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The musical dialogue in music therapy process research

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1. Music therapy as a target of psychotherapy research

The field of psychotherapy research as portrayed by the voluminous ”Handbook of Psychotherapy and Behaviour Change” (Garfield & Bergin 1986) has not yet discovered the so-called nonverbal psychotherapies. Right or wrong it is a fact that these have developed outside of academia and have not found the acknowledment they deserve. However in psycho - somatic and psychiatric institutions there is a well developed field of nonverbal therapies with therapists who as a rule have semi-academic training acquiring their skills in specific tradeschools: e.g. the Vienna school for music therapy situated under the roof of the academy for music requires a high standard of musical qualities and formal training as a prerogative and delivers a three year course in close liaison with departments of psychosomatic medicine and psychiatry. Therapists trained there provide for their patients an opportunity to experience their affective aspects of their nonverbal interaction style which is highly welcomed as an additional form of therapy by the verbally oriented psychotherapists. At the same time this work is somewhat devaluated whose effects have to be worked through in the real, e.g. verbal psycho - therapy. Even if it were the case that these activities were only additional ingredients for a fruitful work with patients that need an intensification of their capacities to experience emotions it would be worthwhile and long overdue to evaluate these merits by a sound methodology of psychotherapy research.

Definition
Following a well known definition of psychotherapy (Strotzka 1975) music therapy can be considered as a form of psychotherapy as it is a conscious and planned interactional process to influence behavioral disturbances and states of suffering that are looked upon as worthwhile for treatment in a consensus among patients, therapists and society by means of psychological means (by verbal or averbal communication) in direction of a defined goal (diminution of symptoms and/or structural change of the personality) by teachable techniques on the basis of a theory of normal and abnormal behavior.

Indication
The question of differential indication for music therapy, is the subject of many clinical discussions; as in any other form of therapy music therapists often think they know to whom and when to apply their very best. Systematic

studies on this question and on outcome are still rare (Strobel & Huppmann 1978). Especially for so-called psychosomatic patients the clinical literature is abundant with specific claims; with a growing number of music therapists these kinds of claims have been made for borderline pathology, schizophrenia (Oswald 1965), eating disorders (Loos 1986, 1989) and so on. Specific clinical fields have a certain amount of consistency and first monographs on topics like autism (Alvin 1988) are available. Drawing a conclusion from the clinical literature there is no doubt that such interventions can be as helpful as any other psychotherapeutic technique. The question of differential effects however has not yet been addressed nor do we know much which preconditions are favourable for the patient to profit from the treatment. In this fairly young field, we may characterize our work by a high spirit of discovery.
What are the means that are worked with ? Are they of psychological or musicological nature or are they an irritating mixture of both dating back to centuries of the application of music to induce affective change ?

Specific and unspecific factors
As there are many relationship aspects involved that we know from other forms of therapy it is most probable that a lot of the mechanisms that have been dealt with under the notion of unspecific factors are part and parcel of music therapy work. The nature of the specific factors is less clear; therefore it should be the aim of systematic research to focus on them. Calling for controlled outcome studies in order to demonstrate the effectiveness of music therapy (Vocke 1985) before embarking on process research is likely to produce a host of results that will not be very impressive in terms of differential outcome. Therefore we should initiate studies to better understand the processes that are operating in musical dialogues. The relationship of the musical elements of the process to the other aspects of it - and these are not only verbal but as well all these others communicative channnels that even in verbal psychotherapy are of pretty high importance - seems to us one of the prime goals to focus upon first. Is it possible to specify the communicational processes in various channnels ? Are there different tasks for the different aspects of the communication process or are there, what Stern (1984) aptly called "amodal transformations" ? For the development of a music therapy process research we are confronted with the task to start a descriptory and classificatory research program.

Our study is geared toward such a descriptive task. Taking up Grawe‘s (1988) challenge for intensive single case analysis we have begun to develop a strategy for investigating processes in music therapy. We will describe the main feature of our approach which by its heuristic nature is stimulating hypothesis formation and will lead to experiences how to do research on music therapy with a small grant[1]" (see Orlinksy 1987).

We began with video-recording of ten sessions with a patient who was in psychoanalytic treatment which also was tape-recorded. The video-recording allows to study the different aspects of the complex interaction where verbal exchange, motion of both participants in the room, gestural components and the looked for musical exchange provide a host of observational data.

