

10 Relationship Between Theory and Practice

10.1 Freud's Prize Question

Sixty years ago Ferenczi and Rank (1924) attempted to clarify "the relationship between analytic technique and analytic theory" and to investigate "the extent to which the technique has influenced theory and the extent to which each currently assists or obstructs the other" — Freud's prize question (1922 d, pp.267-270). It is now time to compare today's problems with those of that time. A few general observations have survived the passage of time. For example, Ferenczi and Rank pleaded the case for both an inductive empirical procedure and a deductive procedure to test hypotheses when they wrote:

It is perhaps not an exaggeration to assert that this mutual control of cognition by experience (given facts, induction) and of experience by previous knowledge (systematization deduction) is the only kind which can keep a science from erring. A discipline which utilized only one or the other of these paths of research or which prematurely attempted to forgo control by a countercheck would be condemned to lose the solid ground under its feet: pure facts because they lack the fructifying idea, pure theory because its premature omniscience would cause it to lose the motivation for further research. (Ferenczi and Rank 1924, p.47)

In evaluating the interaction of theory and practice, it is essential to distinguish the growing treasure of knowledge and its systematization in the general and specific theories of neurosis from its appropriate therapeutic application. The fact that the theoretical phase (in which Ferenczi and Rank included, for example, knowledge of unconscious emotional mechanisms) raced ahead of therapeutic skill led analysts to place great emphasis on remembering and on rational reconstruction of the past. Thus the object of criticism was a therapeutically ineffective "interpretation fanaticism" derived from etiological theory.

Another aspect of this problem can be illustrated using the examples of the therapeutic function of remembering and interpreting and of the reconstruction of a child's early life history. Etiological theory always started from the assumption that the emotional and affective portion of repressed memories is essential for the genesis of emotional illnesses. Thus in interpretation fanaticism, theoretical knowledge was translated into therapeutic practice in a one-sided and incomplete manner. We would like to clarify a general point here by quoting from Goethe's *Dichtung und Wahrheit*: "Theory and practice always affect each other; it is possible to see what people think in their deeds, and predict what they will do from their opinions."

Ferenczi and Rank used the expression "interpretation fanaticism" in criticizing the therapeutically unfavorable way in which theoretical knowledge was transformed. They obviously believed that the knowledge that had already been systematized was applied by many of their colleagues in a technically incomplete fashion, even though these colleagues' theoretical opinions about an

unconscious psychic context may have been completely correct.

To describe the present range of opinions, we can refer to the discussion by a panel of prominent analysts on the relationship between psychoanalytic theory and technique. Richards' (1984) comprehensive report on Wallerstein's introductory presentation, the papers by Rangell, Kernberg, and Ornstein, and the comments of the panel members provides a representative cross section of today's views.

Ferenczi and Rank had spoken of a *circulus benignus*, i.e., of a "mutually beneficial influence of theory on practice and of practice on theory" (Ferenczi and Rank 1924, p. 47). However, they put equal emphasis on the *circulus vitiosus*. Rangell now views progress as the "progressive elaboration of the therapeutic process in a sequence linked directly with the incremental expansion of the theory of etiology" (quoted in Richards 1984, p.588). Ego psychology is cited as an example; it "placed the analysis of defences on a par with the analysis of drive contents" (Richards 1984, p. 588). Since according to his account all theoretical assumptions, including the most abstruse metapsychological ones, are linked in some way to treatment technique, Rangell is able to create a seemingly close and unproblematic connection. Even if theory should at some point develop more rapidly than technique, each still seems to be in a constant process of growth described in evolutionary terms.

Rangell accordingly sees problems only where the comprehensive view is restricted by theoretical or practical one-sidedness. In an ideal relationship theory and technique complement each other perfectly. One thus gets the impression that psychoanalysis would have progressed even further along the spiral line of evolution of the *circulus benignus* if the familiar foundation had continued to serve as the basis for development. A. Freud (1954a) held a similar opinion. Rangell attributes mistakes on the technical or the theoretical side to personal or school-determined one-sidedness, to over-emphasis, or to negligence, the very mistakes previously criticized by Ferenczi and Rank.

Unexplained, however, is what is to be classified as a mistake. Rangell does not even raise the question of what characterizes the scientific validity of a theory. He also neither discusses the problem of therapeutic effectiveness, nor asks to what degree theory and practice support or inhibit each other. He thus does not touch on the central problems, but conveys the impression of wonderful harmony. The most abstract components of metapsychology appear to be related to clinical observations just as much as, conversely, immediate analytic experience seems to fall under the guidelines of the supposedly established theory. Rangell does not mention that, despite decades of effort, the cleverest analysts have not succeeded in determining rules of correspondence between the different levels of abstraction of theory, or that both Hartmann et al.'s (1953) attempts to improve the inner consistency of theory in a way relevant to practice and Rapaport's large-scale systematization (1960) were failures. Since

Rangell starts from the idea of a continuous development in theory and technique, in close interdependence, he does not need to look for disturbances resulting from disproportionate development on one side or the other. For Rangell, such disruptions are rooted almost exclusively in individual or

school-specific misunderstandings with regard to technique or theory. At issue for him are not the truth of psychoanalytic theories and the effectiveness and optimization of technique; the weaknesses and faults lie elsewhere, namely in the analyst who — because of his personal equation — fails to attain the realizable standards of technical and theoretical knowledge. Certain though it is that each psychoanalyst can embody only a certain portion of the entire theoretical and technical knowledge which has been accumulated in the active psychoanalytic community and in the literature in a century, Rangell's *ad hominem* argument is equally out of date. This argument has always made the scientific clarification of difficult problems even harder, sometimes impossible.

Wallerstein (see Richards 1984), in contrast, doubts the truth of the dogma that technique and theory are so closely associated that each alteration in theory must also lead to modifications of technique. In his opinion, theory has changed significantly within a century but it is very difficult to demonstrate how technique has changed as a consequence. The degree of correspondence between theory and technique is thus much smaller than usually asserted, which leads Wallerstein to recommend that the relationship between them be considered in an unprejudiced way.

