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How to measure sustained psychic transformations in long-term treatments of chronically depressed patients: Symptomatic and structural changes in the LAC Depression Study of the outcome of cognitive-behavioural and psychoanalytic long-term treatments*

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ABSTRACT

Worldwide, the pressure on psychoanalysis to prove the results of its treatments according to the criteria of so-called evidence-based medicine has increased. While a large number of studies on the results of psychoanalytic short-term therapies are now available, such studies are still largely lacking on psychoanalysis and psychoanalytic long-term therapies. In a large multicentre study, the results of psychoanalytical and cognitive-behavioural longterm therapies in chronically depressed patients were compared. Both psychotherapies led to statistically highly significant changes in depressive symptoms three years after the start of the treatments. However, the focus of psychoanalytic treatments is not exclusively on reducing psychopathological symptoms, but on changes in the inner world of the patients that are reminiscent of the goal of psychoanalyses that Freud has characterized as developing “the ability to love, work and enjoy life.” In the German-speaking community, such transformations are called “structural changes.” This article reports results on such structural changes achieved with the help of a sophisticated measuring instrument, the Operationalized Psychodynamic Diagnostics (OPD). These so-called structural changes are compared with symptomatic changes. Three years after the start of the treatments, significantly more patients in psychoanalytical treatments show such structural changes than patients in cognitive-behavioural treatments.

KEYWORDS

chronic depression; psychoanalytic psychotherapy; cognitive-behavioural therapy; symptomatic vs. structural change; remission; long-term outcome

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Introduction

The question of whether and in what way psychoanalysis should undergo comparative outcome studies has remained controversial in the psychoanalytic community. It is primarily psychoanalytic researchers at medical and psychological faculties who argue that psychoanalysis will be marginalized if it avoids comparing its effectiveness with other treatments, while psychoanalysts, particularly those from the French-speaking world, insist that methods and criteria of evidence-based medicine are unsuitable for psychoanalysis as a science of the unconscious. In spite of these ongoing controversies, the third edition of the *Open Door Review* shows that more studies of process and outcome have become available, indicating that the acceptance of empirical research is increasing in the International Psychoanalytic Association (Leuzinger-Bohleber and Kaechele 2015).

In certain countries, such as Germany, the risk is growing that funding for psychoanalysis and psychodynamic treatments by health insurance companies will be withdrawn if their effectiveness cannot be demonstrated using conventional Randomized Controlled Trial (RCT) outcome studies. In 2015, the German Scientific Advisory Board for Psychotherapy first assessed the findings of outcome studies of behavioural therapy for a range of mental disorders. In 2018, psychoanalytic treatments will be subject to a similar evaluation.

This scrutiny and questioning of the effectiveness of psychoanalysis was one of the reasons why a German psychoanalytic research group, together with a well-respected cognitive-behavioural therapist and researcher, decided to undertake a multicentre study on the outcome of cognitive and psychoanalytic *long-term* treatments with chronically depressed patients in 2005.

By then, meta-analyses had indicated efficacy for cognitive-behavioural and psychodynamic short-term therapies, but evidence on the effectiveness of longer-term treatments was limited (Fonagy 2001; Leichsenring 2001). At the same time, in some patient groups, e.g. chronically depressed, the tremendously high relapse rate of any form of short-term therapy became apparent (Blatt and Zuroff 2005). There is a consensus among clinicians that these patients require long-term treatment in order to achieve a lasting improvement in their condition and to minimize the risk of a permanent disability (see e.g. Blomberg et al. 2001; Clarkin et al., 2007; Doering et al., 2010; Driessen et al. 2010).

Moreover, methodological objections were made to the exclusive use of RCTs to compare the results of different kinds of short-term therapy: they do not correspond to the parameters of actual practice and thus their results have limited validity (c.f., among others, Westen, Novotny, and Thompson-Brenner 2004; Blatt and Zuroff 2005; Westen et al. 2006); success is measured according to simplified, uniform measures of symptoms that may bias towards pharmacological or behavioural approaches while being less suited to the mode of action of psychoanalytic approaches; the patients' own assessments and preferences hardly get attention, and so on. Arguments of scientific theory were also expressed: comparative psychotherapy research in effect was promulgating a methodological myth about the uniformity of science as well as of clinical practice (Hampe 2003; Leuzinger-Bohleber, Dreher, and Canestri 2003); it was applying research designs suitable for pharmacology to the field of psychotherapy research in a way that was not justified either theoretically, practically or scientifically. Furthermore, psychotherapeutic concerns are subjected to economic evaluations in times of the economization of health care.

The planning and implementation of the Long-term treatments of chronically depressed patients (LAC) study took place against the backdrop of these controversial discussions. Therefore, our research group opted for a design that combines a naturalistic with an experimental study. In contrast to many studies of comparative psychotherapy research, in which, for methodological and pragmatic reasons, trained students or study therapists treated persons with precisely defined symptoms (often students) according to a manualized therapy method, in the LAC study, chronically depressed patients, as they attend the private practices of psychotherapists in Germany today, were treated by experienced therapists in long-term psychotherapies. We expected that many study participants had already undergone several shorter therapies with only limited success, or even a negative course, and therefore had a preference for a particular therapeutic orientation. As a result, many would not be willing to be randomized for long-term treatment. Therefore, we incorporated the option to choose between the two therapeutic approaches in the LAC study—cognitive-behavioural therapy (CBT) or psychoanalytic long-term therapy/psychoanalyses (PAT).¹ If they did not have a preference, they were randomized.

Randomization of patients, blinding of raters in terms of the specific treatment, reliable assessments, manualized and adherence-tested therapy procedures and so on are among the criteria of so-called “evidence-based medicine.” These criteria must be met in order for the studies to be acknowledged both in the world of psychotherapy research and health care systems. Therefore, the research group of the LAC study tried to satisfy all these criteria (see below).

Taking into account scientific-theoretical and methodological concerns of the psychoanalytic community, a multiperspective approach to therapy outcome patients was chosen with those “difficult to treat.” In this article, one important aspect of this complex problem is discussed: in the world of evidence-based medicine, the success of psychotherapies is almost exclusively linked to symptom improvements, whereas, according to the psychodynamic view, successful psychotherapies are primarily characterized by structural change. Hence, these two different perspectives on the treatment outcome are connected in this article.

In psychoanalytic therapy or psychoanalytic long-term treatment, relief of the psychopathological symptoms is—naturally—an expected outcome as well, but the focus of the therapeutic changes is on the transformation of the unconscious mental world, the self-

¹Both treatments had to be clearly defined (see Beutel et al. 2012):

Psychoanalytic therapy (PAT) for depression is well described. To insure homogeneity, all study PAT-therapists had to participate in training workshops held by David Taylor from Tavistock Clinic, London and they had access to his recently published and empirically validated PAT-manual specific to treatment of chronic depression. Topics of PAT for chronic depression are: Uncovering and modifying the unconscious determining factors. Idiosyncratic fantasies and conflicts due to developmental deficits and traumatizations are worked through in the “here and now” of the therapeutic relationship aiming at change of psychic structure (“structural change”) Participating psychoanalysts ($N = 73$) were state licensed and had at least three years of clinical practice.

Cognitive Behavior Therapy (CBT) for depression is based on the work of Beck Lewinsohn as adapted and integrated in a nationally widely used and well accepted treatment protocol (see Hautzinger 2013). In general, CBT therapists used five modules (Problem analysis, goals, psychoeducation, rationale for treatment; behavioral activation, increasing pleasant activities; cognitive interventions to re-structure basic assumptions, schemata; social skill training, problem-solving, stress management; maintenance, relapse prevention). State licensed CBT-therapists ($N = 44$) participated in training workshops held by Martin Hautzinger (cf. Leuzinger-Bohleber et al. 2018).

and object representations as well as unresolved developmental conflicts that influence thinking, acting and feeling and lead to maladaptation to the patients' present environment. Gabbard (2018) even argued that for some psychoanalytic patients change means a loss of their identity as well as a submission to their psychoanalysts. This is one reason why this group of patients has a strong resistance to symptomatic changes. They often only lose their symptoms after termination of psychoanalysis, in order to assert that it has not been the psychoanalyst who has facilitated such changes but they themselves. Psychoanalytic literature has therefore emphasized again and again the importance of the change in mental structures and not only symptoms for a sustained transformation of the patients' emotional functioning. To achieve such structural changes is still regarded as one of the unique features of psychoanalysis, in contrast to behavioural therapy.²

It has thus been a longstanding and central concern for many psychoanalytic psychotherapists to operationalize structural changes, in order to examine them by means of extraclinical-empirical methods. To name but a few: Robert S. Wallerstein developed the *Scales of Psychological Capacities* (SPC) in order to measure structural changes in psychoanalysis and psychoanalytic long-term treatment (see e.g. Wallerstein et al. 1989; Huber, Henrich, and Klug 2005). In the conceptualization of the SPC, he relied on numerous, in-depth expert interviews with representatives of various orientations within international psychoanalysis trying to take into account a wide range of ideas about structural changes.

