Sandell R (2005) Structural change and its assessment. Experiences from the Stockholm Outcome or Psychoanalysis and Psychotherapy Project (STOPPP). In: Giampieri-Deutsch P (Eds) Psychoanalysis as an empirical, interdisciplinary science. Collected Papers on Contemporary Psychoanalytic Research. Austrian Academy of Sciences Press, Vienna, pp 269-284

Structural Change and its Assessment.

Experiences from the Stockholm Outcome of Psychoanalysis and Psychotherapy Project

Rolf Sandell

Department of Behavioural Sciences, Linköping University, Linköping, Sweden

If we were to launch a survey among psychoanalysts of different schools in different societies about the goals of psychoanalysis, my hypothesis is that a large majority, irrespective of school or society, would include some concept of structural change among the most important ones, if not as the most important. Time and again when I have presented our findings to psychoanalytic audiences the question has been asked if—or, why—we did not measure "structural change." It is partly in response to that question that I take this opportunity to offer a more extensive answer than is usually allowed during post-presentation discussions.

How has structural change been defined?

I am not sure who first used the concept of structural change in psychoanalytic discourse. I have found no entry for it in The Language of Psycho-Analysis (Laplanche & Pontalis, 1980) and none for any reasonable synonym or alternative rendering. Correspondingly, it seems to be missing in the General Subject Index in the Standard Edition of Freud's (1974) work. One may assume that is was implied for the first time in the famous formula "Wo Es war, soll Ich werden." However, there may have been structural change notions around much earlier, in terms of the topographical model. In view of the fact that Freud, at the time, considered the conscious and the unconscious as systems, the formulation to make unconscious conscious may be taken to imply, too, the idea of systemic or structural change.

Nowadays, the concept of mental structural change has become what Weinshel (1990) has called a psychoanalytical shibboleth, a slogan, a rhetoric to distinguish psychoanalytic change from the—presumably less genuine—forms of change in other kinds of mental treatments. But Weinshel argues (1990, p. 636), "We should at least consider that

our long-held claim that 'structural change' is the sacrosanct province of psychoanalysis may be a somewhat solipsistic one." My purpose in this paper is to follow Weinshel's suggestion and analyse the structural change concept with the following kinds of questions in mind :

1. What are the essentials of the kind of change that may be called structural (in contradistinction from non-structural kinds of change)?

2. Is the structural kind of change specific to psychoanalysis or may it come about in other ways?

3. Are all changes during a psychoanalysis structural?

4. How may structural change be properly assessed?

The notion of structural change in psychoanalysis

The easy way to define structural change is to claim that it is the kind of change that occurs in a psychoanalysis. This is a primitive definition, of course, more or less a stipulative type of definition, saying merely that whatever change occurs in a psychoanalysis is a structural one. A variation and, in fact, much stronger rendering of the idea is that structural change is the kind of change that may occur only in a psychoanalysis. At once, this becomes a bit more complicated, because this is a reality type of definition, saying that there is something, which we shall call structural change, that will happen in psychoanalysis, exclusively. By being a reality definition, saying something about structural change, it may be tested against reality. One thing that has been found in reality is that, whether it is specific to psychoanalysis or not, there are not always changes observed in psychoanalysis that analysts would like to call structural change. So, therefore some have chosen to link the concept to another concept, that of psychoanalytic process, and argue that structural change is the kind of change that occurs—may only occur, possibly also occur always—if or when there is a psychoanalytic process. Needless to say, this is a vague concept, too, and I have heard many different explications of it, depending, probably, on theoretical standpoints. Whatever the definition, it offers various kinds of circular reasoning. If such work as we choose to call "a psychoanalytic process" seems to have been going on, we may take any change that has taken place to be structural. And if there has been some change that we like to consider structural, we take this to mean that there has been a genuine psychoanalytic process. Contrariwise, if there has not been any structural-like change, we assume that no psychoanalytic process has been established, and if it is our impression that little or any genuinely psychoanalytic process has been going on in a clinically successful case, we conclude that whatever change there may have been has not

been structural. You will realise, no doubt, that the essential questions about the structural change concept are indeed circumvented.

Some have tried instead to define the concept by listing the kinds of change that they think should be considered as structural. I believe that Dewald's contribution (1972) is the most thorough and will therefore cite it as an example. Dewald offered a vast number of examples of what he considers clinical indicators that structural change has been taking place, and he clustered them according to different phases in the psychoanalytic treatment. For instance, he suggests that, before the transference neurosis is well established, structural change shows itself by "how the patient applies himself to the task of psychoanalysis" (p. 309). By that he means that the psychoanalytic situation becomes established, that a therapeutic alliance is developing, that the ego is split in observing and experiencing parts, etc., listing further clinical inferences in this and later stages in the treatment. I carefully choose the word 'clinical inferences,' because these examples are in most cases not empirical observations but distant theoretical inferences that would themselves have to be defined. The question that occurs to me is what is really contributed theoretically to these clinical inferences by invoking another and still more distant clinical inference. Also, we have to ask ourselves what it is about these changes that makes them structural and what it is about other kinds of change that will make them non-structural.

What is a structure?