To do this, it is necessary to go to the level of practice and investigate those problems which were avoided in large measure as a result of the assertion that theory and technique promote each other in a perpetual *circulus benignus*. The naive view that it is possible to assume the existence of a *circulus benignus* without empirical investigation prevents genuine progress because it overlooks the demands that must be placed on practice if theory and technique are to be mutually beneficial.

To avoid any chance of being misunderstood, we emphasize that significant developments and changes have, of course, taken place in recent decades. An excellent example of the interrelated development of theory and technique is Kohut's self psychology, which was Ornstein's starting point in the panel reported by Richards (1984). Mutually dependent development must not be equated, however, with the assertion that technique and theory promote each other in the sense of mutual progress making theory *truer* and technique *more effective*. Kohut, like many other psychoanalysts, claims that practical application and theory form an exclusive "functional unit" when he says:

In most sciences there exists a more or less clear separation between the area of practical, empirical application and the area of concept formation and theory. In analysis, however, these two areas ... are merged into a single functional unit. (Kohut 1973, p.25)

The naive conception that increase in the effectiveness of a technique and increase in the truth of a theory are mutually dependent has been fostered by Freud's legacy of an inseparable bond linking therapy and research. The inseparable bond links the promotion of a cure to that of knowledge, and thus effectiveness to truth. In the following sections we will try to demonstrate the questions and problems this inseparable bond raises. We believe that we can propose general descriptions of the relationship between theory and technique by referring to the theses that form the context of the inseparable bond concept in

Freud's works.

Ferenczi and Rank's failure becomes more comprehensible in light of our current knowledge that it was based solely on familiar processes of group dynamics. The "increasing disorientation of analysts, especially in regard to practical, technical questions," which the authors hoped to clarify definitively, forms part of the history of the psychoanalytic paradigm. For many reasons the transformation of the therapeutic paradigm into a research method appropriate to psychoanalysis — in Kuhn's (1962) sense of normal science — could take place only gradually. It now appears that the validity of the psychoanalytic theory of the genesis of illnesses that are at least in part psychic in origin cannot be evaluated according to the same criteria as the theory of treatment technique.

10.2 Psychoanalytic Practice in Light of the Inseparable Bond

Freud described the relationship between therapy and theory, between practice and research, with the following three theses:

In psychoanalysis there has existed from the very first an *inseparable bond between cure and research*. Knowledge brought therapeutic success. It was impossible to treat a patient without learning something new; it was impossible to gain fresh insight without perceiving its beneficent results. Our analytic procedure is the only one in which this precious conjunction is assured. It is only by carrying on our analytic *pastoral work* that we can deepen our dawning comprehension of the human mind. This prospect of scientific gain has been the proudest and happiest feature of analytic work. (Freud 1927a, p.256, emphasis added)

Analyses which lead to favourable conclusion in short time are of value in ministering to the therapist's self-esteem and substantiate the *medical importance* of psycho-analysis; but they remain for the most part insignificant as regards the *advancement of scientific knowledge*. Nothing new is learnt from them. In fact they only succeed so quickly because everything that was necessary for their accomplishment was already known. Something new can only be gained from analyses that present special difficulties, and to the overcoming of these a great deal of time has to be devoted. Only in such cases do we succeed in descending into the deepest and most primitive strata of mental development and in gaining from there solutions for the problems of the later formations. And we feel afterwards that, strictly speaking, *only an analysis which has penetrated so far deserves the name*. (Freud 1918b, p. 10, emphasis added)

I have told you that psycho-analysis began as a method of treatment; but I did not want to commend it to your interest as a method of treatment but on account of the *truths it contains* on account of the information it gives us about what concerns human beings most of all — their own nature — and on account of the connections it discloses between the most different of their activities. As a method of treatment it is one among many, though, to be sure, *primus inter pares*. If it was without therapeutic value it would not have been discovered, as it was, in connection with sick people and would not have gone on developing for more than thirty years. (Freud 1933 a, pp. 156-157, emphasis added)

These passages reveal the high demands Freud placed on "true" analysis. The inseparable bond thesis can only be upheld if the reason for the therapeutic effectiveness of psychoanalytic practice lies in the truth of the knowledge that has been gained. This assertion is not easily proven because the inseparable bond does not simply occur of itself. Such an idea is an illusion which sees each analysis as an enterprise in therapy and in research. The precious conjunction of effective therapy and true cognition as a product of the psychoanalytic method cannot be considered an innate trait of psychoanalytic practice. Certain conditions must be

satisfied before the claim that there is an inseparable bond can be justified. We would like to attempt to determine these conditions by means of a rational reconstruction of the relationship between theory and practice.

One aspect of Freud's inseparable bond assertion concerns the conditions under which psychoanalytic cognition takes place — the context of discovery, i.e., everything associated with the discovery and acquisition of knowledge. With regard to practice, the context in which psychoanalytic knowledge is discovered is a matter of psychoanalytic heuristics, which deals with the questions of how interpretations arise in the analyst and of which inferential processes form the basis of an analyst's discovery of dyad-specific relationships. Clinical discussions revolve primarily around the heuristics. This is concerned primarily with the discovery of unconscious wishes which result in conflicts when they confront the realities of life. For this reason the pleasure principle, although transformed somewhat, continues to play a central role in psychoanalysis even after the death of metapsychology. Openness becomes essential in psychoanalytic heuristics in order to do justice to the multiplicity of possible inter-

The cases of illness which come under a psychoanalyst's observations are of course of unequal value in adding to his knowledge. There are some on which he has to bring to bear all that he knows and from which he learns nothing; and there are others which show him what he already knows in a particularly clearly marked manner and in exceptionally revealing isolation, so that he is indebted to them not only for a confirmation but for an extension of his knowledge. (Freud 1913h, p. 193)

At this point it is appropriate to comment on the problem of the contexts of discovery and justification, a distinction introduced by von Reichenbach (1938). Although this distinction is useful, we do not view it as a radical dichotomy and therefore, in contrast to Popper (1969), do not relegate the question of how something arises in the clinician and scientist — and thus the entire heuristics of discoveries of all kinds — to the sphere of irrational mysticism. In our opinion, Spinner (1974) has shown convincingly that the strict differentiation between a context of discovery and a context of justification is not adequate either for heuristics or for the justification and foundation in the research process (Spinner 1974, pp. 118, 174ff., 262ff.). Of course, we have to acknowledge that this differentiation is by and large not made at all in psychoanalysis. In contrast to Freud's scientific credo, the function that most analysts attribute to heuristics, to the context of discovery, goes far beyond dyad-specific truths.