For the assessment of therapy success in their large, representative outcome study in the 1990s, the research group of the German Psychoanalytic Association included genuine psychoanalytic assessment criteria. Based on the studies of Schlessinger and Robbins (1975) and Kantrowitz (1986), they developed methods of *psychoanalytic expert validation*, in order to assess the transformations of the inner mental world of former patients on the basis of psychoanalytic follow-up interviews. This psychoanalytic evaluation was contrasted with a number of other assessments (through self- or blind external assessment, health-economic data, etc.) in a multiperspective consideration of therapeutic outcome (Leuzinger-Bohleber et al. 2003).

The examination of self-reflective capacities of patients in short- and long-term therapies by means of the *Self-Reflective-Functioning Scale* (SRF) by Fonagy and his team is in wide use (Fonagy and Target 1997). The ability for self-reflection has always been regarded as central to a positive outcome of psychoanalytic treatment in psychoanalysis. As a consequence, the SRF has been applied in various therapy outcome studies (including the LAC study).

Another genuinely psychoanalytic success criterion for psychoanalysis and psychoanalytic long-term treatments are the *changes of dreams and dealing with dreams, as "via regia to the unconscious."* Leuzinger-Bohleber (1989, 2012) investigated such changes by means of a theory-based, computer-supported content analysis. The results were replicated by Kaechele et al. (2006). In the meantime, Moser and von

²The assumption is that structural change will be more durable than symptomatic improvement, e.g. by internalizing the function of the psychoanalyst to help to understand meanings of unconscious fantasies and conflicts. These internalization processes lead to a sustained capability of self-analysis. Structural change thus is a mental capability that is stable over time rather than a transient mental state (see e.g. the discussion in academic psychology concerning "traits" in contrast to "mental states," e.g. Clark et al. 2003).

Zeppelin (1996) have developed an elaborate coding method for the reliable investigation of the manifest dream content. Fischmann, Leuzinger-Bohleber, and Kächele (2012), as well as Fischmann and Leuzinger-Bohleber (2013), used this coding system to investigate the changes of manifest dreams in individual psychoanalyses in the LAC study. They were able to show that analogous changes can also be detected in dreams in the sleep laboratory, as well as with neurobiological methods (fMRI) in the same individuals.

The most extensive work on the operationalization of structural changes to date was presented by the OPD [Operationalized Psychodynamic Diagnostics] Task Force.³ Therefore, we used this well-validated instrument for measuring structural changes in the LAC study (see below). The OPD was one of the secondary outcome measures in the LAC Depression Study. Structural change is defined by this research group in a very specific way (see below), which overlaps with but is not completely identical to the understanding of structural change in clinical psychoanalysis just described. In order to prevent confusion, we will use quotation marks in this article whenever we are referring to the OPD definition of “structural change.”

The results of symptom changes in both treatment methods of the LAC study will be published in a renowned psychiatric journal, three years after the start of the treatments (Leuzinger-Bohleber et al. 2018). They were based on the a priori defined primary outcome criteria, the self-assessment of the patients in the Beck Depression Inventory (BDI), and the assessment of blinded raters in the Quick Inventory of Depressive Symptoms (QIDS-C) (see Beutel et al. 2012). We will summarize the main findings concerning the reduction of depressive symptoms here (2). This second outcome article complements this perspective with the results of “structural changes” (secondary outcome criteria). To our knowledge, it is the first study comparing structural changes of psychoanalytic and cognitive-behavioural therapy by means of the OPD. Hence, the focus is on the findings by OPD and the Heidelberg Structural Change Scale (Heidelberger Umstrukturierungsskala, HSCS) based thereupon (3/4). By reference to a clinical case study of a psychoanalytic treatment with a young, chronically depressed woman after traumatic loss experiences, structural transformations from the perspective of the treating psychoanalyst and the OPD interviewer, who was blinded to the treatment of the patient, are compared (5). Finally, the chances, but also the limits of an empirical-extraclinical investigation of structural changes are briefly discussed (6).

The LAC study (langzeitbehandlungen chronisch depressiver): A randomized controlled study comparing the outcomes of long-term psychoanalytical and cognitive-behavioural psychotherapies with chronically depressed patients

The LAC Depression Study is the first to compare the long-term effectiveness of cognitive-behavioural (CBT) and psychoanalytic treatment (PAT) of chronically depressed patients

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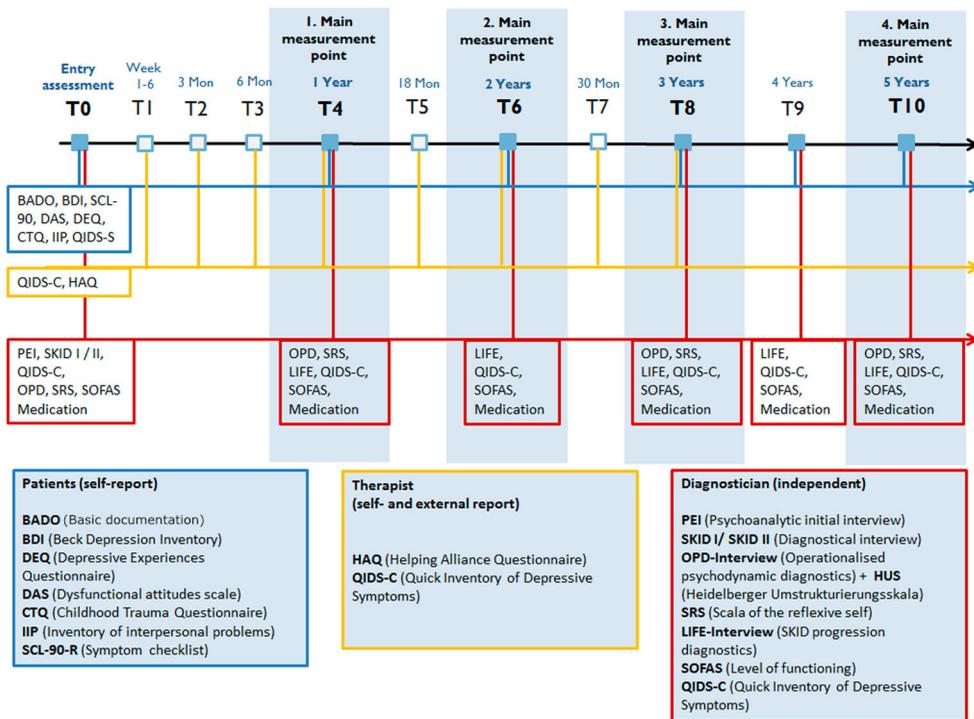


Figure 1. Data assessment: LAC study.

with a study design that investigates the influence of treatment preference in contrast to randomized assignment. The aim of the study is to compare these two treatments according to their short-term and long-term effects on different outcome variables regarding depressive symptoms, remission rates, the level of psychosocial outcome variables and so on. The authors hypothesize that both treatments lead to symptomatic improvements, whereas PAT starts more slowly than CBT but achieves more stable effects (measured by the primary outcome instruments, BDI and QIDS-C) (Beutel et al. 2012).

Figure 1 shows the scope and sequence of assessments.⁴

We have published the Consort diagram with detailed analyses of the recruitment of the patients, the reasons for being excluded from the study and how many of the patients remained in the study (see Leuzinger-Bohleber et al. 2018). A total of 554 patients were interviewed. Of those, 252 patients were included into the study.⁵ Study patients were

⁴We decided to publish the first outcome article three years after the start of treatment for various reasons. The research group of the LAC study had been working already for 15 years. Therefore, it was absolutely necessary to have the main outcome results published. This makes it possible for the younger members of the research group to publish further results, e.g. in the frame of their doctoral theses etc. This means that some psychoanalytic treatments are still ongoing and that not all patients have been investigated five years after the beginning of treatment.

⁵In the Consort diagram of the first outcome article (Leuzinger-Bohleber et al. 2018), we showed in detail which reasons led to the exclusion of some of the 554 patients interviewed. N = 55 had not met the inclusion criteria, N = 70 had not reached the required severity of symptoms, N = 8 had to be included in inpatient treatment, N = 63 revoked their consent to participate in the study, N = 11 chose a non-study therapist, N = 13 dropped out due to difficulties regarding timely referral, N = 16 switched to another therapy arm, N = 14 deviated from the treatment protocol, N = 7 were incorrectly included in the study and therefore had to be excluded subsequently, N = 45 had further reasons that they could not be included in the study.

followed for three years, receiving preferred or randomly assigned treatment. Typical for a naturalistic treatment setting, treatment ended upon mutual agreement of therapist and patient. Based on the total sample of 252 study patients, at least one outcome criterion (BDI or QIDS) was available (indicating that the patients were still included in the study) for 73.4% after one year, 63.9% after two years, and 65.5% after three years. Compared to other studies, this is an acceptable response rate (see e.g. Fonagy et al. 2015).⁶

The baseline demographic and clinical characteristics of all study subjects have been published in detail (see Leuzinger-Bohleber et al. 2018). Patients suffered from chronic depression of high current symptom severity (BDI 32.1 points; QIDS-C 14.3 points). These scores corresponded to per cent rank above 75 in large samples of depressed patients (see Rush, Trivedi, and Ibrahim 2003; Hautzinger, Keller, and Kühner 2006). The majority had taken long periods of sick leave from work due to their depression during the past year. More than 70% had had previous psychotherapies, some even four and more treatments. More than one third of our sample had been admitted to inpatient psychotherapy. Thirty-six per cent were on antidepressant medication. According to DSM IV, 58.3% fulfilled the criteria of a major depression (MDE), 12.3% suffered from dysthymia, and 29.4% were diagnosed with double depression. It proved to be more difficult than expected to recruit patients who were willing to be randomized. In spite of enormous efforts, only 88 subjects could be randomly assigned to one of the two psychotherapies, while 164 subjects were assigned according to their treatment preference.

