

Applied Parapsychology Studies of Psychics and Healers

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Abstract — Most research in parapsychology is aimed at understanding and controlling paranormal phenomena like telepathy, precognition and psychokinesis. However, in everyday life the practical applications of these phenomena, mainly by psychics and healers, play a more important role. People are generally more interested in the question of how effective these applications are than in scientific explanations of them. They want to know whether they should consult a psychic for a specific problem or what to expect from treatment by a paranormal healer. It is an important aspect of scientific activity to provide society with answers to such questions; answers not based on belief or disbelief in the paranormal but on factual research data.

Research with psychics dates back to the last century. Considering the complexity of the problem it is not surprising that it took many years before proper statistical evaluation methods were developed. Based on studies in which the paranormal impressions of psychics were quantitatively evaluated an assessment is given of what happens when clients consult a psychic and of the merit of the impressions on which the psychics base their advice.

Compared to psychics, there exists a much larger community of active paranormal healers. Despite this large number, the amount of research carried out on paranormal healing is less than the number of studies done with psychics. However, there are many studies available on complementary medicine in general which provide data relevant for the interpretation of the activities of psychic healers. All these data give an indication for the effectiveness of paranormal healing and of the main variables involved.

Two overview studies have been carried out, one on quantitatively evaluated studies with psychics, the other on studies on psychic healing and on complementary medicine. The present paper is a summary and overview of the main results of both studies.

Introduction

Although the origins of parapsychology lie in spontaneous paranormal experiences and in the activities of mediums and healers, parapsychology has developed mainly into an experimental field of research aimed at understanding and controlling the assumed paranormal process. The activities of psychics and healers can be considered as the applications of the paranormal in real-life situations. Psychics offer their help to clients for solving various problems, for instance to trace missing persons. They claim that their advice is based on

paranormal impressions. Such impressions would contain information which at the time is not known to the persons concerned. Psychic healers attempt to cure people from complaints and diseases, also apparently by paranormal means.

Experimental research in parapsychology, like Ganzfeld and RNG studies, appears reasonably successful (at least compared to the general rate of success in Social Sciences) and demonstrates that we might be on the trace of an anomalous phenomenon. For many interested in research in parapsychology the main question is whether such an anomalous phenomenon exists or not. It is usually taken for granted that if the existence of psi can be proven, that then the explanation for the achievements of psychics and healers is also obtained. This might be the reason that little research has been carried out in which the phenomena produced by psychics and healers were studied in order to derive explanatory hypotheses based on the characteristics of the phenomena themselves.

In everyday life the practical applications of the paranormal, the activities of psychics and healers, are of more importance than its possible scientific value. People are generally more interested in the question of how useful these applications can be for them than in their scientific explanation. They want to know whether they should consult a psychic for a specific problem or what they can expect from treatment by a paranormal healer. It is an important aspect of scientific activity to provide society with answers to such questions; answers not based on belief or disbelief in the paranormal but on factual research data.

But such answers are also important for scientists. If, for instance, it would be demonstrated that psychic healing is not effective at all, or only effective for specific classes of diseases, that certainly would have consequences for the applicability of certain explanations. There is also a practical point to consider. Research in parapsychology is hampered by the fact that the phenomena under study are weak and unpredictable. If psychics and healers are able to produce paranormal phenomena at will and on a regular basis then asking these people to take part in experimental research might greatly enhance its effectiveness.

For scientists who are interested in finding explanations for human behavior and achievements it makes sense to make a strict distinction between what people do or experience and the verbal explanations they themselves offer for these activities or experiences. If no additional evidence is given, then that explanation is at best to be considered as an hypothesis, based on the subjective insights of the person. In fact, very often there is no relationship at all between the behavior and the explanation, except that the same person is responsible for both.

Astrology is a case in point. The Gauquelin effect is an interesting phenomenon but can hardly serve as an explanation for what astrologers normally do: reading horoscopes for clients. When astrologers make statements to clients about a variety of topics such statements might well be more often correct than expected by chance. But that does not imply that the hypothesis the astrologer

offers, e.g. that reading a horoscope based on the moment of birth explains the correctness of the statements, has any merits. If computer programs are applied which simply follow astrological rules in a strict sense, then the resulting statements are generally very meager and of little interest. Still most research in astrology, and objections against the practice, focus on the astrological hypothesis instead of on the achievements of astrologers. A study aimed at the question of how the astrologer arrives at his statements might reveal that psychological processes play an important role in generating their contents. Therefore the study of astrology should rather start with a study of how astrologers arrive at their statements and whether these statements are really more often true than chance. Then, assuming there is anything left which needs explanation, the characteristics observed should provide the hypotheses for the most likely explanation. The usual tendency to focus research on the explanations and belief systems, instead of on the deduction of hypotheses from the characteristics of the phenomena itself, is quite remarkable and seems especially prominent in disputable areas. However, it is doubtful whether there is any justification for such an approach. The "pragmatic" approach which I will follow is to study the phenomena themselves and to look for explanations which fit their characteristics.

Past studies on psychics and healers nearly all follow the same tendency: a focus on the assumed paranormal character instead of on studying what psychics and healers do and accomplish. Hence important questions have been somewhat neglected, questions like how effective psychics and healers are, what factors are important in their achievements, and what these data suggest as to the most promising explanations. Therefore I carried out literature studies to collect as much data as possible on such questions. These overviews, one on quantitatively evaluated studies with psychics, the other on studies concerning psychic healing and complementary medicine, are published elsewhere (Schouten, 1993a, 1993b). The present paper, presented at the First European SSE Conference in August 1992, is a summary of the results of these overview studies.