In the dyad the therapist is also a researcher only inasmuch as he conducts his research with genuinely psychoanalytic means (e.g., free associations, recognition of countertransference, and interpretive interventions). Such research is the "home-ground" of psychoanalytic theory formation. Thus, in his 34th lecture to an imagined audience Freud said:

As you know, psychoanalysis originated as a method of treatment; it has far outgrown this but it has not abandoned its home-ground and it is still linked to its contact with patients for increasing its depth and for its further development. The accumulated impressions from which we derive our theories could be arrived at in no other way. (Freud 1933a, p. 151)

Psychoanalytic research within the dyad consists in the analyst's acquisition of knowledge about the patient and his relationship to the therapist. In the following we describe such knowledge as *dyad-specific*. The cure results from the fact that the analyst communicates his impressions — including the affective interactional processes (transference and countertransference) — to the patient according to the rules of the art, i.e., in the form of interpretations. This dyad-specific communication of knowledge in treatment stimulates the patient to further reflection about his experiences and especially about his unconscious motivations. A circumscribed form of reflection by the patient is called insight. A consequence of the insight process itself is that new material can be brought to the surface, which in turn means a growth in knowledge, enabling the patient to attain new insights conducive to cure. The kind of knowledge communicated to the patient in interpretations must be strictly distinguished from that resulting from "accumulated impressions," which, in its general formulation as psychoanalytic knowledge, constitutes the *theory* of psychoanalysis.

Although dyad-specific knowledge is acquired against the backdrop of hypotheses stemming from psychoanalytic theory, it can lead to an extension and modification of existing suppositions. Knowledge thus evolves to a more general form, which in turn provides the theoretical backdrop for the acquisition of new dyad-specific insights. The acquisition of psychoanalytic knowledge follows a *hermeneutic circle*. Freud's assertion of the existence of an inseparable bond in analytic practice is thus not related to general theory immediately but via dyad-specific knowledge.

The differentiation of the concept of research implicit here is a source of help and relief. A field ethologist conducts research without being burdened by the necessity of simultaneous general theorizing. Like the psychoanalyst, he develops his theories at a desk, not in the field. Dyad-specific cognition thus constitutes a special step in research; this step can, however, be taken only in the psychoanalytic situation. One branch of this knowledge goes in the direction of general theorizing, another in the direction of effective communication. Viewed in this manner, a special kind of knowledge — dyad-specific knowledge — is acquired by employing a uniform procedure that is at one and the same time a method of research and a method of treatment. The inseparable bond thesis thus means that:

1. The cure results from the dyad-specific knowledge communicated to the patient, i.e., from the affective and intellectual experiences in the dyad that coalesce into knowledge.
2. Knowledge must be conveyed in the technically correct way, i.e., according to the rules of the art of therapy.
3. The therapeutic technique leads to further and deeper insights into the psychic activity of the patient and his relationship to the analyst, i.e., the therapeutic technique produces increased dyad-specific knowledge.

Psychoanalytic practice orients itself around the accumulated psychoanalytic knowledge. To further illuminate the relationship between theory and practice in light of the inseparable bond assertion, we want to differentiate psychoanalytic

knowledge in order to be able to describe more exactly which knowledge governs activities of analytic research and treatment.

Descriptive and classificatory knowledge provides an answer to the question of *what* something is, but not *why* it is. It serves to describe and classify, and puts the facts required for a map of the subject matter at the disposal of psychoanalysis. Assertions about relationships belonging to this kind of knowledge are only correlative; they do not provide any information on the dependent or conditional nature of relationships. An example in the clinical area is knowledge about forms of behavior and experience which are typical and specific for certain psychic illnesses, e.g., the knowledge that a strong need for control is often observed in obsessional neuroses and that attachment needs, separation anxieties, and more or less concealed aggressions are often observed in neurotic depressions. In this sense the entire field of symptomatology can be considered as belonging to the realm of descriptive and classificatory knowledge.

Causal knowledge answers the question of *why* something is, how things are related, which dependent relationships exist between given facts, and how they influence each other. This kind of knowledge thus provides the foundation for psychoanalytic explanations. The following two assertions from the clinical sphere are examples of causal knowledge: First, patients who have been made aware of the aggressive components of their personalities by interpretations, but who have shut them out of their consciousness, will deny their aggressive impulses when certain marginal conditions are satisfied. Second, if thoughts, feelings, and sensations are appealed to which are beyond the realm of the subject's conscious awareness, he reacts defensively. The second of these hypotheses, which both belong to the theory of defenses, is formulated at a higher level of abstraction than the first. In this sense, clinical knowledge of the etiology and pathogenesis of psychic illnesses can be considered causal knowledge.