The main outcome variables were the BDI-II and QIDS-C scores of the patients assessed one, two and three years after treatment started (T4, T6, T8). We analysed the treatment effects over the course of three years using linear mixed models. Time points of observation and the four treatment groups (CBT, PAT, randomized, preference) were included as independent variables. Intake of medication was controlled based on the baseline findings.

Findings

Both forms of psychotherapy and both types of referral led to important and highly significant reductions in the depressive symptoms of chronically depressed patients over one, two and three years. After three years, remission rates (BDI ≤ 12) were 45% and remission rates (QIDS-C ≤ 5) were 61%. The effect sizes were 1.78 (BDI), respectively 2.12 (QIDS-C).⁷ As in other studies, we found no significant differences between PAT and CBT concerning symptom reduction. However, we achieved better effect sizes and full remission rates compared to other studies (see e.g. Steinert et al. 2014). Contrary to our hypotheses, we also found no significant differences between preferential and randomized treatments. This might be due to the relatively small number of patients in the randomized arm and thus a lack of statistical power (see Leuzinger-Bohleber et al. 2018).

Psychoanalytic and cognitive-behavioural long-term therapies therefore led to a sustained improvement in the depressive symptoms of chronically depressed patients. A

⁶The homogeneity of the sample was tested by the methodological centre (see Leuzinger-Bohleber 2018).

⁷The effect sizes were very high (BDI: $d = 1.17$ after one year; 1.83 after three years; QIDS-C: $d = 1.56$ after one year; 2.08 after three years) (according to Cohen [1988], $d = .04$: small effect size; $d = 0.7$: medium effect size; $d = 1.0$: high effect size) (Leuzinger-Bohleber et al. 2018).

critical objection is that psychoanalytic treatments require more sessions for such symptom reduction than behavioural treatments.⁸ Over the three years, PAT had a total of 234 sessions on average, while CBT had only 57 sessions on average during the study period. PAT patients were in treatment for up to 36 months, while the last CBT patients ended treatment after 15 months.

In the discussion of our first outcome article, we argued as follows:

PAT and CBT offered different intensities and durations of treatment due to their divergent theoretical conceptualizations of chronic depression and of the treatment process ... In order to determine if improvements were due to common factors such as contact over time with the therapist or specific factors associated with each treatment modality (e.g. structural change in PAT) we will identify moderator and mediator variables for successful outcome of PAT, respectively CBT. We have included a comprehensive set of secondary outcome criteria such as structural change, social adaptation, quality of social relationships and therapeutic alliance to be used in such analyses ... Future analyses will also scrutinize sub-groups of chronically depressed patients who improved more in PAT or in CBT and how they differ from patients with less favorable outcomes. This will offer important insights into the relevant question, which chronically depressed patients need which kind and amount of treatment ... Analyses of direct and indirect costs of these treatments will also be done in future publications. (Leuzinger-Bohleber et al. 2018)

As we argue, it is necessary to subject the data obtained to further, more differentiated analyses. In this article, we present the results of such an analysis. Another dimension of transformations in long-term treatments was investigated: the so-called “structural change.”

Measuring “structural change”: Operationalized Psychodynamic Diagnostics (OPD) and the Heidelberg Structural Change Scale (HSCS)

In the 1990s, in order to respond to some of the basic problems of comparative psychotherapy research described above, a group of psychoanalytic researchers and clinicians developed the Operationalized Psychodynamic Diagnostics, which in the meantime has become widely used in Germany in the shape of a newly revised and supplemented manual called OPD-2 (2006), which is also available as an English translation (OPD Task Force 2008).

Cierpka et al. (2007, 209) summarized the aims of the OPD system:

The Operationalized Psychodynamic Diagnostics (OPD) system is intended as an empirical and theory-independent instrument which promotes communication within psychoanalysis and with related disciplines. An important aspect, therefore, was the agreement in the OPD group regarding the extent to which in direct conclusion, for example unconscious components, are permitted in the clinical evaluation of behavior patterns. A working group: Operationalized Psychodynamic Diagnosis, consisting of psychoanalysts, specialists in psychosomatic medicine, and psychiatrists, was founded in 1990 in Germany.

⁸We tried to keep the number of sessions comparable during the first year. Afterwards, the treatments should continue according to the needs of the patients and the conceptualization of the treatments by the therapists (e.g. CBT followed the guidelines of a so-called “relapse prevention therapy”). According to the study protocol, PAT should not offer more than 80 sessions, CBT no fewer than 60 sessions during the first year of treatment. Our data showed that the therapists followed their naturalistic practices more than the study protocol: PAT had a mean of 80.4 sessions (SD 27.8) during the first year of treatment, CBT had a mean of only 32.5 (SD 9.0) therapy sessions.

The primary objective behind the OPD manual was to provide a reliable and valid diagnostic instrument that complements the mere description or phenomenology of the psychiatric classification systems ICD-10 and DSM-IV with psychoanalytic dimensions, especially the identification of dysfunctional relationship patterns, strained internal conflict constellations as well as structural conditions of the patient. The basis is a video-recorded, semi-structured interview, conducted by a trained interviewer with an appropriate theoretical background. In addition to the perception of the illness, it inquires about self- and object assessments in different areas of life. The questions are posed as openly as possible, and no answer options are given. The interview is evaluated independently by at least two raters, then discussed together and rated on five axes. This approach allows for better objectivity, reliability, and validity of the diagnosis; comprehensive validity studies have demonstrated good psychometric properties of the OPD (Arbeitskreis OPD 2008).

The OPD has a multi-axial structure and, with its axis V, incorporates the international ICD-10 classification. Axis I assesses dimensions of disease severity and chronicity as well as therapy expectation, motivation and available resources. Axis II estimates the interplay of transference and countertransference. It does not, however, present ideal-type constellations or patterns, but provides a category system of close-to-observe behaviour patterns with free combination possibilities. Axis III corresponds to the classical psychoanalytic diagnostics and the central role of internal (neurotic) conflicts. In the OPD, life-determining, internalized conflicts can be juxtaposed with rather current, externally determined conflict situations. Axis IV represents qualities or deficits of psychological structural features. These include, for example, self- and object perception, self-regulation, or different aspects of the quality of object relations. To summarize, OPD offers multi-axial diagnostics on five (four psychodynamic and one descriptive) axes:

Axis I: Experience of illness and prerequisites for treatment.

Axis II: Interpersonal relations (transference and countertransference).

Axis III: Life-defining and unconscious conflicts of the patient.

Axis IV: Structure (i.e. basal features of mental functioning).

Axis V: Mental and psychosomatic disorders in accordance with the established descriptive-phenomenological diagnostics (ICD-10).

In the LAC study, we used ratings of axes III and IV.

Based on the OPD, a working group developed the HSCS (Rudolf, Grande, and Oberbracht 2000). This instrument assesses different levels of awareness of one's unconscious conflicts and fantasies (foci), and is thus connected with "structural change". Its formal setup is based on Stiles' Assimilation of Problematic Experiences Scale (APES) scale (1992), but development stages of change are related to a specifically psychoanalytic process model. The starting point is a focus taken from the OPD rating, which includes a conflict or a structural feature. The seven-stage scale is used to estimate how aware the patient is of this focus. This is based on the assumption that an increasing awareness of this focus, an internal issue to be elaborated, leads to a more conscious approach to it in the concrete reality of life, thus also reducing the symptoms. While patients often begin

psychoanalytic therapy at stage 2 (involuntary engagement with focus) or stage 3 (vague problem perception), after passing stage 4, they may proceed to stages 5 or 6. Higher levels of structural outcome have been shown as positive predictors of follow-ups of psychoanalytic treatments (see also Schneider et al. 2006; Grande et al. 2009).

