Analysis of the current situation of clinical psychology reveals its enormous complexity and plurality. However, some studies, notably (given its impact) that published by Seligman in 1995, have argued that all types of psychotherapy are equal as regards their effectiveness. Regardless of the truth or falsity of this assertion, what does seem clear is that a large proportion of people who seek therapeutic help improve considerably. In the context of this reality, many questions arise, among which one is of particular concern to us, namely: What makes psychological therapies work?, or What are the processes underlying psychological intervention?, or indeed, Why do people change as a result of therapy?

On trying to explore how, throughout the history of scientific clinical psychology, such questions have been approached, it becomes clear that the analysis of processes of change has been considered of secondary importance, priority being given to research on results (Goldfried & Castonguay, 1993); indeed, this tendency has been accentuated in recent years with the rigorous assessment of the different treatments for empirically determining their efficacy (Chambless et al., 1996; Chambless et al., 1998; Pérez-Álvarez, Fernández-Hermida, Fernández-Rodríguez & Amigo, 2003; Task Force on Promotion and Dissemination of Psychological Procedures, 1995). However, although we consider it crucial to the progress of psychotherapy to know what works, with whom and under what circumstances, we think it essential to identify the processes that explain therapeutic change with the aim of understanding the clinical phenomenon in all its complexity and developing more efficient forms of intervention.

This work represents the beginning of a new way of studying the processes that can explain therapeutic change. The method used is the observation and analysis of therapeutic sessions recorded directly and developed within a behavioural framework. The category system seeks to permit a functional analysis of the therapist-client interaction which will enable the identification of learning processes that operate in the clinical setting and explain success in therapy. Outcomes are provisional, but suggest the utility of this research line for the comprehension of the clinical phenomenon and highlight the importance of associative learning processes in therapeutic change.

El presente trabajo representa el inicio de una nueva forma de estudiar los procesos que potencialmente explican el cambio terapéutico. La metodología de trabajo empleada es la observación y análisis de sesiones terapéuticas grabadas directamente y desarrolladas dentro de un enfoque conductual de intervención. El sistema de categorías elaborado busca la codificación de la conducta del psicólogo atendiendo a su funcionalidad y no a su topografía. Con ello se pretende llevar a cabo un análisis funcional de la interacción terapeuta-cliente que permita identificar los procesos de aprendizaje que operan en la clínica y que subyacen al éxito en terapia. Los resultados y conclusiones del estudio, aunque provisionales, dejan entrever las importantes implicaciones que el desarrollo de esta línea de trabajo puede tener para la comprensión del fenómeno clínico y ponen de manifiesto la relevancia de los procesos de aprendizaje asociativo en el cambio terapéutico.
– at least in part – from the research line begun by the authors of the present work. Specifically, the attention paid to identifying factors common to the different therapeutic approaches, the emphasis on the study of the therapeutic alliance as the main promoter of change in the clinical context or the interest in identifying predictor variables of therapeutic success from integrationist and/or constructivist perspectives, despite their great relevance, mean that such work deviates from what we believe should be the new direction of research on processes in clinical psychology. In our view, what is necessary is a detailed, “blow-by-blow” study of what happens in sessions, a functional analysis of the therapist-client interaction, with the aim of identifying the learning processes promoted in the clinical context for achieving the desired behavioural change in the person who seeks help. In this regard we coincide with the proponents of so-called Functional Analytical Psychotherapy in the view that a large part of the client’s behaviour is shaped and maintained by processes of reinforcement continually found in the clinical context and that occur naturally in session. Like them, we also consider that therapist and client, regardless of the psychotherapeutic approach involved, inevitably shape one another’s behaviour (Kohlenberg, Kanter, Bolling, Wexner, Parker & Tsai, 2004). From this perspective, the therapeutic relationship would be constituted in a social interaction context capable of evoking and modifying the client’s behaviour in the clinical situation itself (Follete, Naugle & Callaghan, 1996).