Let us begin our refinement of the concept by assuming that structural change has something to do with structures and that, if we want to develop a concept of structural change we have to begin with the concept of mental structure. The classical definition was offered by Rapaport (1967; Rapaport & Gill, 1959), which was further developed by Applegarth (1989), thus: "A structure is often defined usefully and generally as 'something' which is the means by which a given function is carried out and which has a relatively slow rate of change compared to other processes … That is, it has a degree of permanence in psychological functioning. Under this definition, then, fall a wide group of processes with quite different levels of organization, degrees of permanence, and other varying qualities" (p.1099). Carrying Applegarth's ideas a little further, I should like to define a mental structure as (1) a system or organisation, by which is meant that it is a set of elements that are interrelated in the sense of associating with, communicating with, or even influencing each other. Further, (2) this system is relatively stable or permanent and (3) does some kind of mental work, that is, has a function in the mental life or (4) organises some kind of mental content, that is, organises products of such

functions. (5) It may be conscious or unconscious, and (6) it is not directly observable but will leave observable traces or derivatives in the form of human actions. (7) A mental structure regulates a mental function so as to bring about some degree of consistency in these actions. The structure will thus reveal itself by the consistency of its derivatives. Finally, (8) structures may themselves be organized in structures or systems, with all sorts of interrelations. Thus, there are structures superordinate to sets of subordinate structures, structures inhibiting or facilitating other structures, unconscious structures influencing conscious ones etc.

Now, this definition allows for a variety of all sorts of mental structures. Thus, we would call the different memory systems mental structures, because they perform the mental functions to lay down and hold memories. But, although they are products of these functions, we would not call single memories structures unless they were stable—which would rule out iconic memories and short-term memories. The internal object world is, on the other hand, a very extensive, long-term memory content, which is reflected in a certain consistency of feeling, thinking, and acting. At a lower level the specific internal objects are structures, too, again provided they are stable. Think of the super-ego as such a structure to which we have assigned special significance. In fact, we should conclude that any mental derivative that is observably recurrent, consistent, or predictable in human actions reflects an underlying, itself unobservable mental structure. Because not all human actions are recurrent, consistent, individually characteristic or predictable, it follows that not all actions are derivatives of mental structures.

The qualities of stability and consistency are central in the definition. Their relation is this: Whereas stability refers to the existence of a formation in continuous time, behavioural consistency refers to the agreement or correspondence among acts at different points in time, on different occasions or in different situations. Therefore, consistency presupposes a stable structure, whereas a stable structure will be expected to produce consistency. Consistency may thus be taken as an indication of an underlying structure, stable across the time taken to observe it, and the degree of consistency observed may be taken as a measure of the coherence of a structure, or its "structurality."

Three kinds of structural change

But how do such structures change? I should like to differentiate between three kinds of structural change that I will show examples of later. I will first make a distinction between structure and structuring. Structuring is one way in which structures may change. It means, simply put, that something that was previously had less structure, that is, less stability and less

of system-properties, has now more of them. Or, one might consider structuring as making a structure out of a non-structure, or stabilizing a system that is less stable. If, for a moment, we accept the energy metaphors of the economic point of view, an increased capacity of the ego to bind energy would be a psychoanalytic example of structuring, because binding denotes "an operation tending to restrict the free flow of excitations, to link ideas to one another and to constitute and maintain relatively stable [sic] forms" (Laplanche & Pontalis, 1980, p. 50). Clinically, we might see it manifested as increased impulse control, for instance. We may consider normal human development partly as a process of differentiation and integration in order to increase inner control and outer adaptation. Basically, this is a structuring process.

Secondly, I should like to distinguish between structuring and restructuring. A structural change in the form of a restructuring, simply put, is when there are changes in the layout, composition, form, or looks, of the structure. There are plenty of examples of intrapsychic restructuring: I guess the typical one, theoretically, is when a non-adaptive solution of a conflict is replaced by an adaptive solution, by rebalancing the poles of the conflict—even if this is only a metaphorical way of describing what is happening. Characterological change in the introjects, for instance as when the super-ego becomes more benign, or when the mother introject becomes less persecutory, are two other examples. In mental development restructuring is essential inasmuch as there are conflicts between new structures and earlier ones that have to be solved by restructuring.

Third, I should like to distinguish between structuring and destructuring and use the latter concept for a third kind of structural change. I believe you too have met persons who are a bit too structured, persons whom we regard as over-controlled, inhibited, compulsive, or simply too predictable. We sometimes want to destabilize their routine ways of being. So it comes rather natural to regard the obsessive-compulsive neurosis as an ideal case for destructuring. We should probably need a way to talk about these alternatives in other terms than diagnostic categories, however. Instead we may talk of opening up closed mental systems, of achieving an increased mental motility and openness, of turning rigidity in feeling, thinking, or acting into flexibility.

Is psychoanalysis sufficient and/or necessary for structural change?

The next issue is: Is the structural kind of change specific to psychoanalysis or may it come about in other ways and are all changes during a psychoanalysis structural?