Findings on structural changes in the LAC study

Since the evaluations of the OPD and the HSCS are very time consuming, 60 patients were selected for each of the therapy procedures. A total of 30 consecutive patients for each of the four arms were assessed by additional OPD interviews during the annual follow-up examinations one, three and five years after initiation of the therapy, with an emphasis on the detection of the degree of consciousness of the foci. After one year and after three years of treatment, complete data were available for 102 patients. In consideration of the limited resources of the LAC study, in addition to axis V, only axes III and IV were rated. The baseline data from patients with complete HSCS ratings (CBT: $N = 45$; PAT $N = 57$) were compared to the baseline of the LAC participants and showed no statistical differences. There was only one exception concerning the differential diagnoses: in the OPD sample we found more double depression in the PAT group, and more dysthymia in the CBT group. Yet we considered participants of the OPD/HSCS subsamples as comparable as they did not differ regarding sociodemographic, medical history, symptom severity and structural data.

Overview of foci in the HSCS at beginning of treatment (T0)

Following OPD assessment, the five foci deemed most relevant for the individual patient were determined on the axes of conflict and structure.

Foci or core problems of the patient were rated with regard to degree of consciousness. As mentioned above, the HSCS defines seven steps of awareness (Figure 2). The interrater reliability ($ICC_{2,1}$) for all HSCS foci was .85, for the HSCI conflict foci .76, and for the HSCS structure foci .71. These scores are in the same range of comparable studies (Grande et al. 2006).

Figure 3 shows the frequencies of the foci of the 102 patients at the beginning of treatment, separately for PAT and for CBT (cf. Kaufhold et al. 2017). The most frequent focus per patient was a structural focus of *Self-regulation* (rated in 13% of all focal ratings); as five ratings were made per patient, this applied to 67% of CBT, respectively 65% of PAT patients. Self-regulation is the ability to experience oneself as the agent of one's own competent actions, and to derive self-confidence and self-assurance from this experience of self-effectiveness.

The second most frequent focus (12%) was *Internal communication*. The capability to have inner dialogues in order to understand oneself includes particularly the capability to experience one's own affects and one's bodily self as well as to use one's fantasies for understanding one's needs (present in 62% of CBT and 60% of PAT patients).

The third most frequent focus (12%) was the conflict focus *Need for care vs. self-sufficiency*, which refers to a conflict between a strong need for care vs. self-sufficiency or altruism (in 58% of all patients). There were no differences between CBT and PAT regarding the patterns of foci at baseline.

The Heidelberg Structural Change Scale (HSCS)		
1. Focus problem warded off	1	Total defence, or avoidance, of the focus area; patient has "no problems" with the critical area
	1+	
2. Unwanted preoccupation with the focus	2-	Symptom pressure, difficulties in interpersonal relationships: unreasonable demands experienced as external
	2	
	2+	
3. Vague awareness of the focus	3-	Passive preoccupation with the focus; traces of acknowledgement of problem, notion of responsibility
	3	
	3+	
4. Acceptance and exploration of the focus	4-	Interested in understanding the problem, working relationship, active "coping", active preoccupation
	4	
	4+	
5. Dissolution of old structures in the focus area	5-	Defence becomes fragile, sadness, feeling exposed, confusion, possibly hopelessness
	5	
	5+	
6. Reorganization in the focus area	6-	Conciliatory approach to the problem area, spontaneous emergence of new ways of experiencing and behaving
	6	
	6+	
7. Resolution of the focus	7-	Integration, arrangement with self, experience conforms to reality, new formations
	7	

Figure 2. The Heidelberg Structural Change Scale (HSCS) (modified after Rudolf, Grande, and Oberbricht (2000), 241).

"Structural change" one and three years after beginning therapy in the CBT and PAT groups

According to Rudolf et al. (2012), stages 4 and 5 of the HSCS are of central importance in terms of "structural changes." Stage 4 encompasses an active involvement with the focus; it is considered an indicator for a process of change taking place on a deeper level, which leads to a resolution of older structures at stage 5. As a consequence, Rudolf et al. (2012) defined positive "structural change" (SC positive) by two criteria: rating of at least two foci at a level of 4 and an increase of the HSCS total score of 1.5 levels compared to the beginning of treatment. The total score of HSCS (T0, T4, T8) is based on the mean of the five foci

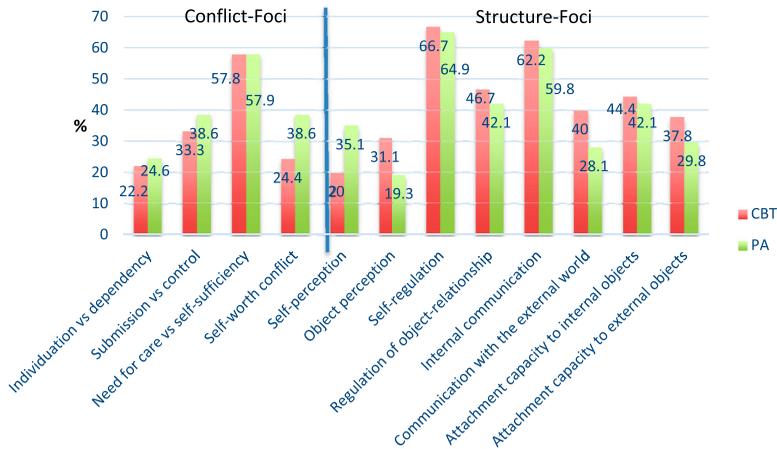


Figure 3. Frequencies of foci at the beginning of treatments ($N=102$ patients).

of each measurement time point. No “structural change” is observed when no focus reaches stage 4 and the difference between baseline and the follow-up assessment falls short of 1.5 stages.⁹

Statistical analysis

Categorical variables were investigated by Chi²-tests. Predictors for “structural change” were determined by linear regression analysis taking into account therapy group, baseline HSCS score, age and gender, separately for one- and three-year assessments. In order to determine the influence of “structural change” (yes/no), treatment arm (PAT vs. CBT) and their interaction on symptom severity, we computed a two-way ANOVA with baseline symptom score as a covariate and symptom score as dependent variable (for BDI-II, respectively QIDS) (for full data analyses cf. Supplementary Tables 1, 2, 3, 4). In order to investigate possible changes during therapy, these analyses were done separately at T4 and T8. Following the procedure of Rudolf, we only included cases of “positive” vs. “no structural change” (see Supplementary Tables 5a, 5b). Baseline symptom severity was controlled as covariate.

Statistical analyses were performed with SPSS 23.0 for Macintosh.

As [Figure 4](#) illustrates, after one year of treatment, positive “structural change” was observed in 24% of patients of CBT and 26% of the psychodynamic treatments. After three years, “structural change” increased to about 60% of patients in the psychodynamic group, significantly exceeding CBT with 36%.

In contrast to our expectation, we did not find a statistical difference in “structural change” between PAT and CBT after one year of treatment (CBT: 24.2%; PAT: 26.3%).

⁹For understanding “structural changes,” it is important to consider these criteria. Moving from stage 3 to stage 4 on the HCSC means e.g. a categorical change: the different stages have a specific meaning that is evaluated by the raters. In contrast to other scales, there is not simply a continuity in intensity: it is a fundamental difference in quality of the level of psychic functioning. Twenty-eight (15 CBT, 13 PAT) patients whose criteria for “structural change” are only partially fulfilled (less than two foci of 4 or a change score smaller than 1.5 stages) are not taken into account in the analyses of positive vs. no structural change, as described below.

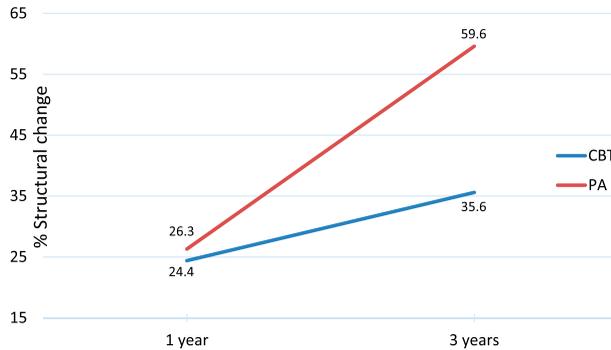


Figure 4. Percentages of patients with “structural changes” after one and three years of treatments by treatment approach (CBT vs. PAT).

Note: CBT n = 45, PAT n = 57.

This is surprising. One possible explanation is offered by Lane et al. (2015).¹⁰ These authors postulate that emotions play a central role in *all* kinds of therapies (e.g. also in CBT as well as in PAT) but are not conceptualized in many psychotherapies. In PAT, irrational emotions in the transference are seen as one key to the unconscious. Understanding the unconscious meanings of the emotions and the (traumatic) memories connected with them is essential for any transformation in psychoanalysis, in contrast to CBT. However, according to Lane et al., we may expect that the intensive therapeutic work of empathic CBT therapists also leads to “structural changes” even if these kinds of changes are not conceptualized or intended in CBT. In contrast, discovering the unconscious mental functioning in the transference relationship and the working through in the psychoanalytic sessions is a central aim of PAT in order to achieve structural change. This may be one reason why the differences in “structural change” according to OPD/ HSCS become more obvious and statistically significant after three years of treatment, because PAT therapists are systematically working on structural changes with their patients, in contrast again to CBT therapists. Of course, we also have to consider that CBT therapists are ending their therapies much earlier than psychoanalysts, another possible explanation for our findings. Therefore, we will have to test our findings further after all treatments have been terminated (see e.g. Sandell et al. 2002; Huber and Klug 2016).