Obviously, attempting to analyze the processes of change involved in psychotherapeutic interventions of any kind, although a highly desirable goal, is a task which, given its magnitude, goes beyond the brief of this preliminary study. We have focused our research on the so-called cognitive-behavioural model, and for various reasons. First of all, because the majority of clinicians describe themselves as cognitive-behavioural therapists (Elliot, Miltenberg, Kaster-Bungard & Lumey, 1996; Santolaya, Berdullas & Fernández, 2002). Secondly, because this approach has demonstrated empirically its effectiveness in the treatment of a considerable number of disorders (Del Pino, Gaos, Dorta & García, 2004; Orgilés, Méndez & Espada, 2005; Pérez-Álvarez et al., 2003). And thirdly, because its very characteristics (high levels of operationalization and specificity, emphasis on outcome research, etc.) facilitate the rigorous and systematic study of the therapeutic process.

In short, we attempt to advance one step further towards a scientific psychology that guides clinical practice, towards restoring the close link between research and applied psychology that was lost in the 1980s, and which should continue to constitute the essence of scientific and experimental psychology. We are confident that our line of work will not only help to build the solid theoretical base necessary for the evolution of clinical psychology (Vila, 1997), but will also contribute to reducing the gap between research and clinical practice, one of the current challenges for the discipline (Gavino, 2004; Labrador, Echeburúa & Becoña, 2000).

**METHOD**

**Participants**

We analyzed 23 clinical sessions, each lasting approximately 1 hour, corresponding to four different therapeutic processes. In all cases, clients’ express consent was obtained for the recording and observation of the sessions, in accordance with the Spanish Deontological Code for Psychologists in its articles 40 and 41, which refer to obtaining and using information. All clients were adults (one man, two women and a couple) and had sought psychological help. One of the courses of therapy was terminated voluntarily by the client, one is still in progress and the other two were completed with excellent results. All cases were treated by the same behaviour therapist, with more than 15 years’ professional experience of private clinical work.

**Variables and instruments**

After considerable work we developed a system of categories that would permit analysis of the recordings made. This system, yet to be validated, was based on the functional description of the therapist’s behaviour in interaction with the client, that is, the functional analysis of the therapeutic process was carried out considering the clinician as the emitter of the behaviour to be studied, a behaviour whose effects could be appreciated by observing the behavioural reactions of the client. The categories considered, as defined in the study, are presented in Table 1.

**Procedure**

In this first approach to the definitive drawing up of a system of categories that permits the study of the therapeutic process, we worked in the following manner. For obtaining the sample we were helped by a prestigious clinical psychologist whose professional work could be considered as falling within the field of behaviour therapy. Given that the private clinic in which
she worked was equipped with the technology for recording therapy sessions on video, the staff at the clinic agreed to provide the researchers with recordings of all the sessions in those cases in which clients gave their explicit consent to act as participants in the study.

As the recordings became available, three judges, experts in behaviour modification, began observing them in an informal way and drawing up an initial list of categories through which to encode the therapist’s behaviour on the basis of its function. Given the problems raised by this categorization system (ambiguous definitions and lax use of technical terms pertaining to the psychology of learning), it was decided to use a new encoding system in which the observation categories referred to topographical rather than functional aspects of the behaviour. However, this system of categories, despite facilitating agreement between observers, soon revealed its scarce utility in relation to the ultimate goal of our work: to identify the learning processes underlying the therapy and that would explain changes taking place within the clinical context.

We therefore drew up a new system of observational categories focusing on the function of the therapist’s behaviour. This new system, as well as introducing more well operationalized definitions of the categories, corresponded more closely to the technical terms to which it referred. With this system we began working on the encoding of the sessions with the dual objective that the observers trained in its use and that any modifications could be made to the system itself as and when difficulties of application arose. Additionally, we worked on the identification of the different phases in which each session could be divided, in accordance with the therapist’s goals, with the ultimate objective of determining whether there was any regularity between cases in the phases identified, which functions of those included in our system of categories predominated in each stage, and whether it was possible to identify prototypical sequences of such functions in the different phases.