Treatment and change knowledge (Kaminski 1970, pp.45-46) is claimed to be useful in *practice*. This kind of knowledge is defined by its relationship to action, and includes statements about the capacity to create the phenomena and conditions that have to be satisfied before certain goals can effectively be reached. This knowledge therefore concerns phenomena and facts that do not yet exist, and thus goals which can be reached with its help. In contrast to causal knowledge, described above, knowledge of treatment and change does not say anything about the conditional nature of the relationships of given circumstances, but rather about the production of certain circumstances through action. The following statements are examples of this form of knowledge, which for the sake of clarity we refer to as action knowledge: (a) Consequences undesirable for the psychoanalytic process result if the analyst returns all of the patient's questions. (b) The furtherance of the patient's perception of reality is unfavorably affected if the analyst simply disregards, rather than acknowledges, the plausibility of the patient's comments. (c) If the patient's resistance to the conscious realization of certain contents grows at an increasing rate as a consequence of previous interpretations of these contents, and if the analyst fears the patient may completely close up and remain silent, then it is advisable for the analyst to drop content-related interpretations and to discuss the resistance instead. Thus, such

statements, especially concerning the psychoanalytic treatment technique, can be classified as treatment and change knowledge.

On the basis of this differentiation we can say that clinical psychoanalytic research and treatment in diverse spheres are governed by change (treatment) knowledge, for example by mutative knowledge. In contrast, the descriptive (classificatory) and causal forms of knowledge, while also originating in the clinical situation, do not originate exclusively or *specifically* there; they have to be produced by the analyst's processes of reflection outside the clinical situation. The causal knowledge which constitutes the theoretical subject matter of psychoanalysis can only result from the hardly explicit operation of reflectively processing experience. On the one hand, descriptive (classificatory) knowledge stands in opposition to the causal and change (treatment) types of knowledge, since descriptive knowledge does not make statements about cause and effect. On the other hand, change knowledge, as a technical form of knowledge, contrasts with descriptive and causal knowledge, which are theoretical forms of knowledge. Technical knowledge tells us how we can act; theoretical knowledge provides us with an insight into the nature of things. How are these two forms of knowledge related? For example, can technical knowledge (change or treatment knowledge) be derived from theoretical knowledge (descriptive or classificatory knowledge and causal knowledge)? These questions lead us to the issues usually discussed within the framework of the *context of justification*.

10.3 The Context of Justification of Change Knowledge

In the framework of the context of justification a question is generally asked regarding the accuracy of the assertions that have been made, i.e., the justification of the assertion that a statement is accurate (true). There are at least two kinds of justification. First, we can justify the accuracy of a statement by deriving the statement from an existing body of knowledge which has already been established as true. Second, the accuracy of a statement (an item of knowledge) can be confirmed empirically by consulting one's experience to see whether the assertion reflects reality. When considering change knowledge within the context of justification in the following, we are interested in the first of these two approaches. We inquire whether the accuracy and established effectiveness of its recommendations for action can be derived logically from psychoanalytic causal knowledge, or whether recourse to another form of knowledge is necessary. We ask, for example, whether the assertion that a patient's resistance can be resolved effectively by interpreting it can be explained and justified by psychoanalytic causal knowledge (and thus theoretical knowledge). We will present in detail the two approaches which seem to us to be most important.

The *continuity assumption*, as Westmeyer called it (1978, p.III), is widespread. In the theory of science its proponents include Albert (1960), Weber (1968), and Prim and Tilmann (1973), in psychiatry Möller (1976), in psychoanalysis Reiter (1975), and in behavior therapy Eysenck and Rachman (1968) and Schulte (1976).

Characteristic is Weber's (1968, p.267) assertion that it is only necessary to reverse the order of statements about relationships and conditions in order to obtain information about how something can be changed. It is also said that effective knowledge of change results from reversing true assertions about relationships. Assume that the following psychoanalytic assertion is accurate: "If a patient becomes conscious of unconscious processes, the pathogenic conflicts based on them are resolved." Then the following effective knowledge of change would have to result: "In order to resolve pathogenic conflicts the patient should be made aware of the unconscious processes on which they are based." The following statements are to be understood in this sense: "If someone has understood something correctly, then he can make it." "If someone can make something, then he has understood it correctly." In these statements, understanding and doing are assumed to be interconnected from the very beginning. Insight into the nature of something is allegedly sufficient to enable someone to make it, and if someone is able to make something, people think they can assume that he has understood it. In that case, the correct understanding of a thing would go hand in hand with its successful production; correct understanding and successful production would constitute a continuum. This is a mistake for several reasons, and we will now comment on the two most important of these.

In general, statements about connections and conditional relationships apply only under ideal conditions, i.e., the sphere to which these assertions claim to apply has significantly fewer variables than reality. For example, there are fewer variables in a controlled laboratory situation than in real life. We find enormous idealization and abstraction regarding the features to be considered (parameters and variables) in, for example, Skinner's experiments. There are considerable differences between human learning in a real-life situation and that of a rat in a Skinner box, and they must be taken into consideration if, for example, a teacher wants to intervene in his pupil's learning processes. What is sufficient for the theorist to explain behavior under restricted (ideal) circumstances may by no means be sufficient for the practitioner to intervene in a complex real-life situation to modify behavior. The difference between the idealized sphere and the practitioner's real sphere of activity is one of the reasons that behavior therapy, according to its original self-understanding, failed as applied learning theory and was not able to demonstrate that the laws of learning shown to be accurate in laboratory experiments are a sufficient basis for effective practice.

Causal knowledge provides information about which facts are the prerequisites for other facts, but not about which actions bring about which facts. It is asserted, for example, that a certain state A leads to a different state B. In the position of the practitioner, I have to ask how I can create state A so that it can lead to state B. The analyst thus has to ask himself how he can make unconscious processes conscious in order to resolve pathogenic conflicts. In practice, it is not sufficient to know the prerequisites and the consequences — the *what* and *why*. The agent must know *how* he can create the necessary conditions. For these reasons the continuity assumption cannot be used in the attempt to explain and justify hypotheses about effective action (which belong to knowledge

of change) by appeal to the truth of causal knowledge.

Bunge's (1967) *foundations approach* heeds the legitimate objections to the continuity assumption. The major differences between his approach and the continuity assumption are that the transition from causal knowledge to knowledge of change does not take place immediately, but by means of an intermediate step, and that this transition has more of a heuristic than a justificatory quality.