In order to determine the effect of treatment on “structural change” at T4 and T8, multiple regression was computed, additionally entering sex, age and HSCS baseline score.

One year after starting treatment (T4), neither the HSCS baseline score nor the type of therapy or demographic characteristics had a significant impact on “structural changes.”

¹⁰“Time and cost considerations aside, the technique of meeting three, four or five times per week for several years creates a special opportunity to activate old memories and observe their influence on present-day construals and emotional experiences with an emotional intensity and vividness that is difficult or impossible with other methods (Freud 1914/ 1958). As such, this approach has the potential to offer something not available with other modalities that can have pervasive effects on a person’s functioning in a wide variety of social, occupational, and avocational settings. New learning can involve improvement in function above and beyond symptom reduction, such as better self-esteem, greater ability to tolerate and manage stress, improved flexibility in social relations, a greater capacity for intimacy and the construction of a coherent life narrative that exceed what would be expected based on symptomatic improvement alone (Shedler 2010)” (Lane et al. 2015, 16).

However, after three years of treatment (T8), type of therapy was a predictor of “structural change”: “structural change” occurred significantly more frequently in patients with psychoanalytical treatment.

In order to determine the relationship between structural change as defined by Rudolf et al. (2012) and symptom reduction, a two-way ANOVA with depressive symptoms as the dependent variable was calculated. Baseline symptom severity of our two primary outcome measures was controlled as co-variable.

After one-year assessment (T4) for the BDI-II score, there were trends ($p < .10$) of treatment arm and structural change. Thus, the connection between structural change and symptom reduction at this time (one year after the beginning of treatment) turned out to be rather weak. There was no effect of baseline symptom severity, and no interaction effect between structural change and therapy group. After three years (T8), however, structural change was a statistically significant predictor of symptom severity. There was also a significant interaction between structural change at T8 and treatment arm, i.e. structural change had a stronger impact on outcome in PAT compared to CBT. Figure 5 illustrates the interaction.

As the figure shows, structural change was associated with a lower symptom score on the Beck Depression Inventory (BDI-II) after three years, but only in the PAT and not in the CBT group. Similar patterns of results were found for QIDS-C.

These findings show that indeed the two therapies, CBT and PAT, differ statistically in respect to “structural change” achieved as well as its influence on the reduction of depressive symptoms three years after the start of treatment. To our knowledge, this is the first empirical study that shows such a difference in the dimension of “structural change.”

But what does “structural change” mean from a clinical perspective? The following case may help to illustrate the processes of transformations of chronically depressed patients in psychoanalysis that might lead to structural change according to a psychoanalytical clinical understanding.

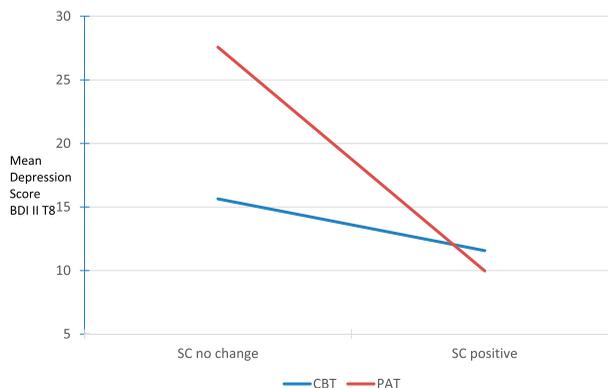


Figure 5. Severity of symptoms and structural change in cognitive-behavioural (CBT) and psychoanalytic therapy (PAT) after three years.

Note. The analysis only contrasts SC positive: CBT 15, PAT 31 vs. no change: CBT 13, PAT 10; partial SC was excluded ($N = 28$); $N = 5 =$ missing BDI score; SC = structural change; positive = at least two foci at level 4 or higher and increase by 1.5 points; no change = does not fulfil either criteria; symptom severity measured by Beck Depression Inventory (BDI-II) score.

Table 1. Foci determined by the raters in the evaluation of the OPD interview and the results achieved in the HSCS up to three years after the beginning of therapy.

Foci	HSCS at beginning of treatment (T0)	HSCS one year after starting treatment (T4)	HSCS three years after starting treatment (T8)
Submission vs. control conflict	3+	6	6
Care vs. autarchy conflict	3	5	5+
Affect tolerance	3-	4+	5
Balance of interests	3	4	6
Accepting help	3+	5	5+

We have already published an extensive case report of psychoanalysis with a chronically depressed patient, Mr M., in his mid-fifties (Leuzinger-Bohleber 2014, 2016). As with most of the patients of the LAC study, he had been depressed since his early childhood.

Although the average age of the patients of the LAC study is 41 years (see Leuzinger-Bohleber et al. 2018, Table 1), we have decided to present here a relatively young patient because we are convinced that trying to achieve structural change is particularly essential for relatively young, chronically depressed patients. At the end of his psychoanalysis, close to the age of 60 years, Mr M. stated: "I regret so much that I have not undergone an intensive psychoanalytic treatment much, much earlier. This would have given a totally different direction to my life" Ms B. had been depressed since the traumatic loss of her father in her seventh year of life. Therefore, she fulfilled the inclusion criteria of the LAC study although she was only in her early twenties when she started psychoanalysis.¹¹

"I can surely not expect anyone, also no man, to put up with my family and my psychotic mother ... ": On the structural changes in psychoanalysis with a traumatized, chronically depressed late adolescent

In this presentation, we focus on the psychological transformational processes and refrain from the detailed presentation of single sessions. Treatment sessions were regularly presented in the LAC study's weekly case conference in Frankfurt am Main. In addition, the changes in the psychoanalysis were clinically evaluated by means of the *Three-Level Model for Clinical Observation* and the expert validation integrated therein (Altmann di Litivan 2014).¹² In the following, a summary of the structural transformations in the

¹¹Another reason for choosing Ms B. was that we have already summarized the beginning of her psychoanalysis in a former German publication which juxtaposed the initial phases of a behavioural therapy with a psychoanalytic treatment in the LAC study (Leuzinger-Bohleber et al. 2010). There was a discussion of similarities, as well as of important differences regarding therapeutic approach, aims and treatment technique, while, at the same time, an explanation was given as to what extent the psychoanalytic treatment was referencing the manual for the treatment of chronically depressed patients by David Taylor (2010), which had been used as a basis in the LAC study. Due to the scope of this article, we limit ourselves to the psychoanalytic treatment.

¹²Following the Three-Level Model for Clinical Observation, psychoanalytical sessions from the beginning, the middle and the end of psychoanalysis had been presented and intensively discussed with the clinical team of psychoanalysts in Frankfurt. The following summary of the psychoanalysis was "expert-validated," which means: (a) the summary of the psychoanalysis followed a systematic compression of the clinical material (as described in the Three-Level Model); and (b) members of the clinical teams had read and commented on several drafts of the case study. Their comments have been considered in the case study (see e.g. Leuzinger-Bohleber 2014).

psychoanalysis by the treating psychoanalyst (M. Leuzinger-Bohleber) is juxtaposed with the independent, blind assessment of the “structural changes,” in accordance with the OPD/HSCS and the semi-structured interview after three years of treatment (U. Bahrke).

Summary of the structural changes from the perspective of the treating psychoanalyst (M. Leuzinger-Bohleber)

First impression of the patient and treatment motivation

The 24-year-old female patient was referred by a neurologist to the outdoor service of the Freud Institute and the LAC Depression Study, respectively. She suffered from severe depression following a complete mental breakdown three years ago. She dropped out of her studies and spent her days mostly in seclusion, alone. She was often ill, had gastrointestinal problems and back pain. She was 45 kg overweight, with serious health consequences. She suffered from severe sleep disturbances, fear of failure, suicidal thoughts and the feeling that she had lost her ground.

A trigger for the breakdown was a conflict with her roommate, with whom she previously had a close, non-sexual relationship. She now lived again in an apartment with her psychotic mother, cooked and cared for her and was unemployed. She was socially isolated and had only a few friends left. At the time of the initial assessment, she took sleeping pills and antidepressants.

In the first interview, Ms B. speaks without interruption, without any affect modulation in her voice. In my countertransference, more and more depressive feelings are spreading: I am fighting against fatigue, doubt whether I can reach Ms B. emotionally at all and sink into a state of helplessness and emptiness. When, towards the end of the interview, I draw the parallel between the sudden loss of the flatmate and her father, whom she discovered dead in the basement after a heart attack when she was seven years old, I am astonished by her immediate emotional reaction. She interrupts her flow of speech, looks at me and begins to cry desperately: “I have never thought about that ...” She herself appears to be astounded at her crying: “I never cried as a child. Only as an 18-year-old, when my aunt led me to the tomb of my father for the first time, was I suddenly overwhelmed with weeping.” In this sequence of the interview I find emotional contact to Ms B. and can imagine working with her. She herself explicitly wishes a high-frequency psychoanalysis on the couch¹³ and is strongly motivated for the treatment. As with many patients in the LAC study, she had already undergone several unsuccessful short-term psychotherapies.