**RESULTS**

The above-mentioned case analysis permitted us to draw up the following schema of the therapeutic process (Figure 1).

Before presenting the results emerging from the detailed analysis of each of the phases identified, it is important to stress the social nature of the therapeutic phenomenon. The therapist-client interaction can be

<table>
<thead>
<tr>
<th>Function</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Discriminative</td>
<td>Utterance by the therapist giving rise to a behaviour in the client which, in turn, is followed by reinforcement or punishment (Example: request for information, encouragement to speak about a particular matter, request to do a breathing exercise)</td>
</tr>
<tr>
<td>Evocative</td>
<td>Utterance by the therapist giving rise to a clear emotional response in the client accompanied or not by an utterance (Example: weeping, laughter, “I’m getting upset/nervous”)</td>
</tr>
<tr>
<td>Reinforcement</td>
<td>Behaviour by the therapist showing approval for, agreement with or acceptance of the behaviour emitted by the client. On a different level of analysis we would consider as a reinforcement function the utterance by the therapist that follows each utterance by the client, since it increases the probability that the latter will continue to speak</td>
</tr>
<tr>
<td>Punishment</td>
<td>Behaviour by the therapist showing disapproval for, rejection of or non-acceptance of the behaviour emitted by the client</td>
</tr>
<tr>
<td>Instructional</td>
<td>Utterance by the therapist aimed at stimulating the appearance of a future behaviour in the client outside the clinical context. The consequences do not have to be mentioned explicitly</td>
</tr>
<tr>
<td>Motivational</td>
<td>Utterances by the therapist referring to the reinforcing nature of the reinforcer, with or without explicit reference to the behaviour to be emitted in order to achieve it (Example: stressing how well the client will feel if s/he practises relaxation frequently)</td>
</tr>
<tr>
<td>Informative</td>
<td>Utterance by the therapist with the aim of transmitting technical or clinical knowledge to a non-expert</td>
</tr>
</tbody>
</table>

**Table 1**

<table>
<thead>
<tr>
<th>System of categories</th>
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<tbody>
<tr>
<td>Function</td>
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<tr>
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<tr>
<td>Motivational</td>
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<tr>
<td>Informative</td>
</tr>
</tbody>
</table>

**Figure 1**

**Phases of the psychological intervention in Behaviour Therapy**

**ASSESSMENT PHASE**

**OBJECTIVE:** Delimiting the problem behaviour/s, behaviour being understood as the interaction of the organism as a whole in its physical-chemical, biological and social context

**Predominant function:** Discriminative Function

**EXPLANATION OF FUNCTIONAL ANALYSIS PHASE**

**OBJECTIVES:** Presenting to the client the hypotheses employed by the psychologist about learning processes that explain the acquisition and maintenance of problem behaviour/s. Setting the intervention objectives and the treatment proposal

**Predominant functions:** Informative and Motivational Function

**TREATMENT PHASE**

**OBJECTIVE:** Applying the treatment plan designed on the basis of the functional analysis, and which has been explained previously

**Predominant functions:** Instructional function

**CONSOLIDATION OF THERAPEUTIC CHANGE PHASE**

**OBJECTIVE:** Maintaining the behavioural changes achieved during the intervention

**Predominant function:** Reinforcement function
studied on two levels of analysis: on the one hand, the merely conversational level typical of any verbal interchange, and on the other, the therapeutic level, which is our essential object of interest. The clinical phenomenon understood as social interaction could be described from a functional point of view as the repetition of the sequence in which each emission of one of the speakers is, at the same time, a discriminative stimulus of the next emission by the other speaker and a reinforcing stimulus of the previous utterance, so that if the therapist were to cease asking questions of and making remarks to the client, the speech behaviour of the latter would also cease.

Although the analysis of this sequence could be applied throughout the therapy, we hold that it is irrelevant to our study most of the time, so that we shall often ignore it, despite considering verbal interaction to be the necessary instrument for the different processes of change found in the clinical context.