Whether psychoanalysis is sufficient for structural change to occur is a question about the outcome of psychoanalytic treatments. Equating stable change and structural change, I guess there may have been at least one psychoanalytic case somewhere sometime that showed no such effect whatsoever, which would suffice to say that psychoanalysis is not sufficient. But that is a trivial argument: The decisive issue is whether psychoanalysis may be expected to produce stable change, that is, structural, change. That is a statistical inference. On the evidence collected in the Stockholm project, I would say, yes, it may. And definitely also a psychoanalytic therapy, provided it is not conducted in an as-if-psychoanalysis mode. And neither of these claims is trivial because, according to the limited number of psychotherapy outcome studies with long-term follow-up there are, some varieties of psychotherapy may not be so expected.

Now, to the question whether psychoanalysis is a necessary precondition for structural change. I shall start by pointing to some concepts outside psychoanalysis that have the qualities of structure. These are so-called dispositional concepts, like traits, attitudes, habits, and so on. For instance, a trait is a so-called intervening variable for whatever accounts for consistency in some aspect of individual behaviour, like conscientiousness or agreeableness. A trait would pass the stability criterion of a structure, also the unobservability criterion, and also the conscious-or-unconscious criterion. Perforce, a trait is a structure and a stable change in a trait has to be structural. So, there are structural concepts outside psychoanalysis, and there are also theories to account for changes in such phenomena, such as attitude change, learning, development etc.

In psychoanalysis, although there seems to be a general tacit assumption that structural change is a psychoanalytic specialty, many writers take it for granted that change of the kinds that we must regard as structural may occur outside analysis. This is a critical issue for my argument. Boesky (1988) says, "… cures effected by manipulation of the transference or even by crude suggestion in some forms of psychotherapy also represent an alteration in compromise formation and therefore another kind of structural change." And he adds: "… so do the spontaneous remissions of neurotic symptoms … as well as exacerbations of symptoms or the appearance of new symptoms" (s. 311). Abend (1990) exemplifies extra-psychoanalytical structural change with "identifications and responses to suggestion, or other forms of transference influence" (s. 532). We also have to consider the radical, profound, and stable effects that a traumatic experience will have on the psyche, whereas the normal, undisturbed spontaneous development must be regarded as a process of slow structural

change. Considering the distinction between supportive and interpretative interventions, Kris (1993) suggested "that support can lead to enduring (structural [sic]) psychic change" (p. 112). Note this formulation: structural equals enduring.

Are symptoms structures, and are symptom change structural?

Let us focus now on symptom change in this perspective. In their attacks and devaluation of behavioural therapies, many psychoanalysts have come to view symptom change as not only non-psychoanalytic but even anti-psychoanalytic, as if it were nothing but pseudo-change.

However, an interesting point of view on the status of symptoms was recently revealed to me in a discussion with a colleague of mine, a leading expert on cognitive-behavioural therapy internationally. His point was that "symptom" is a concept without a place in behaviour theory or behaviour therapy. His argument ran as follows. "Symptom" refers to a manifest sign of some underlying pathological structure or pathogenic process. However, behavioural theorists or therapists do not reckon with anything underlying at all. Manifest behaviour does not reflect or represent anything but itself and definitely not anything psychologically meaningful latent content. The manifest is the problem, simply. I think this converges with my argument that "symptom" is a term used to refer to indications or derivatives of underlying structures. Thus, I am not arguing that symptoms are structures. My position is that, provided that they are recurrent and consistent, symptoms are derivatives of, and therefore indicators of, underlying structures.

Reading psychoanalyst scholars on symptoms yields a somewhat confusing and contradictive picture. So let us rather look at what Freud said on this issue. He used the word "Ersatzbildung", "substitute-formation," and I believe the notion of a formation indeed implies a structure, or an arrangement or a disposition, as it is explained in Webster's Dictionary. In Hemmung, Symptom und Angst (Freud, 1926, p. 145) Freud suggests that this formation has two aspects—and both are structural in nature: "one, hidden from view, is the alteration in the id in virtue of which the ego is removed from danger; the other, presented openly, shows what has been created in place of the instinctual process that has been affected [by the defences]—namely, the substitutive formation." If these processes are structural, the reverse processes must be, too. Thus, symptom remission, as much as symptom formation, has to be considered indicating structural change, too.

The assessment of structural change

Now, how should we assess structural change, clinically in outcome research? Let me summarize, to begin with . First, I have argued that there are all kinds of structures and therefore also all kinds of structural change, so this is not any psychoanalytical specialty. Second, I have argued that the essential quality of a structure is that it is relatively stable or permanent and that structural change itself has to assume a degree of stability or permanence in such stable or permanent dispositions. Third, I have argued that structures, and thereby structural change, are themselves unobservable and therefore have to be inferred on the basis of indications or indicators. This is exactly equal for the clinical situation as for the research situation. Fourth, I have argued that stability in underlying structures, given enough time, will produce consistency in its derivative actions.

In consequence of these argument , we cannot define structure and structural change by pointing to some psychoanalytical function or functions and claim that these, but not others, are structural, and consequently there are no particular measures or scales or instruments that, as such, specifically address structures or structural change. This is not to deny that some functions may be more central to what a psychoanalyst is trying to effectuate, be they ego functions, object relations, drive processes or what not. But the structurality of a function does not really reside in the function and therefore nor in any scale measuring it. Stability and consistency, which are the definiens of structurality, do only reside in the application of the scale in the assessment design.

