Abstract: The Department of Clinical Psychology I represents the psychoanalytically oriented section of the Institute of Psychology at the University of Zurich. For the past 10 years the department's research has placed emphasis on content analytical and qualitative investigations of patient narratives. These narratives are obtained through the department's own psychotherapy department practice and examined using the JAKOB narrative analysis developed specifically for this purpose. For the data collection a high quality video system is available. All data and research results are systematically administered in the JAKOB database.

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1. Introduction

The JAKOB database integrates the results of research in clinical narration carried out in the Department of Clinical Psychology I at the University of Zurich. Central to this psychodynamically oriented research activity is the scientific investigation of psychiatric illnesses and their methods of treatment. We investigate the linguistic structures within psychotherapeutic communication; our main interest lies in a differentiated understanding of subjective experiences and their effect on psychotherapeutic processes. [1]
The department operates a psychotherapy practice which offers preliminary consultation and psychotherapeutic treatments to the public on favorable terms. Its associates have either a psychoanalytical or a behavioral orientation and may still be in training. The audio and video recordings used for research purposes are obtained from the practice's counseling and therapy sessions. Wherever possible each session is recorded following a standardized method. The recording takes place in our video studio using five cameras operated from a separate technical room. Over the past 30 years more than 10,000 hours of video material have been recorded, of which some 5,000 have been archived in the database. In addition, several thousand hours of audio-only recordings are stored in the database. [2]

The JAKOB narrative analysis developed in this department is a qualitative research tool (see chapter 5.1 as well as BOOTHE 1994; BOOTHE, von WYL & WEPFER 1998; BOOTHE 2000) for systematically analyzing patients’ narratives. It is both an encoding method as well as an evaluation system for narratives from everyday life in a psychotherapeutic context. It conceptualizes narratives as dramaturgically constructed linguistic productions and interprets these in reference to the unconscious conflict material of the narrator contained therein. The goal of the narrative analysis is to arrive at a psychoanalytically oriented clinical conflict diagnosis. The computer program AutoJAKOB was developed to support the encoding and evaluation of the narratives. [3]

Over the course of many years of research a substantial amount of data material has been collected. This includes not only audiovisual data storage media but also patient card files, transcripts of therapy sessions, extracted narratives, publications, dissertations, theses and student research papers. The aim is to integrate this material into a central database—the JAKOB database—to classify it, assign keywords and make it accessible for research purposes. [4]

The following presentation of our database and research methods is divided into four parts. First we present the JAKOB database and the data administration. Next we explain the principles for regulating data protection and describe the techniques of data collection and transcription. Finally we present an overview of the JAKOB narrative analysis method and of completed research in related fields. [5]

2. The JAKOB Database

2.1 Overview

Over the past ten years, the Department of Clinical Psychology I has specialized in the field of qualitative narrative text analysis. With the ever-increasing level of research activity taking place, it has become essential to classify the extensive data material emerging (video and audio cassettes, transcripts and publications), to make it accessible through a suitable system to faculty members and students—and to a limited extent also to interested parties outside the university via the Internet—and to administer it in a clear and transparent manner. To this aim we have created a comprehensive database covering the entire field of narrative
analysis, one that is able to address a wide spectrum of related questions and inquiries, enabling users to find existing data for requested keywords, symptoms and publications quickly and easily and receive the necessary information on transcripts, video and audio cassettes. [6]

The following diagram shows the structure and the components of our database:

![Diagram 1: Structure and components of the JAKOB database](7)

### 2.2 Detailed structure of the JAKOB database

The JAKOB database was created using Microsoft Access® and consists of two data tables. The first table contains anonymous information on the clients whose videotapes and transcripts are documented in the database. This information is coded so that it impossible to identify individual patients. Only the patients’ former therapists can access the original data based on pseudonym and therapy code. Confidential patient data is stored in a separate database which can only be accessed by the practice director. [8]

The data relevant for research purposes are stored for each person. This includes begin and end of therapy, the number of sessions, gender and the diagnoses at the beginning and end of treatment. In addition, number of videotaped sessions and whether these are recorded on audio cassettes (for transcriptions) is indicated. Important data items for search purposes are, first, whether there are already existing transcripts and if so for which sessions and, second, how many narratives are available in total. Of primary importance for faculty members and students is a list of publications and research projects for which the text material of a certain client has already been used. For this purpose all associated documents and entries are indicated in the JAKOB database for
each person stored. Evaluations of client narratives carried out using the
AutoJAKOB computer program (see chapter 5.1) are also contained in the
personal data in a separate field. Authorized users can request these evaluations
to be shown directly on the screen and printed. [9]