Having made these general points with a view to clarification, we move on to presenting the results of the analyses we made of each phase of the behavioural intervention.

**Phase 1: Evaluation**

In this first, assessment phase the behavioural sequence most frequently repeated is that in which the therapist guides the clinical interview towards the acquisition of information necessary for adequate understanding of the client’s problem (Figure 2).

On occasions it is observed that, despite the fact that the therapist emits utterances aimed at fulfilling a discriminative function for the client by controlling the emission of certain responses, this is not achieved. Consequently, the client’s behaviour is not that which was desired and is not followed by reinforcement. In such cases it appears that the strategy used by the professional is that of seeking another utterance that elicits the appearance of the desired behaviour, which will be reinforced as soon as it is emitted.

Leaving to one side for the moment the discriminative and reinforcement functions, it can be appreciated that both the punishment and evocative functions appear quite infrequently in the course of the therapeutic process, in general, and of the assessment phase, in particular. In the case of the evocative function, it is observed that negative emotional CRs tend to appear regardless of the therapist’s behaviour, whilst positive emotional CRs (e.g., laughter) are more frequently evoked from stimuli presented by the therapist.

Also in this phase it is possible to find utterances with an informative and/or motivational function, especially when the client expresses some type of worry or unease that the clinician tries to reduce by providing information or motivating the person in the direction of change. This leads us to think that these utterances quite possibly also fulfil a negative reinforcement function.

Although in this initial phase the therapy does not yet seek to bring about change, it is possible to find reinforcement of adaptive behaviours when these are emitted by the client, and even to observe some type of therapeutic intervention in response to certain specific utterances or behaviours of the person seeking help. This is appreciated relatively frequently in the cognitive restructuring of some maladaptive thoughts that emerge during the assessment phase, even though in many cases what is sought is not cognitive change, but rather an assessment of the type of belief the person holds and the extent to which s/he considers it to be true, with a view to planning the treatment in later phases of the intervention.

More characteristic of this first stage is the inclusion in the assessment process of the measurement instruments that help to complete the information obtained through the interview. The incorporation of these tools, usually self-registers and questionnaires, involves two stages: an initial one in which the therapist explains the reason for their use and the client’s task, and a second one in which the work done outside the session is reviewed and the new information obtained is discussed. Let us consider the functional sequences typical of these two stages.

A) **EXPLANATION OF THE TASK:**

1. **Instructional function.** The therapist explains to the client what s/he will ask him/her to do, when, where, how, etc.
2. **Informative function.** The clinician explains the rationale of the task and why it has to be done in the way indicated. Also included within the informative function would be the examples presented by the therapist with a view to shaping the client’s behaviour.

3. The following sequence is often seen to be repeated:
   - **a) Discriminative function.** The therapist asks the client to practice in session, with an example, how s/he would carry out the proposed task outside the session.
   - **b) Operant response.** The client practices in the session how to do the task. His/Her behaviour may be guided by discriminative stimuli emitted by the therapist and reinforced in intermediate steps through the therapist’s utterances, thus promoting the shaping of the client’s behaviour in the case of such necessity.
   - **c) Reinforcement function.** The clinician, through his/her utterances and non-verbal behaviour, ends the sequence by showing agreement with and approval for the client’s satisfactory performance.

B) REVIEW OF THE TASKS:
1. **Reinforcement function.** The therapist expresses satisfaction to the client about the latter’s task performance.
2. The clinician uses the information provided by the self-registers, self-reports and other assessment instruments for presenting further discriminative stimuli that control the emission by the client of new responses providing deeper knowledge of the problem behaviour.

**Phase 2: Explanation of the functional analysis and of the therapeutic plan**

As far as the explanation of the functional analysis is concerned, we often find the following functional sequence (Figure 3).