A typical starting point is the proposition: "When repressed conflicts threaten to reach consciousness, there is increased resistance to these conflicts." This can be transformed into a nomopragmatic proposition by expanding it to include concepts related to action: "When the analyst interprets a patient's repressed conflicts, the patient's defenses are strengthened." Yet interpretation of a patient's repressed conflicts does not mean the same as the threat that such conflicts will reach the level of consciousness. It is also impossible to derive the first proposition from the second, because the concepts of the former are not contained in the latter. The proposition about the interpretation of repressed conflicts cannot be directly derived from causal knowledge. Concepts of action, such as "interpret," must also be brought in.

In order finally to establish a rule for practice, the nomopragmatic proposition is inverted: "If the patient's defenses are to be strengthened, it is advisable to interpret his repressed conflicts," or "If the patient's defenses are to be weakened, it is advisable not to interpret repressed conflicts." This inversion also cannot be established rigorously and thus remains problematic (Perrez 1983, p. 154).

Since neither step 1 (from causal knowledge to pragmatic proposition) nor step 2 (from a nomopragmatic proposition to a rule of treatment) can be established rigorously, Bunge's foundations approach also fails to ground change knowledge in causal knowledge. Bunge even raises the consideration that it is quite possible for ineffective rules of action to be derived from established theories (concerning causal knowledge), and vice versa. Although it is only by coincidence that a completely inaccurate assessment of certain conditional relationships can lead to their effective management, even with a true theory it would be impossible to give a strict explanation and foundation for effective practice (e.g., the cure of a neurosis with the psychoanalytic treatment technique), because of the above-mentioned relationship between causal knowledge and knowledge of change. Bunge discusses both the idealization problem — less relevant for psychoanalysis because psychoanalytic theory develops in close association with practice — and the difference between knowing what and why and knowing how, and shows that the difficulties cannot be solved in this manner. He offers in their place another possibility for the treatment knowledge, using technological theories or technology instead of causal knowledge. Wisdom (1956), a psychoanalytically trained philosopher, founded an early and original form of a similar "psychoanalytic technology."

Technologies are also theories, yet they differ from those mentioned above, which are constituted by descriptive knowledge, in that they have the character of applied instead of pure science, i.e., they are related directly to acts which are suited to create particular circumstances. Technologies encompass the more

general technical knowledge (in contrast to the concrete rules of change or treatment knowledge), that is suitable both for acquisition of treatment knowledge and for the effectiveness of the rules of action furnished by treatment knowledge. They refer to what can and should be done in a particular case in order to be able to produce, avoid, change, or improve something.

Bunge (1967) distinguishes two kinds of technological theories, substantive and operative. The former refer to the objects of action and include, for example, statements about typical transference patterns or forms of resistance for certain groups of patients. In other words, they include statements about those theoretical statements designed to transmit knowledge relevant to practice, i.e., they convey the knowledge necessary for mastering the everyday tasks of therapeutic practice, not that necessary for a detailed explanation of what and why. Substantive technological theories are usually the fruit of the theories of pure science and adopt from them structural elements which, while regularly subject to conceptual coarsening and impoverishment, thereby gain in practical utility.

Operative technological theories, on the other hand, refer to the practical act itself. They lend themselves to the development of strategies for the formulation of recommendations for effective action. These recommendations take the form of global rules and refer to the special circumstances of the concrete therapeutic situation, i.e., lead directly to "know-how."

The advantage of technological theories lies in the fact that they are able to model practice significantly more effectively and to provide better explanations and justifications of the effectiveness of practice because of their ties to applicability.

Thus there are two opposing spheres of knowledge, neither of which is derived directly and immediately from the other: the pure scientific theory of psychoanalysis — including the descriptive and causal forms of knowledge and the theory they constitute — and the applied scientific theory of psychoanalysis — substantive and operative technological theories and change (treatment) knowledge. Different demands are placed on these two types of scientific theories (see also Eagle 1984).

10.4 The Differing Requirements for Theories of Pure and Applied Science

Truth and practical utility are the two criteria by which pure and applied scientific theories have to be evaluated (Herrmann 1979, pp. 138-140). "Truth" means here that hypotheses and statements (including explanations) about a range of objects have been shown by experience to be accurate. Practical utility means that these statements lead to effective acts, i.e., to acts by which the desired goals are achieved.

Pure scientific theories may be (indeed, are supposed to be) bold, original, and innovative. Surprises during the testing of a theory are often of great heuristic value. For example, the psychoanalytic hypothesis regarding the etiology of a given illness may turn out not to be valid for that illness, but to be true of another

illness where this etiology had not even been suspected. On the basis of the existing theory, the attempt is made to explain this surprise. New assumptions result, producing an extended (or corrected) form of the theory with the resultant new attempts at verification. In this example, the unexpected has been decisive in the growth of knowledge — understood in the sense of an ever more successful explanation of the world of facts.

The demand is placed on the pure scientific theory of psychoanalysis that it possess depth, range, precision, and sufficient degree of validity (Stegmüller 1969). For example, it is expected that the general hypotheses of clinical psychoanalytic theory represent as close an approximation to clinical reality as possible. Thus they are supposed to be able to adequately and comprehensively describe the genesis, development, and course of psychic illnesses, or to be able to sufficiently explain all the significant factors and the interdependence of psychic processes.

The truth of pure scientific theories (including in psychoanalysis the theories of development, personality, and neuroses) consists in the accurate and sufficient explanation of the reality they are making statements about. Thus, if scientific theories are not to describe reality merely in an abridged and consequently inadequate way, they have to be a maximal approximation to the complexity of reality. In the empirical sciences, the degree to which this approximation is successful is tested by observation and experiment. Thus the dilemma is created that complex (and thus parameter-rich) theories, such as psychoanalytic theory, are difficult to test empirically, while theories which are easier to test often have very few parameters and are thus usually abridged representations of reality.