The second data table contains the entries for the documents. This refers to all
types of information belonging to the JAKOB narrative analysis. An entry is made
for a video or audio recording, a transcript, and for the individual narratives
extracted from videos or transcripts. This data table also contains all publications
related to JAKOB narrative analysis, including books, newspaper articles,
dissertations, theses and student research papers. [10]

Information on last modification date and author are stored in each document, as
are the storage medium (e.g. printed transcript, file on diskette or server) and
location. Text files (Text, Word- or Pdf-format) on the department server can be
opened with the appropriate access rights by clicking on the hyperlink. Each data
record contains a memo field for the summary of the document content. For
purposes of JAKOB narrative analysis, short patient narratives can be stored
directly in this field, in which case a reference to the original document is
unnecessary. Additional fields are available for comments, date, changes and
bibliographical information. The bibliographical information is formatted to allow
transfer of data with the software Endnote®. [11]

2.3 Database queries

A high level search function connects the two data tables and permits an
information search across the whole data base. The search is initiated through
selection of keywords from the thesaurus or by entry of any search terms. At data
entry the associated keywords can also be selected from the thesaurus or be
chosen freely. As the JAKOB narrative analysis is a diagnostic instrument, the
thesaurus contains terms from the field of psychodiagnostics and from the
classification of psychiatric diseases. In addition, there are search terms based
on form or content like "dissertation" or "dream". The quality of the search
functionality is dependent on the extent to which the structure of the thesaurus
contains meaningful and differentiated keywords. [12]

Apart from the high level search across the entire database based on keywords,
there also exist search functions for the personal and document data. These can
be used to search all fields in the respective data tables. A full text search across
the linked electronic text documents is not planned at this stage but could,
however, be useful in searching through transcripts. [13]

The currently installed prototype of the JAKOB database consists of a Microsoft
Access® database. We intend, however, to replace this prototype with an
Internet-based application in the near future, in order to make the JAKOB
database independent of the operating system, to avoid complicated installation
procedures and to enable external users to access a subset of the information
contained in the database. [14]
2.4 Current state of the database

The first steps to create the JAKOB database were taken in 1998, with the long term aim of establishing computer-assisted administration. We are currently engaged in populating and linking the database tables as well as assigning keywords to the thesaurus. To date, the database contains verbatim transcripts of 460 therapy sessions and over 400 extracted, segmented and encoded narratives from the psychotherapeutic counseling and treatment sessions of over 40 patients. Our database contains over 100 research projects—publications, department reports, theses and student research papers—on the topic "clinical narration" written between 1989 and 2000. [15]

3. Regulation of Access to Audiovisually Collected Data and Issues of Data Protection

The departmental regulations on personal data protection govern both the authorization of videotaped persons and access to recorded material (THOMANN & BRAUN, 1990). The patients of the practice are asked in their initial interview for their consent to the recording of the sessions. We ask them to sign a consent form on which they can specify the degree of permitted access to their data, for example to preclude use of their recordings for instruction purposes within department courses. The treatment of patients is not made dependent on their consent to a video or audio recording. Patients have the right to revoke their consent at any time or to restrict the potential use of the recordings. These rights of revocation and restriction are also valid for therapists of the practice. All therapists are also faculty members for whom some provision of therapy recordings of their therapies for research and teaching is a prerequisite. [16]

In the area of teaching, all students specializing in clinical psychology must sign a confidentiality agreement. At the beginning of their studies, students receive instruction from a faculty member in dealing with confidentiality and data protection requirements. Most of our courses are accessible only to this comparatively small circle of persons. All types of clinical data are considered sensitive material: consequently, we consciously refrain from use of explicit categorizations like "secret" or "top secret" (THOMANN & BRAUN, 1990). [17]

The access to videotapes is governed by the principle that each user may obtain only as much information as is necessary for the project in question. Videotapes are only made available if the visual information is indeed required. If language material exclusively is being examined without the need for additional audiovisual information, then transcripts only are provided. If these are not yet available, only the audio portion of the recording can be accessed in order to create a transcript. [18]