The leading question of our first study took its departure from the clinical conviction that in the musical dialogue between patient and therapist the therapist is able to detect characteristic repetitive patterns. So we set out to ask if there is an expertise among music therapists to identify characteristics of musical interaction that are related to a patient’s psychopathology?

[1] This study was supported by the Klöckner Foundation (Essen) and by the Breuninger Foundation (Stuttgart).

2. Sampling of significant musical dialogues

Musical dialogue means free improvised expression and interaction with instruments and voice. The therapist‘s “playful“ interaction with the patient, sometimes even considered as "acting-in or out"(Abs, 1989) or as a kind of "holding" (Priestley, 1983), supporting or complementary reactions according to the specific moment in the process afford the patient the opportunity to study his usual patterns of affect and behaviour in a relationship and to risk new ways of playing and experimental trying out in the safe setting of a therapeutic situation. The therapist‘s attitude is imbued by an intuitive empathy; simultaneously he/ she is abstinently reflecting the interaction, controlling his/her counter - transference. A shared reflection of the musical experiences is important and meaningful with patients who are able to do this, to help to integrate what has happened.

Hypothesis:
Music therapists work under the assumption that the musical (in the widest sense of the word) expression and interaction with the therapist represent the core structures of the patient's personality and behaviour.

Research to support this assumption is still rare.

Our study group‘s first question was if and in which way the typical features of interaction between patient and therapist in the setting of a free musical improvisation can be identified and described verbally and by representation in a specific code.Then we asked: can this typical features be recognized by a group of experienced music therapists?

Patient:
The patient in our study agreed to participate in a 10 session experimental intervention of music therapy, simultaneously to his ongoing psychoanalytic treatment. He was diagnosed as a schizoid personality disorder. The regulation and control of intimate relationship is the main theme of the treatment. He perceives the therapist as extremely mighty and tries to control him. He checks out the limits handling the setting-rules like a child (Thomä & Kächele 1988, p.142).
His specific symptomatology consists of perverse actions. In situations when he feels overpowered by others he withdraws. Alone in his room he ties himself up with chains, which he locks up and sets under voltage. To free himself becomes more and more dangerous. By this he gets himself sexually aroused. Up to now he never had intimate relationships to women. Intellectually he can control nearness and distance because he is very handy on the verbal level. The personality can be described as inhibited specially in terms of aggression, insecure, passive, extremely easy to hurt.

Setting:

The music therapy intervention took place in a music therapy room with carpet floor and a lot of instruments. Drums and other rhythm instruments, flutes, a harp, a bass etc. at at easy disposal for the patients. The therapist and the patient agreed upon

–meeting once a week for one hour for a total of ten sessions
–choosing freely instruments (or voice)
–playing freely on the instruments
– talking about the experiences.

Pattern:
During the intervention the patient very often interrupted the musical dialogues experiencing the therapist as too loud, too quick, too skilled etc. The therapist felt imprisoned more and more. It seemed to him whatever he did was wrong. This stereotyped, unconscious role induction aroused specific countertransference feelings in him: he understood that the patient did to him what he had suffered from in his early childhood.

Documentation:
The experimental intervention was recorded by a fixed video camera. Before and after each session mood questionnaires (Janke & Debus 1971) and therapy session reports - were filled out by the patient and the therapist. Immediately after the session the therapist produced a spontaneous affective protocol, later he formulated a detailed report on the basis of the videotape. The weekly supervision with another music therapist was also recorded as well as the psychoanalytic sessions that paralleled the experimental intervention.

Significant episodes:
In the clinical "macro" process the therapist gets information on the patient's psychopathologic structures by repetitions. Affective and cognitive processes direct the attention to specific patterns of behaviour To show these to a person outside one would have to choose sequences in which the patient interacts with the therapist in such a typical manner.
The therapist (TT) and two colleagues (SB & NS) with the same training independently chose short sequences which were highly convincing for them demonstrating the specific pattern of interaction. The criteria were fairly intuitive.They used two perspectives for the selection of significant episodes:
1. repetitive patterns: rhythmic, melodic and/or communicative e.g.the patient interrupts the dialogue; for this patient this was a very typical pattern of interaction and therefore a clinically meaningful choice.
2. patterns of change (Rice & Greenberg 1984): moments where the patient's musical expression and interacting behaviour differs from the usual patterns.