Technologies are expected above all else to be reliable. Those which are original and bold, which lead to surprises, and which do not guarantee to keep practice firmly under control are of no value. Simple and rough representations of reality are often precisely the ones which provide the technological advantages expected and demanded of them, by making it possible to formulate recommendations for effective action (treatment rules) to accomplish current tasks in concrete problem situations under specific circumstances.

A fully formulated technology of psychoanalysis — as yet there is none — would have to demonstrate a sufficient degree of applicability, usefulness, and reliability for therapeutic practice (Lenk 1973, p.207). All of this implies the demand for the practical utility (efficiency) of technological theories. From the point of view of efficiency, it is a matter not of how well the psychoanalytic technology explains clinical reality, but rather of how well it is able to master the routine tasks of clinical psychoanalysis. The theories concerning technique must be investigated in order to determine which approaches are especially useful for therapeutic practice. The effectiveness of a psychoanalytic technology is judged by the success of the therapeutic practice employing the technology. The distinctive feature of psychoanalytic technology is without doubt interpretation. In this sense it is possible to speak of a technological hermeneutics differing in essential features from theological and philological hermeneutics (Thomä and Kächele 1975; Thomä et al. 1976; Eagle 1984). Psychoanalytic interpretations are made not for texts, but for patients with therapeutic expectations. Blight (1981)

therefore stressed that psychoanalysts cannot merely retreat inside the hermeneutic circle. The attempt to prove the therapeutic effectiveness of psychoanalytic interpretations forces analysts to take at least one step outside the hermeneutic circle and confront questions regarding the empirical proof of change. Thus, even Ricoeur cannot escape viewing the effectiveness of therapy as the decisive criterion for the hermeneutic psychoanalytic method of proving the existence of unconscious motivations: "The guarantee that the reality of the unconscious is not just a pure figment of psychoanalysts' imagination is provided finally only by therapeutic success" (Ricoeur 1974, p. 19). In general, however, it is precisely the hermeneutic school of psychoanalysis which has paid no more than lip service to effectiveness. With surprising modesty, analysts are satisfied with subjective evidence, that is, with dyad-specific truths within the hermeneutic circle (Lorenzer 1970).

Even a high degree of effectiveness (the main criterion) does not guarantee the truth of the technology, i.e., the accuracy of the technological explanation, which is another important consideration. A technological rule might specify, for example, that the analyst interpret resistance instead of unconscious conflicts if he wants to resolve the resistance resulting from repeatedly addressing a repressed conflict in various interpretations. Assuming that the effectiveness of this rule has been shown, we now ask why this recommendation for action is effective. The answer is provided by technological assumptions in the form of a technological explanation. The factor to be explained and founded is the connection between the condition established by the analyst (e.g., via interpretation) and the effect it has on the patient (reaction). The effectiveness of this rule can be explained in the following way: The unconscious conflict is repressed for specific reasons, i.e., there is a motive for the repression (e.g., avoiding the guilt feelings that arise when the conflict becomes conscious). For this reason the motive for repression is strengthened when the analyst ignores the patient's resistance and interprets the unconscious content of the conflict directly. The repression then expresses itself as the patient's increased resistance to insight into the unconscious content of the conflict. The motive for repression is also unconscious, and causes the patient's resistance as long as it remains so. The automatic nature of this mechanism can be overcome if the resistance is interpreted. Here, interpretation of resistance means that the patient is made aware, not of the unconscious content of the conflict, but rather of the motive for repression, which is closer to the ego. This destroys the automatic mechanism, removing the basis for the formation of resistance.

The validity of this explanation is tested in the course of research into the therapeutic process following the usual methods of empirical research, i.e., in the same way that the statements and hypotheses in pure scientific theories are tested. It is quite possible that the mechanisms asserted in the technological assumptions, and alleged to explain the effectiveness of the rule, are inadequate for the facts, i.e., the explanation is insufficient. It may nevertheless still be possible to formulate effective rules using these assumptions. The reverse is also possible: the therapeutic process, in contrast to the preparation of a list of effective rules, might be satisfactorily explained by the assumptions of a given technology.

Technologies can thus have two faces. First (the explanation), they can be treated as pure scientific theories and consequently have to satisfy the requirement of such theories. Alternatively (the generation), they remain theories of applied science and are expected to demonstrate practical utility, i.e., effectiveness in practice. Satisfying the requirements of pure science is neither necessary nor sufficient for satisfying the requirements of applied science, and vice versa

This fact can be explained by the difference which exists between verbal expressions and the actions a person actually performs. Inasmuch as it is already possible to speak of psychoanalytic technology (since, at best, the statements on treatment technique can be regarded as operative technological theory), in therapeutic practice this technology is transformed by the psychoanalyst into a therapist-specific (personal) theory that might lead to effective therapy even if the objective technology is not completely valid. The opposite is the case if the technology is sufficiently "true" yet its operative conditions are different from those of therapeutic practice, or if the therapist's subjective adaptation of it produces an ineffective result.

A refined technology which takes all the special circumstances of a real, complex situation into consideration is lacking in psychoanalysis, as indeed it is in the applied social sciences as a whole. Such a technology would be able, if it were sufficiently valid, to provide recommendations in the form of rules for the appropriate action in every specific situation. If an analyst wanted to use such a utopian technology in the course of therapy, he would have to master a wealth of parameters exceeding the limits of his cognitive capacity. Even if such mastery were possible, the analyst's personal degree of adroitness would still come between his technological knowledge and his actual performance. The fact that the subjective adaptation of objective technology is an inevitable problem in the translation of theory into practice is a reference to the practice of psychoanalytic therapy as an art. The translation is ultimately a skill, and the practice of therapy an art. Mastering this art is a question of training and personality.

