was elected a fellow of the CINP in 1964. He presented papers on "EEG-Langschnittuntersuchungen bei der Pharmakotherapie von Psychosen" (Helmchen und Kunkel), on "Zur Analyse elektroencephalographische Veränderungen unter psychiatrischer Pharmacotherapie" (Helmchen und Kunkel) and on "Syndromegenese psychischer Nebenwirkungen der psychiatrischen Pharmakotherapie" (Helmchen) at the 3rd, 4th, and 5th Congress respectively; he also coauthored a paper on "Documentation clinique en psychopharmacologie le systeme A.M.P." (Angst, Battegay, Bente, Berner, Broeren, Cornu, Dick, Engelmeier, Heimann, Heinrich, Helmchen, Hippius, Lukacs, Pöldinger, Schmidlin, Schmidt and Weis) at the 6th Congress. Helmchen was a formal discussant of Working Group 4 (Pharmacological and Clinical Action of Psychotropic Drugs) at the 4th Congress.

valuable information may be lost on unexpected changes and side effects if only a specific syndrome is being considered.

At the end of the 1950s, five university departments of psychiatry in Germany decided to collaborate on the development of a method for the collection and documentation of data suitable for psychopharmacological research. The participating departments were in Erlangen (D. Bente), Mainz (K. Heinrich), Berlin (H. Helmchen and H. Hippius), Münster (M.P. Engelmeier), and Homburg/Saar (W. Schmitt). After constructing an instrument for documentation to be used by all five participating departments, several multicentre trials were carried out to test it in practice with a view to describing the therapeutic effects of various new psychotropic drugs. The results of these studies were first published by Bente and his associates in 1961 (1).



Hanns Hippius

A similar development took place in Switzerland at about the same time. The five participating university departments in Switzerland were in Zürich (J. Angst), Bern (F. Cornu), Geneva (P. Dick), Lausanne (H. Heimann), and Basel (W. Pöldinger) (2). Somewhat later, the department of psychiatry in Vienna (Berner) joined the group.

The aim of the Swiss and German investigators was to understand the course of psychiatric illness during treatment with psychotropic drugs. It was also to assess the entire field of psychiatric findings, including demographic and anamnestic data for each patient, rather than concentrating on specific psychopathological syndromes, such as the depressive syndrome. The concept of "documenting" the data was also important.

The system was made public at the 5th Congress of the CINP in Washington in 1966 (3). The first German edition of the *AMP Manual* appeared in 1971 and the first English edition in 1982 (4). Since the initial workshop on translations of the system, which was held during the 10th CINP Congress in Quebec City in July 1976, the *Manual* has been translated into French, Italian, Japanese, Croatian, Portuguese, Spanish, Danish, Russian, and Estonian.

The group first called itself AMP and later AMDP (Arbeitsgemeinschaft für Methodik und Dokumentation in der Psychiatrie, or Association for Methodology and Documentation in Psychiatry). The original acronym did not refer to the concept of documentation, and this was an unfortunate omission, because even at the beginning, the importance of accurate documentation was emphasized. Since then, the main goal of the AMDP has been to identify the kind of data relevant to psychiatry, to develop methods for recording these data, and to render the recorded data available for statistical processing.

The AMDP documentation system originally consisted of four data collection forms, designed for optical evaluation in order to be used in digital processing by computer. The number of the data collection forms was later increased to five. The system was different from other psychiatric documentation systems in terms of the comprehensiveness of the recorded information.

The AMDP system contains the following documentation structure:

1. Anamnesis – demographic data (e.g., education, level of employment)
2. Anamnesis – life events (e.g., death of spouse/partner)
3. Anamnesis – psychiatric history (e.g., birth and childhood, previous psychiatric episodes)
4. Psychopathological symptoms (100 items; e.g., incoherence, delusional ideas, depressed mood)
5. Somatic signs (40 items; e.g., interrupted sleep, nausea, dizziness).

Documentation of the anamnesis contains such details as the patient's working career and information about the patient's family, including the number and gender of siblings. The disease anamnesis covers the family history with regard to psychiatric disorders in the biological family of the patient, life events in patient's familial situation during childhood (e.g., divorce or separation of the parents), and the patient's psychosocial development, including such factors as drug abuse, aggressive behaviour, or suicide attempts. Furthermore, past psychiatric treatments and their efficacy, as well as diagnosis according to the International Classification of Diseases (ICD), are recorded.

The core of the AMDP system is the data collection forms that cover psychopathological symptoms and somatic signs. The symptoms described on these two forms were derived from classic descriptive psychopathology, familiar to the psychiatric community in German-speaking countries.