All transcripts prepared for research are made anonymous (elimination of family name and name of city/town). It is practically impossible for the reader to draw conclusions as to the real person's identity. The transcribed dialogs receive a code that combines the patient's code name with the exact numerical description
of the particular text section (number of the session and text unit). The transcripts are stored in this form and are accessible for reuse, for example in subsequent research or lectures. [19]

In the event the JAKOB database is made partially accessible to the public, various additional problems of data protection will arise that do not exist where use is confined to within the faculty. It is necessary to categorize data and entries in the database as being "public" or "internal". All database entries relating to publications, reports of the department, and projects of faculty members and students which are intended for distribution via the Internet as documentation for our area of research are declared "public". Entries relating to transcripts, narratives and persons are not intended for publication. [20]

Documents coded "internal" can only be viewed within the network of the Department of Clinical Psychology I. For this access a password is required. With this password, database entries can be viewed for a fixed period of time and information on the number and details of transcripts and narratives as well as data on persons concerned can be obtained. To open an internal transcript, however, a special authorization is needed, which is only provided to members of the department. It is our intent to limit access on confidentiality grounds to as few data in the JAKOB database as possible, through appropriate preparation and encoding of the data. [21]

4. Videotaping and Transcription of Audiovisual Data

4.1 Method of data collection

The recording of clinical data material occurs either through an audiovisual recording in the video studio or as pure audio recording in the counseling and therapy rooms of the department. The video recordings are not based on a specific research design but on a standard configuration. This procedure is a product of the following considerations:

• Use of fixed multiple cameras and microphones guarantees a consistently high quality of recording.

• The reliability of equipment and its correct use that is essential for a long, uninterrupted recording series (e.g. therapy over several years) is much higher in a fixed recording setting than in a variable one.

• A constant recording setting improves the comparability of different recording series and is conducive both to meeting the reliability requirements placed on observers and to the absence of artifacts.

• Projects of data analysis and evaluation pertaining to research in psychotherapy, particularly research in psychotherapy process and casuistic research, can be commenced immediately after their conception without having to wait for the result of a data collection process that may take several years. [22]
The problem of our "data collection philosophy" lies in the fact that it is difficult to estimate the usability of existing recording configurations for future projects. There is a danger that e.g. the recording of an entire therapy will prove to be of no value simply because the chosen picture frame is not suitable. To obtain the most optimal recording possible, the department has been continuously improving and modernizing its facilities since the 1970s. In keeping with the therapeutic orientation of the department (focus on psychoanalytical and behavioral settings with one patient and one therapist), the emphasis has been on optimizing the recording of (sitting) dyads both visually and acoustically. [23]

4.2 Data recording techniques

Diagram 2 demonstrates the recording configuration in the department's video studio with five cameras which record facial expressions, gestures and "complete" images concurrently in a standardized way. [24]

Cameras and microphones are operated by remote control from an adjacent room and the picture and audio information is mixed and stored. Several professional digital (DVCPRO) and analog (S-VHS) video recorders as well as several audio-tape recorders are used in the production of storage media. The recording of sound in the video studio, both digital and analog, is achieved by means of four fixed microphones for acoustic recording of persons moving about the room and two to four clip-on microphones for persons seated. Equipment for audiovisual editing is also available. (further technical information is provided under http://www.klipsy.unizh.ch/thomann/index.htm#audiovision [Broken link, FQS, December 2004].)
Clinical data material is captured either via an audiovisual recording in the video room, at times with parallel audio-taping using a separate medium, or as purely audio recording in the counseling and therapy rooms of the department. Special consideration was given to the quality of both picture and sound, the latter especially in view of the impact of acoustic phenomena on future transcriptions. The problems associated with recording, storing and reproduction of dialogs have, as far as the technical aspects of the equipment is concerned, essentially been solved. The main remaining problems continue to be the room acoustics and the choice of a suitable recording method. In this regard, several extensive structural and technical improvements were introduced.1 [26]

4.3 Transcription of audiovisual data

For now, transcripts are produced using audio cassettes, since ergonomically usable recorders have existed for this medium only. The development of reasonably priced high capacity storage media with rapid access times may lead to a decision in favor of digital transcription equipment. For the year 2001, a parallel recording of dialogs on hard disk of a PC with subsequent storing of the audio files on the department's server is planned. For research projects we use, as mentioned above, the video and audio material collected within the psychotherapy practice. The initial consultations and psychotherapy sessions are, however, only transcribed in full in exceptional circumstances. As the focus of our research lies on the "narrative" form of speech, and also on financial grounds, only such selected speech contributions are transcribed. [27]