Now, there are indeed a great number of instruments claiming to study consistency. Indeed, the typical method in personality psychology is focussing on inferred traits by the use of so-called personality inventories for self-report or rating scales for observers. The interesting thing about these methods is that they do not really assess consistency, in the sense of actually making repeated observations across time. Rather, consistency is typically taken for granted in the questions or the instructions. What they typically do is to ask for generalizations across time or across occasions, like “How typical is this for you or him or her?” or “How often do you or he or she do this?” etc. Obviously, consistency—and thereby stability—is assumed, only. But, equally obvious, any person’s response to an item of that type will be more or less influenced by temporary conditions inside or outside, and that is of course why Mischel (1968) long ago noted that the validity of personality inventories in relation to action were quite modest. It is also likely that an unknown share of consistency reflects so-called response sets that are independent of the disposition one was really aiming

at, such as yea-saying, nay-saying, social desirability. So, although they are convenient to use, the validity of these instruments is based on generally untested assumptions. Consider the phenomenon called the sense of coherence. It is claimed, by its originator, Aaron Antonovsky, to be a very stable and enduring, almost unchangeable, information-processing system. Look at Figure 1 what happened with the sense of coherence during psychoanalytic treatment in the Stockholm project.

(Figure 1)

Obviously, it is not stable under all conditions. On the contrary, it seems to change all the time, most of the time upwards, to the better, sometimes, in the beginning of treatment, downwards, to the worse. Consequently a single administration of Antonovsky's questionnaire would not be enough to infer that we are measuring a structured function.

So we have to use a stronger assessment design, the repeated-indications design. It makes time an accessory, by having repeated indications and inferring structure by observing the consistency among these repeated indications. And note that, if these are numerous enough, there may be some intervention interspersed between them, which makes the inference of structure one of structural change, really. Although this design is as relevant to clinical in-session and between-sessions observations, for systematic evaluation or research purposes, we may of course use the same instruments as above, self-rating personality inventories, observer rating scales or whatever; the important difference is that in this design we make repeated observations, exploring the consistency of the phenomenon we are interested in rather than taking it for granted. Assuming that stabilisation does not depend on the clinician or the instrument being insensitive to change, or that the patients respond to on the basis of response sets such as social desirability, that is, to please the analyst or therapist, we may draw safer conclusions about what amount and kind of structural change there has been. This is actually what we did in the Stockholm project (Sandell et al., 2000). The details about how this study was designed are not really necessary for the present discussion, so suffice it to say that we used a number of overlapping groups of cases in psychoanalysis or long-term psychoanalytic psychotherapy, 434 cases altogether, to reconstruct a general trajectory of outcome across an ordinal time scale, ranging from two years before treatment to three years after termination. Figures 2 and 3 show the development across time in symptom distress and social malfunctioning. Note that in these two figures, improvement is a downward trend, in contrast to the previous figure.

(Figures 2 and 3)

Now, is it reasonable to infer any structural change from these trajectories? It seems so, it seems as if the patients, at an average, were in a steady state before treatment and found a new and improved steady state a couple of years after treatment that is compatible with what would be expected of structural change, at least when social relations and symptoms were concerned. And, undoubtedly, it is a lot easier to believe in stable or structural change there than if we had merely measured these variables once before treatment and once after, of course. But, if we now focus on the post-treatment period and decompose the entire sample depending on treatment duration and session frequency, we find that development post-treatment may look very different. Figure 4 is for the sense of coherence again, and the others look very much the same. Depending on duration and session frequency, post-treatment change may be more or less positive (upward trends) but under some conditions even negative (downward trend).

(Figure 4)

These are so-called modelled data, which is why they are so clean and regular. But where is structural change here? A steady state means that there is no change at all, but we should presumably prefer a not-steady state in the sense of continuing improvement, like the thick solid line!

A weaker version of the repeated-indications design is to consider the various items of the instrument one uses as repeated indications. This only weakly tests the stability criterion but may be used as an approximation, because it nevertheless indicates consistency, in a sense. Thus, if a function has stabilized, we would expect the patient to respond in similar or corresponding ways to different tests of this particular function. Using a standard instrument, as we did in the STOPPP, we should expect that different items would settle on roughly the same level, thus having a smaller dispersion or variation among themselves later than they had before. Look in Figure 5 what happens in psychotherapy and psychoanalysis,

when the sense of coherence is concerned : A gradual decrease in such dispersion and a final reduction after psychoanalysis, by about 50%, visibly less after psychotherapy.

(Figure 5 and 6)

The same picture applies to the symptom distress measure. But Figure 6 shows what happened when social relations were concerned. A spike in the middle of the psychoanalyses and no change at all in psychotherapy! Although this does not look like a case of structural change, because it is transient, not stable, it has to be explored further. We may decompose the social relations scores in a number of subscores. Most of them exhibit a steady structuring, as in Figure 5. But in Figure 7 we find another one, concerning one's relations to friends, with exactly that upward spike during treatment.