On the course of treatment

In the first few months, Ms B. usually starts talking as soon as I come to meet her at the door, and continues like this on the couch. She seems to have a need to control our relationship almost completely in this way. Often she talks about everyday situations or the variety of physical symptoms that torment her. She can only sleep with the help of medication¹⁴ and often spends the day in bed before coming to our session in the

¹³It was a “psychoanalysis on the couch”—first with four sessions, in later phases of psychoanalysis with three, and in the fifth year with two sessions a week.

¹⁴As was discussed in Leuzinger-Bohleber et al. (2018), due to ethical reasons medication could not be withheld in this group of severely ill patients. Only baseline medication was taken into account in our analyses, but the influence of medications on therapy outcome was not in the focus of our design. Instead we have documented the use of medication in

evening. It becomes clear how lonely she is. Although she lives in the same apartment as her mother, the two usually meet only at dinner. The mother lives completely cut off in her own world and seems to barely notice the patient. She still denies her husband's death and talks about him being on a journey in South America.

I provide here some information concerning her biography that was collected during psychoanalysis. Even before the death of the father, the children and relatives noticed that her mother "was behaving increasingly strange, in that she, for example, wore sneakers with an elegant costume or let us children no longer ride bicycles or eat certain foods. She avoided certain persons, on the grounds that they were doppelgangers who mean to do something evil" (written report of the patient). It turned out that she suffered from "a type of schizophrenia triggered by the menopause" (patient). The patient's father took her to a psychiatric clinic, but the mother discharged herself after a few days. To this day, she still refuses to take medication and lives a "strange, restricted life."

When the father died shortly thereafter, relatives attributed the strange behaviour of the mother to shock and seldom took care of her or her children: "We children effectively grew up on the evening when we found our father dead in the basement, and we learned to function as adults" (patient). They took over the domestic tasks, such as shopping and cooking, but also the management of the rented apartments, which apparently constituted part of the family's income. Both children had a striking growth spurt. The patient had her first menstruation one year after her father's death, at the age of eight. She gained 40 kg within a year and was always the tallest in her class. Her performance in school was relatively good and she attended a renowned high school. It seemed hardly believable to me that no one at school knew about the family situation. It turns out that the children shared the mother's fear that they would be put into a children's home if someone discovered the mother's illness. The sister moved out immediately after finishing high school and, with the help of a notary, left the patient to take care of the mother. Although the patient also moved into a flat share after finishing high school, she looked after her mother every day.

The patient's enormous psychological achievement, her successful coping with her school life under these circumstances, was probably possible due to her good early object relations. Emerging memories of cheerful, humorous scenes with her father suggested that she had a "good-enough" relationship with him, and probably also with the mother, whose mental illness was not so serious during the first years of Ms B.'s life. The patient obviously had been a vital, lively preschooler. In the course of treatment, it turned out that, in spite of the state of shock and the stagnation of her development, she had managed to maintain a positive inner relationship with her father: "During my entire school life, I felt that he was looking at me from heaven, that he was always there" These fantasies illustrate that it had not been possible for her to mourn the loss of her father. The good early relationship to the father (and mother?) was probably reactivated during the transference of the initial phase of the psychoanalysis, with the result that her depression disappeared after the first year of treatment due to a positive transference relationship.

After only two months, Ms B. begins to go out of her apartment more often and takes up a part-time job. During these months of treatment, it becomes comprehensible that Ms B. lived in a dissociative state for many years and “was never really present in reality.” This is why, in many psychoanalytic sessions, I try to address the function of dissociation, as a protection against unbearably painful despair, grief and aggression. Finally, after six months of treatment, for the first time Ms B. can cry deeply on the couch about the traumatic loss of her father. After that, it is easier for her to feel, to articulate and to approach her current feelings in the analytical situation and to use them as an inner orientation matrix. Again and again, Ms B. describes how disturbing these processes are for her and how vulnerable she feels, “like a hermit crab when it dares to leave its shell”

The hermit crab becomes a metaphor in the treatment. Repeatedly, it becomes upsettingly apparent what a terribly secluded child Ms B. had been during elementary school. Even in adolescence she had not found any deeper contact, not even with her few “girl-friends.” The traumatizing, sudden loss of the beloved father and the psychotic breakdown of the mother had led to a “frozen state,” an inner paralysis and a depressive withdrawal from all real relationships. Her inner mental development had come to a standstill. Apparently, she had used most of her psychic energies to cope with her life situation and school performance.

After much back and forth, Ms B. decides to resume her studies after nine months of treatment. The resumption of the studies is associated with many fears. The analytical work proves to be particularly important for Ms B. during this time, especially for overcoming the total depressive withdrawal and the traumatically induced mental state of paralysis, but also because of conflicts of loyalty towards her mentally ill mother. She seems to struggle against an unconscious “truth,” presumably stimulated by oedipal fantasies, among others, that she is not entitled to live her own, successful life separated from her mother. We finally understand that the unexpected breakdown at the age of 21, the “social death,” as Ms B. once called it, was experienced on her part as a repetition of the sudden, traumatic loss of her father on the one hand. On the other hand, in her fantasies it also meant a revenge of the (oedipal) rival, whom she had just “let down” in her adolescent separation process.

Since Ms B. appears extremely vulnerable and fragile on the couch during this period, I am deeply concerned about whether she will find her way back to university life after the years of depressive withdrawal, the lack of structure in her everyday life and the lack of learned social skills. After some months, Ms B. falls in love with a fellow student and, very carefully, and with continuous relapses, ventures out of the “hermit existence.” In one session, despair and distress break out of her most intensely: “I can surely not expect anyone, also no man, to put up with my family and my psychotic mother” Many of the following sessions have to do with a deeply buried, negative self-image of being an essentially destructive, despicable person whose “bad wishes” and “reckless temperament” were to blame for the father’s death. Her depressive convictions and fantasies also become observable in the transference. Again and again, Ms B. is convinced that she is a heavy burden for me and has to protect me, since otherwise “a catastrophe” could occur. I could become seriously ill or even die, and her own wishes and impulses would be to blame. During this time, she recounts one of her few dreams:

I am in a large courtyard of an old building and stand barefoot on a huge pile of shards. My feet are bleeding ... Far away, at the entrance to the courtyard, there are some people ... no one is interested in me ... I wake up in panic.

Her associations first lead to her feeling more and more vulnerable since she has started psychoanalysis, e.g. realizing how lonely and socially isolated she really is.

You feel that your feet are bleeding and told me in one of our last sessions that you are afraid of facing a pile of shards that is your life so far, and no one, including me, was interested in you in your distress and loneliness ... (Analyst)

Towards the end of the session, the patient talks about her inner, omnipotent conviction regarding the effect of her own destructive impulses: "... when I woke up I had the impression that I was to blame for the fact that everything was in ruins. I would have to stand on the pile of shards as a punishment, like in the pillory ... " (patient).

Psychoanalytic work helps her to create some inner distance from the overflowing embodied memories of the traumatic object loss and unconscious (oedipal) fantasies triggered thereby. She begins to partially regain her self-agency. This leads to visible changes in the psychoanalysis. The patient now feels less need to control the analytical relationship so intensely. For the first time, she is able to tolerate silence during the sessions and is able to associate more freely.

In the third year of treatment, Ms B. is seeing an internist to ask for help with losing weight. To her astonishment, the competent doctor advises her not to undergo a rigorous treatment in a clinic or even gastric surgery, but instead helps her to change her eating habits. In the following months, she slowly but steadily loses 40 kg and, in my perception, turns into an attractive young woman. In psychoanalysis, the focus is often on the fears that she could not bear to abandon her "armour of fat." She often feels helplessly exposed to her feelings, like a hermit crab. When that crab grows, it has to leave the protective armour and find a new home. In doing so, it is defenceless, vulnerable to being spotted and eaten by predators.

Ms B. feels similarly vulnerable in this phase of the analysis. On the couch, intense emotions surface, especially grief and despair, but also anger and rage, e.g. in connection with conflicts with the analyst regarding cancellation fees. The associated, unconscious fear mentioned above, of destroying her opposite (e.g. her oedipal rival) with her aggressive/destructive impulses and fantasies, can now be worked on directly in the transference.