Our transcripts follow the rules of the text database of Ulm (MERGENTHALER 1992; BOOTHE 2000, pp.26ff.). Conversations held in dialect pose special

1 With regard to room acoustics, suitable structural measures for absorbing reverberations, in order to enlarge the area in which microphones record as much direct sound and as little diffuse sound as possible, cannot be replaced by electronic methods. For this reason we were required to expend a relatively large effort to achieve an adequate acoustical configuration of the video studio so as to optimize the clarity of consonants that is essential for transcripts (furnishings to impede room resonance and low frequency reverberation = scale of structure in decimeters and meters; a single bookcase occupying an entire wall with books whose backs form an irregular surface and curtains to dampen reverberations of speech segments in the middle frequency range = scale of structure in centimeters; acoustic ceiling in combination with a textile floor covering to absorb higher frequencies = scale of structure in millimeters). The audio recording technique is essentially based on a stereophonic polymicrophonic method. With this method, two fundamental problems in recording conversations are solved—although with a comparatively high expenditure of effort: (1) assurance of sufficient separation of persons speaking simultaneously, essential for a reliable transcription (2) clarity of speech in the recordings while preserving speakers' freedom of movement: clip-on microphones are unsurpassed by any other recording method with regard to separation of speaker, absence of reverberations and authenticity of sound due to their minimal distance from the speaker. The well-known disadvantages of these microphones—the temporary disturbances when being attached, during vigorous movements of the speakers and the limited freedom of movement of the speakers—are compensated through the use of additional microphones that are permanently fixed to the ceiling and "illuminate" the room evenly (see Diagram 2). The recording engineer switches these fixed microphones on as therapist and client enter the recording studio, take their places and fix the clip-on microphones to their clothes (at the same time he follows them visually with one of the five cameras). Then he fades over to the clip-on microphones (and switches visually to one of the prepared "split screen" standard configurations). At the end of the recording he fades back to the fixed microphones until the participants have left the room.

This method is standard for up to four persons. If the recording involves more than four persons or where movements of persons in the room are essential, only the fixed microphones are used.
difficulty and essentially require translation. Swiss German possesses not only a great number of expressions which are difficult to translate, but also a syntax which diverges widely from the standard German. The audiovisual material used for research purposes originates largely from completed treatments. Therapists are in an advanced stage of psychoanalytical training. [28]

5. Research in the Field of Clinical Narration

5.1 JAKOB narrative analysis

The most important research tool in the field of clinical narration is the JAKOB narrative analysis developed at the Department of Clinical Psychology (BOOTHE 1994; BOOTHE et al., 1998; BOOTHE 2000). This qualitative instrument of analysis is presented briefly below. [29]

The dramaturgical method known as JAKOB is a psychoanalytically oriented narrative analysis. The name is derived from the central significance of the figures appearing in the narratives of patients—called objects—and their respective actions. The psychoanalytical situation is conceptualized as a stage model; on this stage, scenes of unconscious conflicts of the narrator are assumed to take place. Methodically and theoretically, this narrative analysis refers in many aspects to the narrative text analysis from literary science as well as to sociological theories and linguistic approaches (BOOTHE et al. 1998; BOOTHE 6 VON WYL 1999, page 19). [30]

What are narratives? They are communications of occurrences, mostly from everyday life, which patients present to their therapists in the form of stories. These communications are complete speech segments, which almost always possess a clearly recognizable structure (beginning—middle—end) and which are therefore especially suitable as units of investigation within a research setting. Such everyday narratives—dynamic units of speech often laden with tension—fulfill a number of communicative and psychological functions: they create social ties and at the same time reveal individuality. In narrating the speaker assures himself of the continuity of his own person before a participative and critical audience. By relating personal experience through narrative, the narrator creates an experimental stage on which he appears—in the form of an ego figure—recreating scenes in the present from steps, stations or stages drawn from his past life journey. The narrative is always characterized by a retrospective dramatization in which the narrator's own interests are central: "The artistic as well as the everyday narrative and childlike play live from the most vivid possible reinauction of dramatic occurrences, where the motives for their recasting, like retrospective wish fulfillment, are incorporated into a well-formed story." (BOOTHE 1994, p.59) [31]