As can be appreciated in the figure, the process observed in the explanation of the functional analysis normally fits the following pattern. The therapist begins his/her explanation by presenting to the client the analysis s/he has made of his/her problem (informative function). In the course of this presentation the psychologist emits some utterances that act as discriminative stimuli for the client, controlling the emission of a response by the client through which he/she indicates if s/he has understood the therapist’s explanatory model and whether or not s/he is in agreement with it. In the case of this response being affirmative, it is reinforced verbally or non-verbally and the explanation of the functional analysis continues. On the other hand, if the client expresses a lack of understanding and/or non-acceptance of the explanatory model set out, then the therapist makes a break in the explanation and devotes time to repeating part of it (informative function), discussing some of the mistaken ideas the client may hold (verbal debate) and/or pointing out the benefits of conceiving the client’s problem in the way the therapist proposes with a view to achieving positive change (motivational function). This process is continued by the psychologist until the client expresses understanding and acceptance of the model, after which the explanation of the functional analysis is taken up again.

This sequence is repeated until the entire causal model of the problem has been presented and accepted by the client, at which point the therapist usually summarizes the explanation (informative function) and presents the broad lines of the most appropriate therapeutic strategy for dealing with the problem (motivational function).

In the detailed explanation of the treatment there is a predominance of the motivational and informative functions. Likewise, we can also identify DS – R – Rf sequences, in which the therapist checks that the client has understood and accepts the intervention proposal, and thus provides reinforcement.

![Figure 3](image-url)

**Figure 3**

**Behavioural sequence characteristic of the explanation of the functional analysis**

- **Informative function**
- **Discriminative function**
- **Reinforcement function**
- **Motivational function**
**Phase 3: Treatment**

One of the most important activities in this phase is the training of techniques in session. The functional schema through which the therapist attempts to promote this learning would appear to be as follows:

1. **Informative function**: the clinician explains the scientific basis of the technique and/or exemplifies it; included in this category would be the behaviour of the therapist, who acts as a model for the client.

2. **Sequence DS – R – Rf**: the technique is repeatedly practised in session, resulting in a process of shaping of the client’s behaviour as s/he receives feedback about his/her performance.

3. **Instructional and motivational functions**: these appear after the practice. The therapist tells the client how to use the technique outside the consulting room, and explains the expected benefits of its application. These are the most relevant functions at this stage of the therapy.

Some elements of this sequence can be omitted, depending on the type of strategy it is proposed to train (whether it requires practice in session or not) and on the skills the client already possesses.

In this phase of the intervention we also find fragments of assessment for identifying difficulties the client may have in putting the therapeutic plan into practice and for providing information on his/her degree of understanding of the techniques, their perceived utility, the progress made, and so on. This assessment is carried out in a similar way to that described in the initial phase of the therapy.

Other peculiarities observed in this treatment stage include the following:

- Frequency of appearance of the function evoking negative emotional conditioned responses can be increased in cases where it is desired to involve classical extinction processes.
- The reinforcement function is often found after utterances by the client indicating:
  - That he/she has done the tasks proposed.
  - That he/she understands the utility of the strategies taught.
  - That he/she knows when to use such strategies.
  - That he/she is capable of generalizing the application of the strategies to new situations.
- When the client fails in the application of the techniques practised, we can often observe the emission by the therapist of a set of utterances with different functions:
  - Punishment: showing disagreement, disapproval.
  - Instructional: indicating the appropriate mode of action.
  - Informative: explaining once more the basis of the therapeutic strategy and/or shaping the client’s behaviour.
  - Motivational: highlighting the benefits of acting in the indicated way.

**Phase 4: Consolidation of therapeutic change phase**

This phase is characterized by the predominance of the reinforcement function accompanying clients’ utterances referring to the goals achieved during the therapy. It is observed that as progress is made there is more and more frequent incidence of behaviours emitted by the therapist with the function of evoking positive emotional responses, such as laughter.

The most relevant process in this stage is probably the reinforcement identified in the following functional sequence typical of this phase of the intervention (Figure 4).

Finally, we should highlight some trends that become stronger as the therapy advances:

- Decrease in the time devoted in session to aspects related to the problem behaviour.
- Increase in the session time devoted to talking about topics that are pleasant (reinforcing) for the person.
- Increase in positive utterances about matters related to the problem for which the client sought help.