(Figure 7)

Finally, let us look at agreement, not across items but across time. As all patients in the study delivered data three consecutive years, we may explore the consistency across these years. What we see in Figure 8, when social relations are concerned, is a sharp drop in consistency from year to year early in treatment from a very high initial level and then a gradual increase to a lower level than initially. In the meantime, we also see a sharp drop that is the inversion of the spike we saw earlier. We may interpret the initial reduction in correlations from year to year as a kind of destabilization early in treatment, exactly what I had in mind talking about destructuring. It is structural, because the correlations do not revert to their initial, high level. So it seems that psychoanalytic therapy appears to provoke revisions of one's priorities in one's social relations. What happens after that may be interpreted as structuring, on a more flexible level.

(Figure 8)

Now, in conclusion, are these indications of structural change? I think they are, like any stable change in any stable mental function.

References

Abend, S. (1990). The psychoanalytic process: Motives and obstacles in the search for clarification. Psychoanalytic Quarterly, 59, 532-549.

Applegarth, A. (1989). On structures. Journal of the American Psychoanalytic Association, 37, 1097-1107

Boesky, D. (1988). Comments on the structural theory of technique. International Journal of Psycho-Analysis, 69, 303-16.

Dewald, P. (1972). The clinical assessment of structural change. Journal of the American Psychoanalytic Association, 20, 302-324.

Freud, S. (1926). Inhibitions, symptoms and anxiety. S. E. 20.

Freud, S. (1974). Indexes and bibliographies. S. E. 24.

Kris, A. O. (1993). Support and psychic structural change. In M. J. Horowitz, O. F. Kernberg & E. M. Weinshel (Eds.,), Psychic structure and psychic change (pp. 95-115). Madison, CT: International Universities Press.

Laplanche, J., & Pontalis, J.-B. (1980). The language of psycho-analysis. London: Hogarth Press.

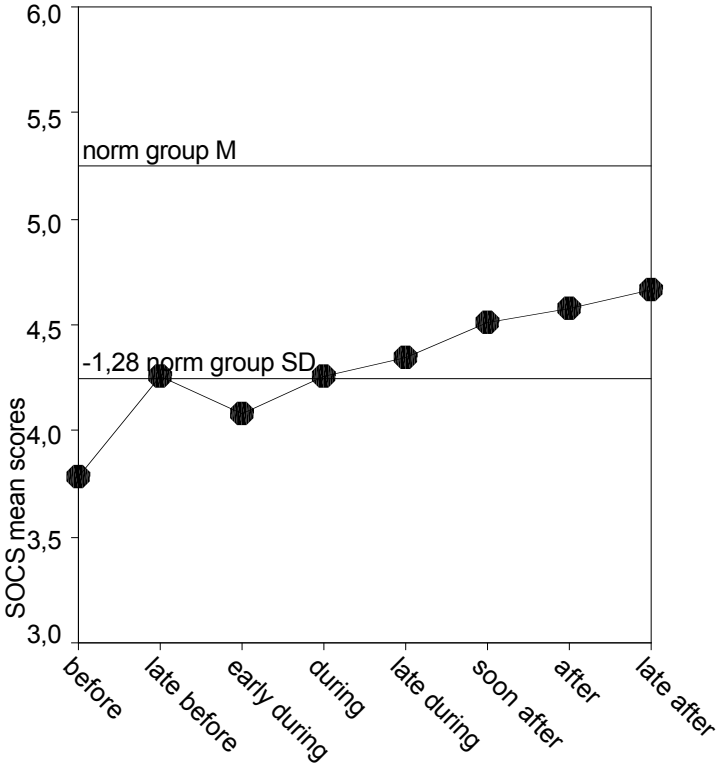
Mischel, W. (1968). Personality and assessment. New York: Wiley.

Rapaport, D (1957). Cognitive structures. In J. S. Bruner et al. (Eds.), Contemporary approaches to cognition (pp. 157-200). Cambridge, MA: Harvard University Press.

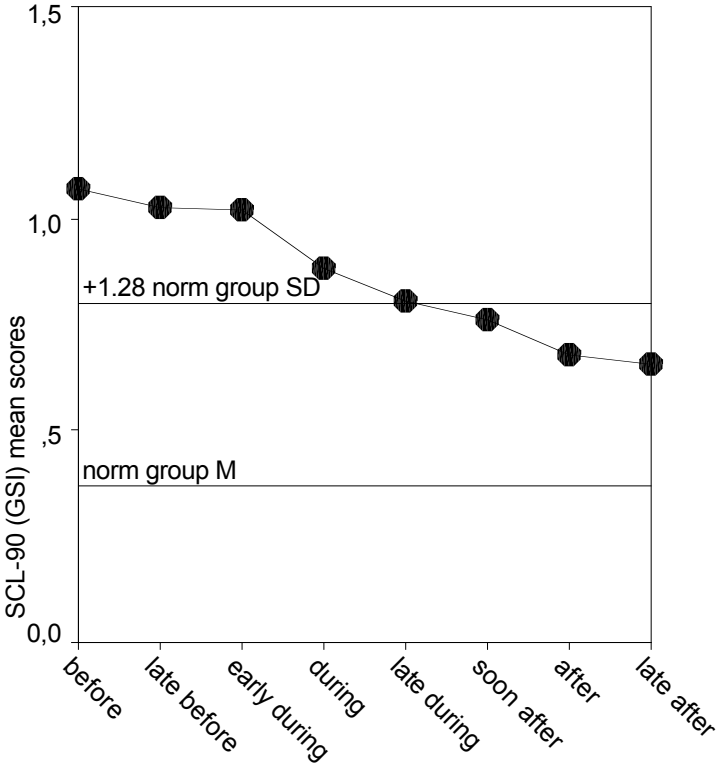
Rapaport, D., & Gill, M. (1959). The points of view and assumptions of metapsychology. In Collected papers of David Rapaport (pp. 795-811). New York: Basic Books, 1967.