10.5 Consequences for Therapeutic Action and for the Scientific Justification of Theory

The consequence of the distinction made above between the truth of knowledge and the effectiveness of action is to separate these two factors which were so closely linked in psychoanalytic practice by Freud's inseparable bond thesis. Their relationship is not a priori such that one is the prerequisite or consequence of the other. In the analytic situation, research is not automatically linked with therapeutic acts, or vice versa. The bond has to be produced each time through concrete action. The analyst must ask himself whether his daily psychoanalytic activity not only leads to true individual insights into the patient's psychic processes, but also promotes the patient's eventual cure. In other words, the question is whether his technique is equally suited to gain new insights and to achieve therapeutic success. The inseparable bond must be created, it is no law inevitably governing psychoanalytic practice. The assertion that a *circulus benignus* exists in practice, i.e., that (true) theory and (effective) therapy promote each other, is not justified until the inseparable bond has been established. Therapy research conducted by third parties not directly involved in therapeutic activity has the task of determining whether this has been achieved in practice in more than just individual cases (see also Sampson and Weiss 1983; Neudert et al. 1985; and Chap. 9).

In view of the fact that neither effectiveness nor truth necessarily determines or results from the other, in attempts to validate psychoanalytic hypotheses it is essential that there be clarity with regard to whether the hypotheses are understood in the sense of pure science or applied science. If the latter is the case, it is also necessary to clarify whether the object of discussion is their explanatory value and/or their generative value (their usefulness in formulating effective rules). The testing criteria and procedure vary accordingly.

The divergence of truth and effectiveness is not given sufficient consideration even if, for example, the "tally" argument, as it was named by Grünbaum, is used to prove the correctness of psychoanalytic hypotheses. This argument is based on the following statement by Freud:

After all his conflicts will only be successfully solved and his resistances overcome if the *anticipatory ideas* he is given *tally* with what is real in him [i.e., the patient]. Whatever in the doctor's conjectures is inaccurate drops out in the course of the analysis; it has to be withdrawn and replaced by something more correct. (Freud 1916/17, p.452, emphasis added)

Here Freud expresses the opinion that therapy can be successful only if the patient achieves accurate insight into the historical truth of his life and his suffering. The tally argument describes a problem of correspondence and not a claim to truth, as Freud has supposed.

Grünbaum, who has dealt in detail with the problem of testing psychoanalytic theory on the couch (i.e., in and through practice; see especially Grünbaum 1984), calls the assertion that true insight leads to success in therapy the "necessary condition thesis." This thesis is the most important assumption for the tally argument, that is for the argument that therapeutically successful analyses

speak for the truth of the analytic (dyadic) knowledge gained in these analyses and communicated to the patient. Grünbaum raises the following doubts about the therapeutic effect of true insight: The therapeutic effect might actually be due to the analyst's suggestion, e.g., could be based on untrue insights and pseudoexplanations; it might be a placebo effect due to the analyst's and patient's faith in the truth and effectiveness of insight gained through interpretation; or it could result from yet other aspects of the psychoanalytic situation, such as from the experience of a new kind of interpersonal relationship, and not from "true insight."

In contrast, Edelson (1984) continues to support the claim that a patient's true insight is a necessary prerequisite for changes which are valued as therapeutically positive in the framework of a psychoanalysis. At the same time, he admits that true insight is not a sufficient precondition for achieving therapeutic changes in psychoanalysis. Edelson argues that analysis-specific goals and changes are all tied to the patient's true insight, and that it is only possible to speak of a successful and effective psychoanalytic treatment if these goals and changes are achieved.

It is not difficult to recognize that the controversy about the correctness of the necessary condition thesis is actually about the question of whether Freud's assertion of an inseparable bond is valid for psychoanalytic practice or not. Anyone who simply accepts the inseparable bond as a given fact in his arguments (e.g., in the form of the tally argument) treats the bond as a law of nature. It is often forgotten that the role of true insight has not been sufficiently studied in empirical research into the therapeutic process, and that the conception of insight is tied to serious methodological difficulties (see the survey in Roback 1974). It would therefore be premature to accept assertions about the association of true insight with therapeutic success as valid (as in natural law). This caution is justified in view of the fact that empirical research into the therapeutic process has acknowledged that a whole series of conditions beyond true insight play a significant role (Garfield and Bergin 1978).

Grünbaum's contamination thesis had previously been put forward by Farrell (see Farrell 1981), and specifically addressed by Cheshire (1975, Chap. 4), who convincingly defended psychoanalysis against it. The decision as to the correctness of this thesis must be made on the basis of empirical research into the therapeutic process, and not within the framework of philosophical discussions. The same is true of the allegation regarding suggestion, the legitimacy of which would have to be substantiated empirically with regard to psychoanalytic practice before it could be asserted with the certainty which often characterizes it (Thomä 1977). It must therefore be demanded, first, that the forms of changes specific to psychoanalysis be described exactly and be distinguished from other processes; second, that research seek indicators for the changes in question, since the changes, inasmuch as they concern dispositions, can only be observed indirectly via these indicators; and third, that not only the conditions for true insight be specified and examined, but also what is necessary in addition to true insight in order to achieve the personality changes envisaged by the goals specific to psychoanalysis (Edelson 1984). Freud's leitmotif "Where id was, ego shall be" (Freud 1933 a, p. 80) sets an ambitious goal, which in another

form coincides with the aim of structural changes. Everyone who has attempted systematic research in this field knows that our task is difficult to discharge if we want to go beyond clinically confirmed knowledge. In the previous chapter we described examples making it clear that modifications of our theoretical ideas are also to be expected which will have beneficial effects on our clinical activity.