To offer one example, towards the end of the third year of treatment, Ms B. falls in love intensely and starts a stormy sexual relationship. She hurls herself into the love affair and frequently cancels sessions. She perceives the treatment more and more as a restriction of her autonomy, so I let myself be tempted to consent to finish the treatment by the end of the year. After the summer pause, Ms B. does not show up for the analytical sessions; I am convinced that she has broken up the treatment. After four weeks, the patient gets in touch. She has ended her relationship abruptly and is in a desolate mental state. In the next few weeks it becomes clear that she enacted the traumatic loss of her father in her psychoanalytical relationship as well as in respect to her lover. As described by traumatized patients, she had unconsciously tried to turn her traumatic experiences as a passive victim—losing her father totally unexpectedly—into activity. Now it is she herself who abruptly leaves the love object. Working through this dynamic and the

associated unconscious fantasies and conflicts during the following months gradually enables her to actively deal with the traumatic experience, and thus facilitates a structural change, as described by some psychoanalysts as characteristic transformation processes of severely traumatized patients (see e.g. Bohleber and Leuzinger-Bohleber 2016). In the fifth year of the psychoanalysis, Ms B. finds a new partner through the internet and begins—carefully—a new romantic relationship. I am impressed by the fact that she has chosen a boyfriend from a southern migrant family with great cohesion. “In their family, they accept me like a daughter—despite my psychotic mother”

The relationship with the boyfriend evolves into a reliable and sexually satisfying relationship. Ms B. moves into her own apartment, completes her studies and finds a job in a small company. She is planning to finish the psychoanalysis in a year. The final phase of psychoanalysis is particularly important for a lasting structural change in Ms B.’s inner object world, in that, through the chosen, predictable separation from the analyst, the unconscious fantasies and fears, triggered by the sudden traumatic object loss of her father, can once again be directly experienced and worked through in the transference relationship.

Notes on treatment technique and structural changes from a psychoanalytical perspective

Within this scope, it can only be mentioned briefly that the treatment technique was based on the successive understanding of the specific psychodynamics of Ms B.’s chronic depression. With reference to the scheme for the psychodynamics of depressive disorders by Hugo Bleichmar (2010), Ms B.’s depression was linked to the impact of the traumatic loss of her father at the age of seven (traumatization type I according to Terr 1994), as well as the years of taking care of her psychotic mother (traumatization type II), which meant a traumatic loss of the love objects and, at the same time, overstimulated the oedipal fantasies and conflicts of a seven-year-old. The trauma prevented coping in a “good-enough” manner with oedipal and pre-oedipal conflicts: the inner development stagnated. Ms B. had survived the traumatic object loss, remaining for many years in a frozen state and a depressive withdrawal connected with adiposity and dissociative conditions. At the age of 21, her traumatized, “exhausted self” (see Ehrenberg 1998) collapsed. It was no longer able to stand up to the development-specific requirements of late adolescent separation and identity-finding processes.

The more recent psychoanalytic literature on the treatment technique of severely traumatized patients describes the need to establish a reliable analytical relationship with the patient to begin with, in order to convey a sense of safety and facilitate an approximation to the trauma, without the experience of re-traumatization (cf., among others, Bohleber and Leuzinger-Bohleber 2016; Taylor, 2015). After the dissociative defence had been understood as an unconscious attempt to cope with the trauma, the unbearable emotions connected with the traumatic object loss could be experienced in the here and now of the transference relationship. Ms B. thus gradually gained an active coping strategy for dealing with the traumatizations suffered. She was no longer exposed to the threat of being overwhelmed by the fear of death and panic, and successively regained a basic sense of self-agency. This partial feeling of self-agency allowed her to find a way out of the psychological shock and the depressive withdrawal and to renounce her adipose protective armour.

Hence, the analytical dealing with the traumatic object loss enabled Ms B. to recognize her frozen development and, metaphorically speaking, to find a way out of her existence as a “hermit crab.” The unconscious fantasies, overstimulated by the traumatization, could be successively understood psychoanalytically. The availability of good inner objects and a basic trust in a helping Other, which had been destroyed by the traumatization, could be partially re-established in psychoanalysis. As a result, Ms B. ventured to enter into an intimate, emotional relationship with persons important to her, both in psychoanalysis and in reality. She rediscovered her body and her feelings, and underwent an impressive process of belated and progressive development of her self, which had remained at the stage of a seven-year-old. The corresponding unconscious fantasies had determined her psychic functioning. She was more and more able to perceive and reflect her fears of a repetition of the traumatic object loss, and thus to limit their (unconscious) influence on her current relationships. This allowed her, in spite of massive fears of dependency and loss of autonomy, to enter into a sexual and tender relationship, as well as to find her way professionally.

Towards the end of the psychoanalysis, Ms B. was able to acknowledge the traumatic loss of her father as well as the psychotic illness of her mother as part of her own life history. Now, she lived consciously with the effects of these traumatizations on her current thinking, acting and feeling and was no longer passively and unconsciously determined by their shadows.

This transformation of the inner self- and object representations, the active dealing with suffered traumatizations and associated unbearable affects, (unconscious) fantasies and conflicts, but also the overcoming of the stagnation of psychic development processes, characterize from a clinical psychoanalytical perspective the *structural changes* Ms B. has undergone in the psychoanalysis. The short summary may illustrate, in analogy to the group statistical findings, that as according to the above-summarized outcomes of the LAC study, also with this individual case, these changes took longer than the decrease in depressive symptoms, which had already been observable after one year of treatment.

Increased awareness of the foci as an important step connected with “structural changes” according to the OPD/HSCS is related to this psychoanalytical understanding of structural change.

“Structural changes” based on an OPD/HSCS interview three years after the start of treatment evaluated by a blinded rater (U. Bahrke)

The two raters who evaluated the OPD interview at the time the therapy started (T0) considered care vs. self-sufficiency, and submission/control as the most important unconscious conflicts of Mrs M. Therefore, they were defined as foci for the assessment of the progress on the basis of the HSCS. The raters assumed that an increasing awareness and treatment of the related inner themes of these two foci would also result in a more conscious dealing with these conflicts in the concrete reality of life, thus also reducing the symptoms. Furthermore, the raters assessed that the patient’s structure was not exceptionally weak, which is why they chose two foci on the conflict axis and only three on the structure axis. In terms of structure, based on the OPD interview, they estimated that an increase in the ability to tolerate affects would be essential for self-development in the area of self-regulation, and that the regulation of the object relations would depend on

attention to and implementation of the balancing of interests. Finally, it was considered essential that the patient should learn to accept help very concretely in the field of attachment to external objects.

This assessment of the raters correlates well with that of the analyst: the dominance of the conflict of care is apparent from the biography; the controlling aspect in the transference “through the talking overkill” is described by her; and the good structure “in the light of her good early object relations” is stressed. The focus of the affect tolerance is likewise revealed in the first interview: the “ability to cry.” Regarding the degree of consciousness for these psychodynamically relevant foci, the raters estimated the patient to be (already) at level 3 (vague problem perception), which is also a good prognostic sign.

Sure enough, it was apparent that the patient could very quickly accept the analytical “help” offered to her, since, after only one year of therapy (T4), the raters attest her high results in the conscious work on her conflicts, especially the access to her potential for aggression (conflict of submission in area 6). The results of the structural foci have already improved compared to T4; most of them are found in area 4 (recognition and exploration of the focus).

Table 1 shows HSCS foci at the beginning of treatment and after one and three years.

Three years after the beginning of therapy (T8), a slender, attractive, eloquent patient turns up for the OPD interview. She willingly describes episodes of her relationships and is able to deal with the interviewer’s interventions thoughtfully. Some focus-relevant statements are quoted here:

I don’t feel weak anymore when I say: I need someone to help me with something, or I have to rely on someone. That doesn’t make me feel small anymore ... If I’m feeling bad and I realize it would be good to have someone now by whom I feel looked after, with whom I can be like I am, then I do call these people and I’m ready to say: I have this and that problem.

When asked, the patient can illustrate her behaviour by way of an example and, in doing so, touches on the focus of the control conflict: “I still have a problem with misjudging myself ... I do say to myself: You can’t plan everything and have everything under control, that’s completely utopian ... but then others are there to help me straighten that out a bit.”

When asked about the different feelings she described and how she deals with them (focus affect tolerance), she says: “Guilt feelings towards others are what occupies me the most or the longest, and they also discourage me and make me feel like I’m a bad person.” After describing an example, she continues thoughtfully: “This is just this old behaviour, I believe, which is probably still the strongest thing clinging to me in such moments, to think that I have messed something up ... that is the only thing which is still very strong.”

On the basis of such statements, the raters considered the patient to be at level 5 regarding the focus of affect tolerance (resolution of old structures in the focus area), which means that she was able to perceive her own damages and limitations with sad and resigned moods, but also an emerging scope for hopeful new designs.

In the further course of the interview, she once again refers to her relevant areas of conflict, which also touch on the focus of the “balance of interests”:

That's somehow related to the fact that it's always been like this: I am the reliable one who doesn't make any demands, and somehow I'm still expecting that from myself, that I make it right for everyone—but I know: You have to take care of yourselves! I do know that, and still, at the moment when the feeling of guilt comes up ... But then after a certain time there's a new voice, saying: No, they could have taken care of themselves just as well! You can't sort out everything for other people, and it's not your job, too.