Sandell, R., Blomberg, J., Lazar, A., Carlsson, J., Broberg, J, & Schubert, J. (2000). Varieties of long-term outcome among patients in psychoanalysis and long-term psychotherapy. A review of findings in the Stockholm Outcome of Psychoanalysis and Psychotherapy Project (STOPPP). International Journal of Psychoanalysis, 81, 921-942.

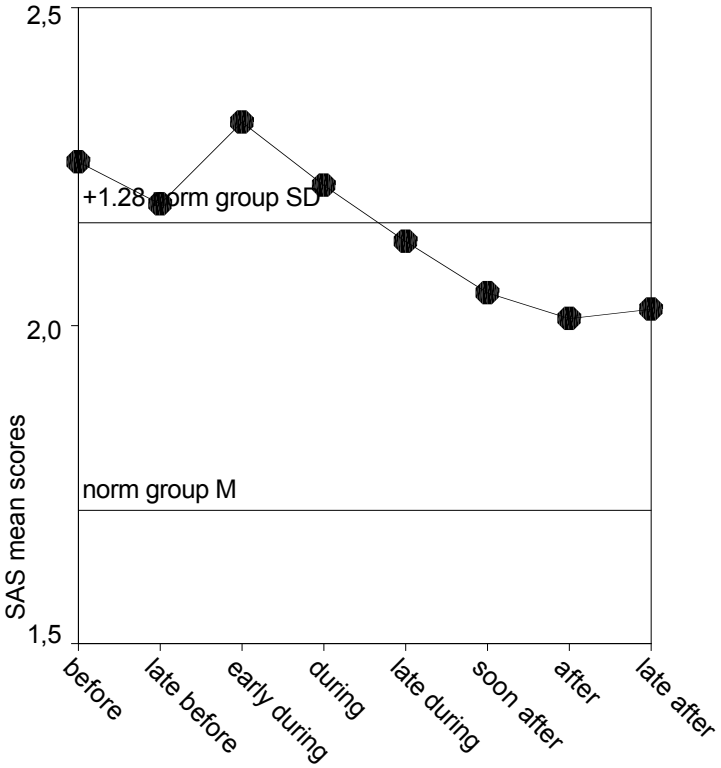
Weinshel, E. (1990). Further observations on the psychoanalytic process. Psychoanalytic Quarterly, 59, 629-649.