For each significant episode the music therapists composed a verbal description of his sequences. In a joint meeting they discussed the material and found together eight scenes with a mean length of two minutes. In order to

control the clinical validity of our selection we invited different rater groups: music therapists, psychotherapists and lay people.

3. Rating of significant musical dialogues

As consensual validation of our selection of the significant episodes constitutes a further step in developing our research program we were interested in other music-therapists‘ expertise to recognize such patterns.

= Do they classify these musical interactions in ways that are pertinent to an understanding of the personality of patients

= Are these patterns recognizable only when present in the therapeutic sessions or are they also identifiable when music therapists are mere observers listening to taperecorded sessions or even watching videotapes?

= Do they share the therapist´s view of the interactional patterns?

= Is it also possible for other psychotherapists or even laypeople to identify these patterns?

In order to answer these questions, we developed a questionnaire, which was administered to three groups of raters:
20 music therapists, 10 psychotherapists, 20 lay people. Criterion for selection of musictherapists and psychotherapists was a fair amount of clinical experience.

Ratings of music - as is known from music-psychology - usually capture the subjective experience of the listener and are in general related to the piece of music as a whole. Our study had to disentangle the part played by the patient and the part played by the therapist, which eventually leads to far reaching consequences for the recording. Since we were especially interested in the interaction of players, we included items covering relationship aspects developed in psychotherapy research.

The questionnaire consisted of 2 parts. Raters were told to fill out part 1 with 10 questions right after having seen and listened to one significant episode. At the end of the rating they were asked to answer three additional questions, part 2, as to their general impressions.

The questions of part 1 referred to the way both patient and therapist played their instruments, how they probably felt during their play and what the interaction looked like. We elicited different information:
a)The adjective checklist (shortened version of Janke & Debus 1971), composed of 26 words expressing moods and feeling states and emotional behavior. Each item was rated on a line of 10cm.
The Janke-Debus questionaire has been analyzed for its factorial structure which has led to nine well established categories. As we were interested in a

clinically relevant description of this particular patient we preferred to construct a category system tailor-made for this patient (see further down).

b) Brief free descriptions of the patient‘s and therapist‘s musical behavior. This material will enhance our inventory of qualifying expressions about the hard-to-grasp nonverbal experiences.

c) We used Luborsky´s "Core Conflictual RelationshipTheme" standard categories (Luborsky & Kächele 1988, p. 95) to formulate typical relationship patterns, e.g.:
- "The patient tries to attract the therapists attention" or
- "The patient wants to dominate the therapist".
The raters had to decide whether statements similar to these were right or wrong with respect to a certain episode.

For each of the eight significant episodes these three ratings were performed separately for patient and for therapist as well. In addition one question referred to the role relationships of the interaction directly as conceptualized by Racker (1968)
- "Was the relationship more concordant or complementary or even discordant?"
A further question of part 1 should catch ideas of the raters as to what they themselves would have done "being in the shoes of the therapist" in this episode, quoting Strupp´s idea when he analyzed "psychotherapists in action" (1960).

For summarizing their impressions on the whole material the raters had to answer the three following questions in Part 2 of the questionnaire:

a) Please, characterize the personality of the patient.
b) What is the main problem of the patient according to your opinion?
c) What are the technical difficulties of the therapist?

The free answers of the raters were analyzed by categorizing them into the same six categories as used for the adjective-checklist:

1) Symptomatology
2) Refusal of relationship
3) Inner tension, aggressiveness
4) "Healthy behavior"
5) Depression, resignation
6) Feeling threatened, being afraid of loss of control

As the therapist‘s free comments on the sessions will be coded in the same way, a comparison is feasible.

Quantitative analysis is still under way; statistical results are not yet available. We are working on a group-statistic approach as well as on finding out which echo the single significant event stirred up in the various raters. However, these questions are not yet in the focus of our present attention.

4. Representing musical dialogues: problems of transcription in music therapy

Music therapy process research using video tapes can be approached by rating procedures as discussed above. A more direct investigation needs representation of the musical interaction. The history of representing psychotherapy dialogues is linked with the introduction of tape recording in the fifties and the development of tape recording systems to standardize the subtilities of spoken language in linguistic form (Gottschalk & Auerbach 1966).