Everyday narratives reveal—in the form of compact formulations—emotionally significant experiences of self and in relation to others. In psychotherapeutic dialog, they are especially suited for communicating material relating to conflict. These conflicts are represented in the dramatization of the narrative. The
narratives reveal not only something about the nature of the conflict but also about the way in which the narrator deals with it. In examinations using JAKOB narrative analysis, the narratives are not of interest as communications of facts, "but as a dramatic structure, as a special form of staging of action and event" (BOOTHE 1994, p.58f.). There is thus the possibility to examine the material in a text-immanent manner, that is, to analyze it independently of the context. Patients' narratives are, in relative terms, easily identifiable and transparent in structure, and therefore of almost greater importance for research in psychoanalytically psychotherapy than dreams, which are significantly less frequently reported. [32]

The JAKOB narrative analysis permits a systematic examination of patients' narrations. In the context of an increasingly interpretative analysis of structure, one arrives at well-founded statements with respect to the conflict situation and the narrator's patterns of interpersonal relations. After a patient's narrative has been identified in the verbal dialog and transcribed, it is segmented according to subject-predicate associations (the number of segments ranges between ten and hundred). Thereafter, the actors, props, scenery and actions on stage are recorded using a coding system for lexical word choices. The focus of analysis is the interpretative attainment of the dramatic potential: Here, wish fulfillment, anxiety, conflict, defense and compromise are to be revealed on the basis of the text. The aim of the analyses is to arrive at a scientifically founded and systematized psychodynamic diagnosis of conflict and relations, for both research and therapeutic practice. [33]

The first version of this method was created in 1989 (BOOTHE 1989). Since then, it has been continually developed and extended (BOOTHE 1994; BOOTHE et al. 1998). The current manual can be obtained at the Department of Clinical Psychology I in the form of a departmental report (BOOTHE 2000). In the meantime, great effort has been expended to develop a specific computer program for carrying out narrative analysis (LUDER 1999). The AutoJAKOB analysis program cannot of course provide automatic processing of interpretative steps. It is, however, able to produce most of the codings automatically and to facilitate the very extensive task of interpretation. AutoJAKOB makes it possible to record the narrative, perform a partial analysis of linguistic morphology and syntax and, building on these steps, produce a coding of the text using the predetermined categories. For the subsequent interpretation there are pre-set evaluation schemes available that simplify and standardize the process. [34]

5.2 Scope of application for JAKOB narrative analysis

The research and further development of the method is taking place in both a clinical and a literary scientific context. The most extensive research project to date—a study supported by the Swiss National Fund—was concerned with the initial narrative in psychotherapy (BOOTHE et al. 1998). Based on six detailed casuistic analyses, the study demonstrated the significance—and relevance for conflict diagnosis—of initial narratives in preliminary consultations and therapy sessions of totally five hours. [35]
Almost one hundred publications, dissertations and theses in connection with the JAKOB narrative analysis demonstrate the broad field of application of this research method: In addition to various studies concerned with single concepts and comparisons with other methods of analysis, there exist casuistic studies of the narrative style of patients with narcissistic, dysthymic and compulsive disorders, of those suffering from bulimia, anorexia or schizophrenia as well as of patients in the process of rehabilitation following a heart attack. There are examinations of the progress of short and long term therapies over time. Currently there are several interdisciplinary, multiperspective casuistic studies being developed in cooperation with the universities of Saarbrücken (Prof. Dr. R. KRAUSE) and Ulm (Prof. DR. H. KÄCHELE) as well as the Hospital for Psychotherapy and Psychosomatic Medicine Tiefenbrunn/Göttingen (Prof. Dr. U. STREECK) [36]

Due to its origins in the field of literature and the humanities, narrative analysis is suited for projects from related research disciplines: several studies deal with the production and reception of fairy tales in the context of research into language acquisition and narrative competence of children. Finally, there exist a number of analyses of literary texts, such as for example dream narratives and diary entries of Franz KAFKA or a microgram from Robert WALSER (NEUKOM 1997; BOOTHE & VON WYL 1999, p. 137ff.) [37]

With respect to the relationship between research and psychotherapeutic practice, we seek to make the method also of use to the latter. In the context of the psychotherapeutic practice and class instruction in post-graduate studies in psychoanalytic therapy, elements of JAKOB narrative analysis are directly used. The experiences thus gained serve the further development of this research tool. [38]

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