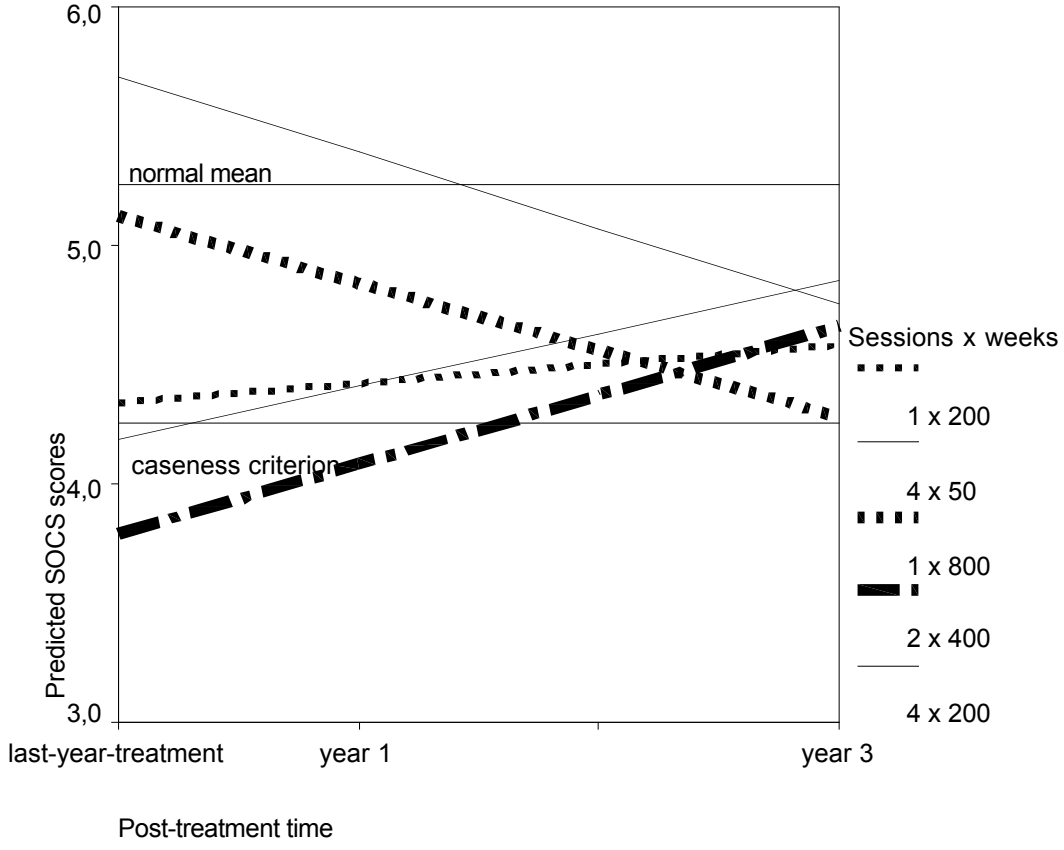


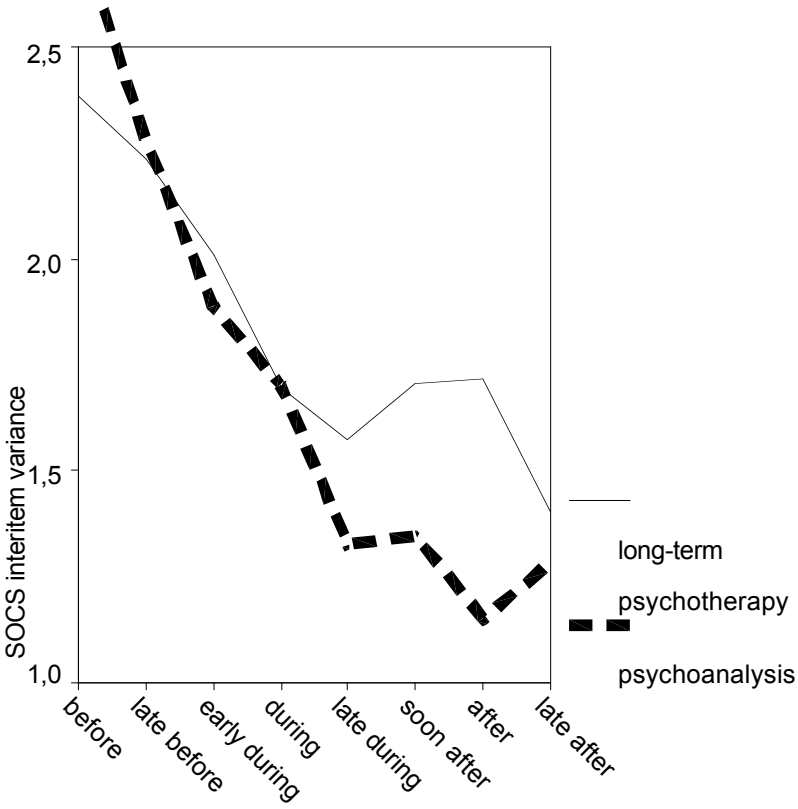
Time, in relation to treatment

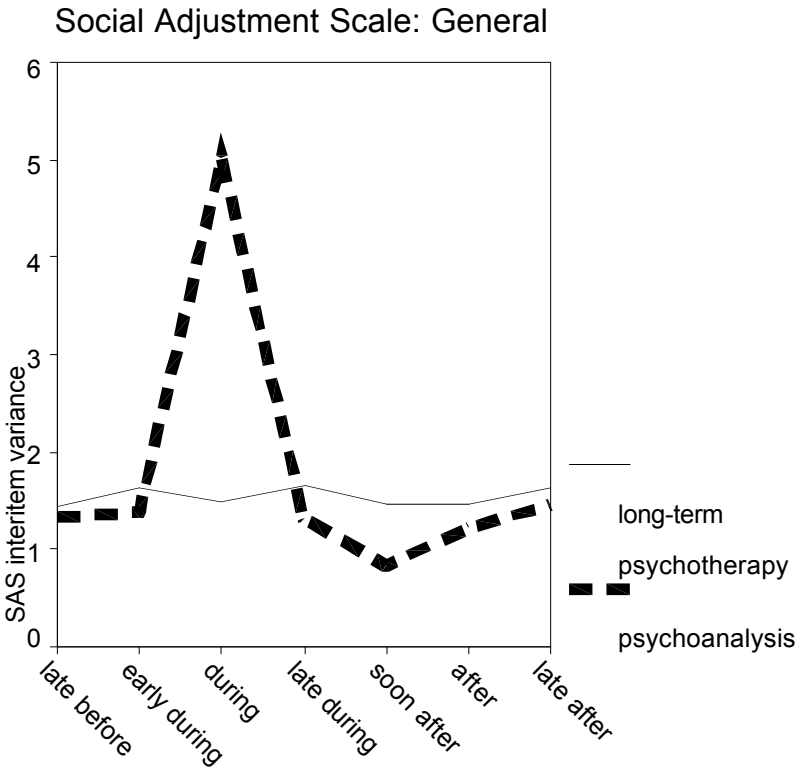


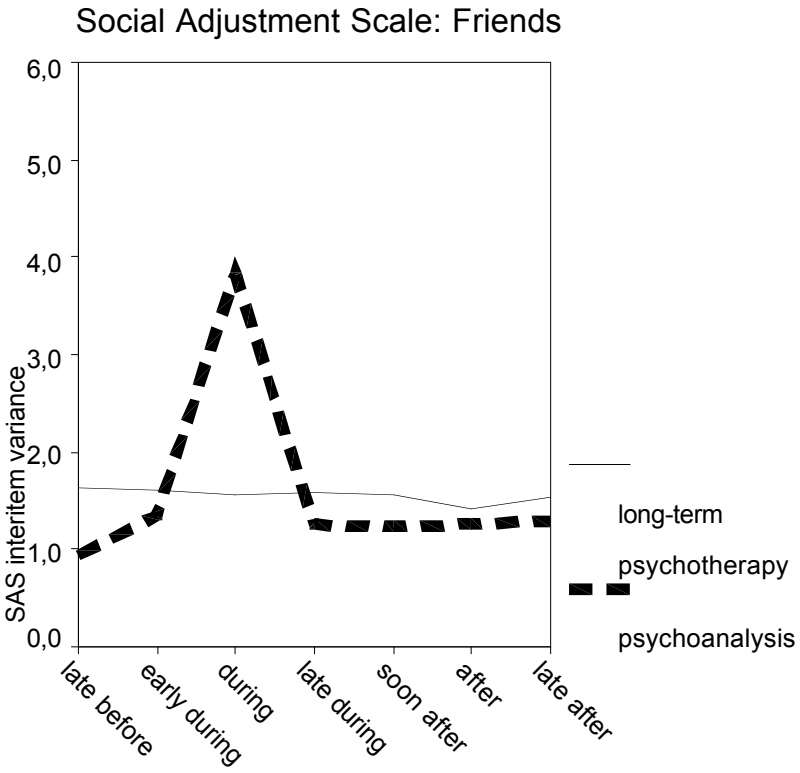
Time, in relation to treatment

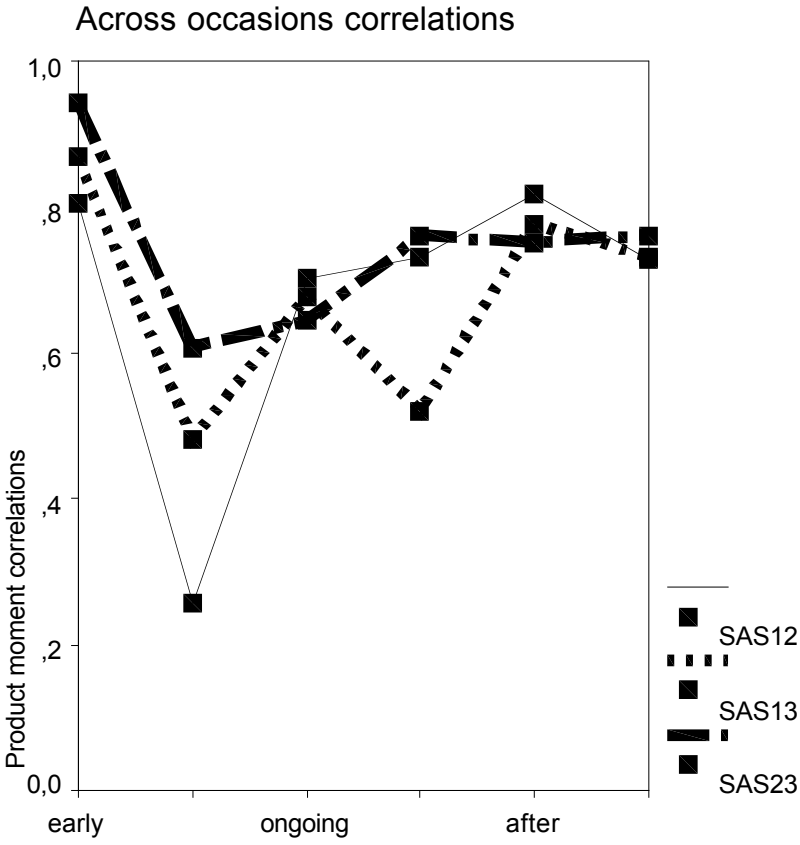

2,5
2,0
1,5
+1.28 norm group SD
norm group M
SAS mean scores
before
late before
early during
during
late during
soon after
after
late after
Time, in relation to treatment


6,0
5,0
4,0
3,0
normal mean
caseness criterion
Predicted SOCS scores
last-year-treatment
year 1
year 3
Post-treatment time
Sessions x weeks
1 x 200
4 x 50
1 x 800
2 x 400
4 x 200


2,5
2,0
1,5
1,0
SOCS interitem variance
before
late before
early during
during
late during
soon after
after
late after
long-term
psychotherapy
psychoanalysis
Time, in relation to treatment


Social Adjustment Scale: General
SAS interitem variance
6
5
4
3
2
1
0
late before
early during
during
late during
soon after
after
late after
long-term
psychotherapy
psychoanalysis
Time, in relation to treatment


Social Adjustment Scale: Friends
6,0
5,0
4,0
3,0
2,0
1,0
0,0
SAS interitem variance
late before
early during
during
late during
soon after
after
late after
long-term
psychotherapy
psychoanalysis
Time, in relation to treatment


Across occasions correlations
1,0
,8
,6
,4
,2
0,0
Product moment correlations
early
ongoing
after
SAS12
SAS13
SAS23