Our intention was to find out how the music which patient and therapist improvise during their music therapy session could be graphically represented in such a way that the music can be repeated by a trained music therapist; by this the singular therapeutic event becomes an identifiable object of investigation. But how can one write down improvised music? Our traditional music notation system is not at all sufficient for our attempt to visualize music which only in part leans towards traditional music and which is almost completely different to what people are used to. Even so whenever possible, music therapists should, of course, use the notation system we all know, to facilitate the reproduction of a particular piece of "therapy music". On the other hand when "therapy music" escapes the notion of traditional music it makes sense to use signs and symbols which are proposed by contemporary composers (Karkoschka 1966). Since there is no uniform musical notation system in the field for New Music, it seems more than justifiable to choose any kind of sign language which appears suitable for one's own work. Here, it is very important to give very clear instructions concerning how the signs are to be interpreted by the player.

Our aim was to devise a language which enables the researcher to reproduce the musical interaction with sufficient degree of similarity. A first example will illustrate this point of view.
Figure 1:
This figure represents a time axes plus two other horizontal lines - the left-hand-line and right-hand-line - where on each of the two one can see specific signs. The meaning of the signs is given at the top of the sheet, along with the description of the patient's physical position while playing, and the name of the instrument being used in this particular episode.

Three types of scores were developed which we consider indispensable for our research program.
Score number 1 (called "Nachspielpartitur" in German) from which we took the aforementioned example is a literal transcription or "sound for sound"-transcription of the so-called "significant episodes". As the duration of one "significant episode" in our sample is no more than three minutes, the time scale one uses should be rather fine grained. We decided to use the scale of

one second equalling one centimeter. In the case of many sounds occorring in a smaller space of time, the scale used could be of one second equalling two centimeters, and so on (Figure 2).

The musical event, the "dialogue" or "interaction" can now be analyzed: Having identified sounds, phrases and dynamics the structure of interaction can be examined. The literal transcription is, as anyone might imagine, a very complicated and time consuming procedure. We realized, that in this particular part of research a second person is helpful to perform the task, where one person plays the data-analytical part, the other person the transcription part.

Score number 2, ("Balkenpartitur"), attains to catch the whole session, representing in a very simple way the point at which each of the participants starts and stops playing. The On-Off pattern analysis which has been proved fruitful in psychotherapy research (see Marsden 1971) might have a good chance in music therapy research. The time scale used here is two centimeters for each minute. The graphics for both therapist and patient are put one below the other so that the external observer having no information about the musical contents of the session can quickly discern who played how much and when. Further: did therapist and patient play together? always? never? how much? who started? who interrupted? and so forth. The so-called "Balkenpartitur" could also be helpful in determining the significant episodes: why not choose, without yet knowing the music which was played, this episodes where the structure of interaction is in some way particular (see Figure 3). And why should one not think that patterns of interaction which are very similar to each other will have musical similarities as well? We think this may be an interesting point of research: What kind of relationship exists between structure and material?

Score number 3 is the graphic representation of all the musical repetitive patterns of the patient. Here we discern the familiar topic of pattern analysis in psychotherapy research. Not only in verbal discourse but also in musical dialogue we can expect and do indeed find repetitive structures. In this case we discovered rhythmic and melodic patterns as well as "the-way-of-playing" patterns. The so-called "Spielmuster" are easy to detect once one gets to know the patient better. Of course, we are not only looking for repetition but also assume change. With growing professional experience the music therapist will discover the patterns of change immediately. The following example of our study displays a number of patterns which have been dug out of the material (Figure 4a & b).

As to the rhythmic patterns the patient used very regular, monotonous ways of playing. We discovered five main patterns almost all of them in an 4/4-modality. The last pattern was different as the patient was playing very regularly on one side, but putting his accents very irregularly on the other.

The melodic patterns are characterized by very small intervals, such as seconds, by unfinished scales and by the frequent use of glissandi.
The last pattern seems to be different as the patient used a new interval: the tierce. It is interesting to know that he never repeated this little melody, whereas he used all the other melodic patterns at least five or six times.

Our personal experience with the three types of notation has furthered our clinical work. We think that the evaluation of the implementation of such descriptory system may further diagnostic approaches and the evaluation of technics.

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