What is usually referred to as the "Homburg experiment" (5) took place prior to the publishing of the data collection forms. It consisted in part of a meeting of the representatives of all participating departments for a first interrater reliability session to determine to what extent their assessments correspond with each other. The Homburg experiment also tested the scientific validity of the clinical description of the selected symptoms. At the meeting of interrater reliability testing, agreement was reached on the decision-tree to be used for assessing the psychopathological state of patients. The actual decision-making process was represented by a logical model consisting of four judgmental steps: accessibility, certainty, presence or absence of a symptom, and severity.

Accessibility of an item exists when the necessary information required for judgment is available (e.g., a stuporous or mute patient cannot provide the necessary information for assessing disturbances of orientation, attention, memory, thinking, etc.). Certainty refers to the confidence that the assessor has in the information provided (e.g., negativistic behaviour on the part of a patient may cause uncertainty as to whether the patient is or is not hallucinating). The presence or absence of a symptom is coded if the question of certainty has been resolved (e.g., by interviewing a patient suffering from senile dementia, an assessor can usually ascertain the presence or absence of disorientation). Severity refers to the degree to which a symptom is present and is estimated as mild, moderate, or severe. Assessment of severity is based on a combination of intensity, significance, and frequency.

It was also necessary to produce a manual with operationalized descriptions of the symptoms covered. Objective sources of information included the following: observations made during the interview, observations of behaviour made by the doctor and nursing personnel, and remarks made by the patient's relatives, as well as subjective information obtained from the patient. The symptoms had to be presented descriptively, as far as possible without taking the anticipated or previous diagnosis into account. Similarly, the presence or absence of a symptom had to be decided upon without consideration of a suspected diagnosis.

The AMDP system falls into the category of observer-based assessments in which judgments regarding the presence and severity of symptoms are based mostly on assessors' observations of patients' behaviour, and patients' descriptions given to the assessors about their pathological experiences. Nevertheless, to ascertain clarity about the source of the recorded information it was originally marked in the AMDP whether a symptom was a purely observable one (O=observer/others), or a self-experienced and reported symptom (S=self/patient), or a combination of the two. After discussions with experienced users of the AMDP system, it was decided that each symptom would be classified as follows:

S = self-judgment alone is used;
O = the judgment of the observer or others alone is used;
SO= self-judgment and that of the observer are of equal value;
sO = self-judgment is of less importance than that of the observer;
So = self-judgment is of more importance than that of the observer.

One of the difficulties in developing the AMDP system was in defining the degree of precision necessary for the documentation. A related difficulty concerned repeated testings to ensure reliability. The difficulties were resolved by stipulating a certain training for the users of the AMDP system. The training program was to include at least ten interviews, with subsequent documentation of the findings (particularly for data collection forms 4 and 5), and with the interviews covering the whole range of symptoms contained in the *Manual*, particularly symptoms 1-100.

The AMDP system is based on the "classic" psychopathology of the nineteenth and early-twentieth centuries, when psychiatrists and neurologists tried to describe the "abnormal" behaviour of mental patients and focus on "pathognomonic" signs for the categorization of syndromes or even disease entities. However, the AMDP system went a step beyond by standardizing psychopathological symptoms for comparative use.

The development of the AMDP system reflects a change in scientific methodology and documentation: the transition from information gained for individual use to its universal application. When assessing the psychopathology of patients, psychiatrists record discrete patterns of behaviour that diverge from the normal and are formally characterized as symptoms. However, when a strategy for treatment is decided upon, it is usual for the treating psychiatrist to categorize the patient's condition according to one or another psychiatric syndrome or disorder. Although this procedure is suitable for clinical practice, it has many drawbacks when used as a method for gathering psychopathological data in psychiatric research. By using the AMDP system, the assessor must concentrate on phenomena less complex than the complete "Gestalt," that is, on the specific symptoms presented by the patient, and record these in a standardized manner so that this information can be readily transformed into data and used in scientific investigations.

To date, the important steps in the development of the AMDP system are the following:

- The publication of a statistical manual with a summary of the findings in the reliability and validity studies (6). The evaluations show that the AMDP system is a practical documentation system, the application of which is not limited to the field of psychiatry (e.g., it might be used in the examination of cardiac patients).
- The generation of syndromes by means of mathematical-statistical approaches. Factor analyses based on data from 2,313 patients resulted in stable, reliable, and sample-independent syndrome scales. Eight syndromes could be extracted by the different factor analyses:

paranoid-hallucinatory, depressive, psycho-organic, manic, hostility, autonomic, apathy, and obsessive-compulsive. The syndrome scales satisfy statistical test criteria (7).

- The publication of a comprehensive textbook for the English user of the system (8).
- The publication of a semi-structured interview for the system (9).
- The publication of a revised manual with instructions relevant to the completion of the anamnestic sheets and definitions of the psychopathological symptoms and somatic signs (10).

The AMDP system provides the necessary uniformity in the international assessment of psychopathological symptoms for diagnostic and research purposes. It is a uniquely rich system in phenomenological descriptions.

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