Referring to such statements, the raters estimated the patient to be advancing towards level 6 of the conflict areas (reordering of the focus area), which means an inner dismissal of the "old" and the assumption of self-responsibility in the focus area.

When the interviewer finally asks the patient about the significance of her childhood experiences for her adult personality (questions that are taken from the Adult Attachment Interview), it becomes clear to what extent the patient now experiences her good inner objects:

I believe the childhood experiences from the time when everything was still okay, before the death of my father and the illness of my mother, have influenced me very strongly, in that I can now draw on them a little bit, maybe also seeing who I actually am: that I was not such a cautious child and didn't always just think about others, but tried out what I wanted to do and felt very supported in that. This changed then completely, and I developed the opposite feelings—and now, during the last year, I've started to draw on my early childhood experiences until I was eight: maybe you can try to adjust your personality also to that and not only to what you had to learn afterwards.

Overall, from the point of view of the OPD raters, we can say that the patient has developed unusually rapidly (T4) in comparison with other chronically depressed patients on the HSCS, that she has been able to stabilize and further improve this result towards T8. It can be assumed that the restructuring in the foci areas will have further improved by the time of the interview five years after the beginning of the therapy (T10).

Discussion and conclusion

In contrast to the first outcome publication of the LAC study focusing on symptomatic changes in PAT and CBT with chronically depressed patients (Leuzinger-Bohleber et al. 2018), the research microscope in this second publication zeroed in on something different: the so-called *structural change* that has been considered a central mechanism of change in psychoanalytical psychotherapies (Blatt and Zuroff 2005; Bleichmar 2010; Taylor 2010). We analysed data of one of the so-called "secondary outcome measures," the OPD and the HSCS. This article is a first attempt to assess increasing awareness of one's unconscious fantasies and conflicts as an indicator of "structural change" and to compare psychoanalytic and cognitive-behavioural treatments based on findings of empirical instruments like the OPD and the HSCS. Findings indeed pointed to essential differences between the two treatment modalities.

Foci of intrapsychic conflicts or structural deficits identified at the beginning of treatment did not differ between CBT and PAT. The overall pattern of foci identified by interviewers blinded to treatment group corresponded to psychodynamic conceptualizations of chronically depressed patients (see e.g. Bleichmar 2010; Leuzinger-Bohleber 2014, 2015). Problems relating to *self-regulation*, the most frequent focus identified in the sample, resonate with depressed subjects' feelings that they have lost the capability to

control their affects, bodily reactions and their ability to create satisfactory object relations in their private life as well as at work. The second most frequent focus, *internal communication*, was also considered distinctive for depressed patients who withdrew from intimate and social relationships and suffer from loneliness and isolation. *Need for care vs. self-sufficiency* was characterized as a basic conflict of depression. Thus, changes in the consciousness of these foci could be expected to lead to psychic transformations in depressed patients. According to the OPD and the HSCS, these transformations are characterized as “structural changes.”

One year after beginning treatment, the proportions of “structural change” according to the OPD/HSCS were comparable between PAT (26%) and CBT (24%). We mentioned one possible explanation referring to Lane et al. (2015).¹⁵ These authors postulate that emotions play a central role in *all* different kinds of therapies (e.g. also in CBT as well as in PAT) but are not conceptualized in all kinds of psychotherapies. We thus may expect that the intensive therapeutic work of empathic CBT therapists in the LAC study also leads to an increased awareness of one’s unconscious conflicts and “structures,” even if these kinds of “structural changes” were not conceptualized or intended in CBT. In contrast, discovering the unconscious structures of mental functioning in the transference relationship and the working through in the psychoanalytic sessions are central aims of PAT in order to achieve structural change, as was illustrated by the case example. This may be one reason why the differences in “structural change” according to OPD/HSCS become more obvious and even statistically significant after three years of treatment: PAT therapists are systematically working on structural changes with their patients, in contrast again to CBT therapists.

After three years, with 60%, more patients in PAT fulfilled criteria of “structural change” (following Rudolf et al. 2012) compared to CBT (36%). When controlling baseline HSCS, sex and age, the treatment arm remained a highly significant predictor of “structural change.” According to our expectations, further analyses showed that “structural change” as defined by the OPD/HSCS was also a predictor of symptomatic change. As the interaction showed, there was a stronger association of structural change and reduction of depressive symptoms in PAT than CBT after three years.

Thus, “structural change,” as defined by increasing consciousness of focal themes of intrapsychic conflict and of deficiencies of mental structure, appears to be relevant for psychotherapeutic change in general and particularly for long-term psychoanalytical psychotherapies. As already mentioned, consistent with the model by Lane et al. (2015), structural change needs a high emotional intensity in the therapeutic relationship and takes time. The psychoanalytic technique of working intensively with patients in the therapeutic relationship over a long period of time may create a specific opportunity to activate emotional memories of traumatic, autobiographical experiences of the patients, as illustrated by the case material of Ms B. These activations make it possible to observe in detail the specific influence on present-day construals and emotional experiences in the transference with an emotional intensity and vividness which, according to Lane et al. (2015, 16), is difficult to achieve with other psychotherapeutic methods. Problematic

¹⁵“One must conclude that there is something about the combination of arousing emotion and processing that emotion in some way that contributed to therapeutic change, but the specifics of what it is about emotion that actually brings about change are not clear” (Lane et al. 2015, 2).

implicit emotional procedures may be changed through insight based on observations in the transference interrupting automatic behavioural enactments. The associated “underlying” emotions become conscious, one presupposition for changing behaviour. In psychoanalytic terms, the emotionally intensive working through of the unbearable traumatic emotions and episodic memories in a holding and containing relationship to the therapists allowed the chronically depressed patients in PAT a psychic integration of the traumatic experiences in their (conscious) idiosyncratic autobiographic memory. This was illustrated by the psychoanalytical case summary. As in the case of Ms B., traumatizations and the unconscious fantasies that had been stimulated by the traumatic loss could be integrated into a more mature self and identity that was no longer mainly unconsciously determined by past traumatizations and connected fantasies and conflicts (see e.g. Negele et al. 2015; Bohleber and Leuzinger-Bohleber 2016). These are possible reasons why we observed “structural changes” only in the majority of patients in PAT after three years of treatment, and not in the CBT group. We hypothesize that “structural changes” will further consolidate at our five-year measurement in the PAT group, contributing to a decline in work disability, the major driver of health costs in chronically depressed patients (see Leuzinger-Bohleber et al. 2003; Bleichmar 2010; Leuzinger-Bohleber 2010, 2015; Taylor 2010; Subic-Wrana et al. 2011; Rudolf et al. 2012; Shedler 2015). In these forthcoming analyses, we will also include a suggestion brought up by Josephs and Bornstein (2011). They have suggested that vulnerability to relapse under stress can be regarded as an important criterion of structural change. After completion of the five-year follow-up, further analyses will determine rates and predictors of relapse in psychoanalytic and cognitive-behavioural treatments and relate these findings to our measure of structural change.

The LAC Depression Study has its limitations. Given the costly nature of the OPD/HSCS assessments, we could not study “structural change” in the entire sample. We also could only consider changes in axes III and IV and the HSCS. To investigate if changes in the HSCS correspond to changes in axis IV of the OPD is subject to further analyses. It would also be interesting to compare these “structural transformations” with sustained changes measured by other instruments (e.g. the Scales of Psychological Capacities, the Self Reflection Scales etc.). While we have presented in this article one of the largest inquiries into “structural change” to date, we concede that from the association we found between structural change and improvement of depression we cannot conclude an impact on depression. Alternatively, a decrease in depression may also improve structural change.

However, while CBT was performed for more sessions than usual in trials (average 57 sessions), it needs to be considered that CBT was overall shorter than PAT (average 234 sessions). Of course, this will evoke arguments concerning the cost of the treatments. A substudy determining which of the two treatments leads to a greater reduction of health care costs, particularly indirect costs (number of days of sick leave, time spent in hospital etc.), is still in progress.

However, we cannot exclude the possibility that the longer duration and the greater number of sessions of PAT may have contributed to the greater structural change observed. On the other hand, the fact that structural change was associated with symptomatic change in PAT, but not in CBT, indicates that its significance for change indeed differs between treatments. A serious limitation of this article is that, for a variety of pragmatic reasons, we had to publish our results with the data obtained three years after the

beginning of treatments. We thus cannot yet answer the question of whether structural change indeed leads to more durable transformations than symptomatic improvements. We will only be able to answer this question after all the therapies have been terminated and we have studied the former patients in long follow-ups.

While we controlled for baseline scores of structure, respectively depression, no other potential confounders could be included. Confirming expectations, more patients in PAT showed “structural change” three years after beginning treatment. The role of changing maladaptive attitudes as a venue of change as well as other secondary outcome measures (see Beutel et al. 2012) will be pursued in CBT and in PAT in further publications.

Further substudies will also try to answer the clinically important question of which patients have particularly good or bad outcomes in which of the two treatments. These analyses will offer important information concerning the question of the so-called “differential indication” for this group of “difficult-to-treat” patients.

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