**DISCUSSION AND CONCLUSIONS**

Although we believe the line of work begun by the present authors to be promising, as far as an understanding of the change processes occurring in therapy are concerned, we are nevertheless aware of the provisional and tentative nature of the results obtained.
It is necessary to resolve diverse methodological problems, mostly inherent to the process of drawing up a system of categories of observation, to be able to obtain valid and reliable data that would allow us to draw conclusions with sufficient scientific rigour (Gorospe, Hernández, Anguera & Martínez, 2005).

Obviously, achieving this objective involves attaining an adequate level of inter-rater reliability, which would require, among other things, a more operational definition of some categories, so as to reduce the likelihood of confusion between them. Likewise, it is essential to solve the problem of non-exclusivity of the categories proposed, since a single behaviour may have different functions depending on the behavioural segment under analysis. Thus, for example, an utterance by the therapist could be encoded both as a reinforcer of the client’s previous response and as a discriminative stimulus of his/her future behaviour.

A possible solution might lie in the literal transcription of the sessions analyzed, which would facilitate the delimitation and encoding of the relevant behavioural segments. In this regard it is important to highlight the appropriateness of setting criteria that allow differentiation of the truly important fragments of the therapy (e.g., the search for information necessary for establishing the hypothesis of the genesis and maintenance of the problem) from those of less relevance to therapeutic success (e.g., assessment of the client’s sociodemographic characteristics).

As mentioned above, in the present study the sole object of analysis was the therapist’s behaviour and its influence on the client’s behaviour. But if we understand this therapist-client relationship as an interaction it becomes essential to study also how the client’s behaviour influences that of the clinician. Only in this way can we begin to approach a true understanding of the therapeutic process (Beutler, 1991).

Another crucial aspect of our work is that of identifying which behaviours emitted by the psychologist actually work as reinforcement and punishment, increasing and decreasing, respectively, the probability of occurrence of the client’s response they follow. As methodological references for this statistical analysis it would be pertinent to cite the study by Truax (1966) and, more recently, the lag sequential approach (Follette, Naugle & Callaghan, 1996; Rosenfarb, 1992).

However, it is essential to increase the numbers of cases analyzed and of therapists observed, with a view to improving the representativeness of our work. Specifically, it would be of great interest to compare the therapeutic approach in professionals with different degrees of experience, since this could help us to identify more clearly the processes underlying the most efficient clinical interventions.

In any case, regardless of the variability of the therapist’s experience factor, the fact of having access to a larger sample of cases would make it possible to test interesting hypotheses about the effectiveness of certain approaches in therapy and the processes resulting from them. Thus, for example, it would be possible to analyze whether therapeutic success increases when the clinician explicitly reinforces the client’s desired behaviour or whether, on the other hand, results are poorer when punishment is used. In this regard, we support the approaches of those authors who argue that research on processes in psychotherapy should be carried out within a general theoretical framework (in our case, the Theory of Learning), so that it is possible to interpret the data and generate new hypotheses that promote further study in the field (Beutler, 2000; Smith & Grawe, 2003).

Finally, and with a view to the mid-to-long-term development of our research, we believe it would be of enormous relevance to analyze the way therapists using different therapeutic approaches proceed in therapy, with the aim of testing the hypothesis that the processes explaining change in therapy are the same, independently of the theoretical model underlying the clinician’s work. On this view, what would vary would be the degree of explicitness with which the therapist manages the conditions necessary for promoting such processes, this variability providing the explanation for the differences observed in efficacy, effectiveness and efficiency between different types of therapeutic approach.

In sum, despite its preliminary nature, we believe this work opens up a highly promising research line with a view to creating a reliable system of evaluation of the learning processes operating in the clinical context, whose study will allow better understanding of the therapeutic phenomenon and, turn, the development of more effective ways of working in the clinical context, thus reducing the distance between theory and practice in the field of psychotherapy.

REFERENCES