Based on the previous results of process-oriented therapy research, it is possible to predict that in future, more sophisticated studies the umbrella concepts of suggestion and insight will dissolve into a broad spectrum of communicative processes. Psychoanalytic therapy also takes life, even though in a particularly refined manner, from the general ingredients of helpful therapy, as Luborsky (1984) has shown empirically for the "helping alliance." Furthermore, psychoanalytic forms of therapy exhibit specific characteristics which distinguish them more or less clearly from other approaches to therapy. We tend to the view that exact exploration of the processes of change in psychoanalytic therapy is just beginning and that numerous detailed studies at different levels of research and using different theoretical approaches will have to be conducted. Tape recordings make it possible to verify observations concerning changes, creating a third area between experimental and clinical psychoanalysis, namely the systematic clinical study of the treatment material (Kächele 1981; Leuzinger and Kächele 1985; Gill and Hoffman 1982).

We would term these approaches "technological research" in the sense described above, i.e., research into psychoanalytic technique and technology. We question whether verification of the basic science theories of psychoanalysis is possible in the treatment room, and agree with the demand, repeated by Grünbaum (1984), that the numerous hypotheses brought to light in the course of treatment be made the object of systematic research by empirical social science and psychology (Kline 1972; Fisher and Greenberg 1977). There has, of course, been an ever growing corpus of just such objective, nonclinical studies since Sears' pioneering work appeared a few years after Freud's death (see Fisher and Greenberg 1977). In our opinion, the psychoanalyst's observations in the therapeutic situation make a significant contribution to studying the etiology of psychopathology or the theory of personality development by generating numerous hypotheses. Yet they can contribute to a theory of therapy in a much more comprehensive manner, i.e., to

an understanding of the relationship between certain kinds of operations and interventions and the occurrence or failure of occurrence of certain kinds of specific changes. It seems to me ironic that psychoanalytic writers attempt to employ clinical data for just about every purpose but the one for which they are most appropriate — an evaluation and understanding of therapeutic change. (Eagle 1984, p. 163)

We agree with Grünbaum (1984) that the office is not the place where the analyst can test basic science theories. However, while Grünbaum considers the phenomena in the clinical situation to be useless as a basis for the verification and testing of psychoanalytic hypotheses, in our opinion these data make an excellent touchstone for use in scientific evaluation by uninvolved third parties testing the validity of the hypotheses (Luborsky et al. 1985). Supplementing

Eagle's position, we think these data are relevant for the generation and testing of both technological and basic science assumptions. We agree with Edelson (1984), who demonstrated this for two examples — his interpretation of the case of "Miss X," reported by Luborsky and Mintz (1974), and Glymour's (1980) argumentation concerning Freud's Rat Man (1909d).

The test in this case is not based on a postulated link between effectiveness and truth, but directly on clinical data. Eagle (1984) also correctly emphasizes that diagnostic knowledge, i.e., that gained from observation of the specific ways in which syndromes develop, represents an independent field relying neither on dyad-specific truth nor on therapeutic effectiveness. For example, Thomä's (1967a) descriptions of anorexia nervosa in psychodynamic terms have proven to be correct in their essentials despite the changes in therapeutic strategies which have occurred both within and without psychoanalysis.

The basic science hypotheses of psychoanalysis have a wide field of reference (e.g., development, personality, and illness) and can move at a variety of levels (see, e.g., Waelder 1962). It is necessary for analysts, when preparing to test psychoanalytic assumptions on the clinical data, to ask themselves which assumptions the clinical data can serve as a touchstone for, and what degree of reliability can be attributed to the clinical data. It is clear from both theoretical considerations (Wallerstein and Sampson 1971; Thomä and Kächele 1975) and empirical investigations (Luborsky and Spence 1978; Kiener 1978) that metapsychological assumptions are useless for this task. It is necessary in this regard that the (often distorting) influence of metapsychological assumptions on clinical experience and interpretation be judged very critically (see Chap. 1). There have been numerous discussions of the real difficulties regarding the use of clinical data to validate basic science hypotheses, and of the controversial possible solutions; we will therefore limit ourselves here to a few references to the literature (Thomä and Kächele 1975; Möller 1978; Grünbaum 1982; Eagle 1984; Edelson 1984).

In closing, we would like to plead for the consideration of psychoanalytic practice both as the core of therapy and as an essential component of the research process in psychoanalysis. Psychoanalytic practice is the sphere where the process of cure takes place and heuristically valuable knowledge is gained. The inclusion of uninvolved third parties is essential and decisive in the testing of this knowledge, whether it be from basic science or applied science. We have to restrict the psychoanalytic research referred to in the inseparable bond assertion, in the sense that its results can be used only for the discovery and development of preliminary hypotheses, not for testing them. The analyst in his daily therapeutic routine must ask himself whether his treatment technique is appropriate both for establishing new hypotheses and widening psychoanalytic knowledge and for promoting the process of cure.

For reasons of methodological principle, the individual analyst is not in a position to do justice to this triad. Who indeed would claim — as Freud did — not only to have gained something new, but also, by means of strict analysis, to have descended into the deepest strata *and* to have proven that he had thus gained solutions for later configurations? In addition, according to Freud's

scientific credo, the increase in generalizable, objectified knowledge of psychic connections can, indeed must, lead to an acceleration of the process of cure if the knowledge is communicated in the course of therapy in an appropriate manner.

Within the psychoanalytic system, short therapies are thus a necessary consequence of scientific progress. In any case, a practical and theoretical foundation is required for descent into the deepest mental strata as well as for analyses which have favorable results in a short time. Only then can it be proven that interpretive therapy is also a treatment promoting the patient's knowledge of himself. This self-knowledge, however, does not have to have an innovative character with regard to the basic and applied science theory of psychoanalysis. Its primary value consists in the fact that, along with other factors, it exercises a positive influence on the process of cure. It is thus very ambitious to want to connect psychoanalytic research in the psychoanalytic situation (i.e., gaining new psychoanalytic hypotheses, which must be distinguished from the research carried out by uninvolved third parties to test the hypotheses) with the interest in achieving a cure. Freud's theory of technique requires that the analyst distinguish between the following components: *curing*, *gaining* new hypotheses, *testing* hypotheses, the *correctness* of explanations, and the *utility* of knowledge.