Research with psychics dates back to the last century. Apart from a few recent exceptions, all studies were aimed at establishing the assumed paranormal character of the psychics' impressions. For lack of proper statistical methods this was initially done based on a more or less subjective evaluation of the material. Hundreds of pages in the older parapsychological journals have been devoted to descriptions of sessions with psychics and to discussions about the possible paranormal nature of the statements made. The development of quantitative methods to evaluate verbal statements from psychics only started in the 1930s. Considering the complexity of the problem it is not surprising that it took many years before proper statistical evaluation methods became available.

Compared to psychics, a much larger number of paranormal healers is active. Despite this large number, the amount of research carried out on paranormal healing has been substantially less than the number of studies done with

psychics. Nevertheless the available material provide some indications with regard to the effectiveness of paranormal healing. These data together with the findings from a number of studies on related fields of complementary medicine make it possible to draw conclusions about the value of psychic healing and about the factors which seem to contribute to the observed effects.

Research With Psychics

In the popular literature on the paranormal it is often stated that hundreds of well-documented cases exist which demonstrate that the paranormal impressions of psychics contributed to the solution of at the time unsolvable problems, for instance in cases of missing persons. Unfortunately, this is not true. It is true that occasionally psychics contribute to the solution of such cases, although not as frequently as many people believe, but there hardly exists a case which is well-documented. The reason is that when a psychic becomes involved in a case, for instance of a missing person, then normally there are so many interactions between the psychic and relatives, friends, and police, and in addition many activities of the psychic such as driving around in the environment, consulting maps, etc., which might yield information on the nature of the case, that it is impossible to keep track of all these activities, let alone to document them all. Often only the end result of this process is recorded: the statements which possibly have some relationship with the known outcome of the case.

The main advantage of experimental research is that in principle the activities of the psychic are under control and that all statements and verbal interactions can be recorded. Even then it is often not easy to assess the value of the statements. When a client interacts with a psychic and comments on the psychic's statements these comments can provide additional information which should be taken into account when evaluating subsequent statements. For quantitative analysis this constitutes such a problem that as a rule in experiments such comments, the feedback, are excluded. Therefore these experimental studies are not entirely representative for the conditions under which a psychic normally works. On the other hand, the elimination of information provided by the client does allow for a better test of a possible paranormal nature of the psychic's impressions.

The aim of a quantitative evaluation of the statements of a psychic is to establish whether these statements are more often correct than expected by chance. Although a quantitative evaluation is the best way to obtain an objective assessment of the value of the psychic's impressions, it provides only a limited view on the data. A qualitative analysis, based on a subjective interpretation of the material, might often be more meaningful. Relationships, for instance of an emotional nature, between apparently unrelated statements can provide a very apt characterization of the target person or of the situation, but might not lend themselves well to an objective quantitative analysis. However, a significant outcome of a quantitative analyses can be considered as a require-

ment which has to be fulfilled before a qualitative analyses is allowed. Thus only after it has been demonstrated quantitatively that the statements are especially applicable to the target person does further interpretation in a qualitative and psychological sense seem warranted.

About 40 reports on quantitatively evaluated studies with psychics were found, but the studies involved vary drastically in size. They range from the evaluation of one session to studies involving many years and hundreds of sessions with psychics. To provide an impression of the nature of these studies a short description of some of them follows. The studies described were chosen because they show the various and sometimes ingenious ways in which parapsychologists have tackled the psychic problem. No description is given of all the work and efforts spent to develop the statistical methods for analyzing verbal material which we have today. This can be found in the more extensive overview on which this paper is based (Schouten, 1992a).

J. H. Hyslop (1919) published the first attempt to provide a quantitative assessment of the statements of a psychic, in this case those of the famous Mrs. Piper. Hyslop was irritated by the objection that the medium's statements, although they seemed convincing, could be explained by a mixture of inference, guessing, and a little bit of luck. He intended to demonstrate the foolishness of that objection by running a control study. All statements of a session intended for the target person (Hyslop himself) were rephrased into 105 questions. For instance, if the psychic had stated that the target person had two sons, this statement would then be rephrased into "Do you have two sons?" These questions were sent to 1500 persons (420 returned the questionnaire) with the request to indicate which ones applied to the receiver's situation. This way Hyslop obtained a probability value for the expected correctness of each statement. Thus in the event that (out of 420) 42 persons would answer "yes" to a statement, the probability for the answer 'yes' to that statement would be rated as 1 in 10. Finally he just multiplied all probabilities obtained because, as he stated "I myself can answer all questions in the affirmative." Not surprisingly this way he obtained a very low probability for all statements combined, proving his point. A strong start, but unfortunately also the last experiment in which all statements of a psychic appeared to be correct.

This study illustrates the approach in which by means of control persons estimates are obtained for the probability of correctness of each separate statement. We know now that this approach suffers from many sources of error. An important one concerns the fact that persons who believe that they were the target person about whom the psychic made the statements are inclined to agree with the statements, whereas persons who know that they serve as control person are inclined to deny the correctness of the statements. A method which eliminates this bias in judgement was first applied by J. G. Pratt (1936). He asked the psychic Mrs. Garrett to give her impressions about a target person whom she did not meet and who stayed in an adjacent room. Fifteen sessions were held, each with a different target person. Pratt, who did not know the relationship between sessions and target person, transformed the medium's

verbal impressions of all sessions into separate statements. Then he requested all target persons to evaluate each statement on applicability to their own situation. Thus none of the subjects could know which statements were intended for them and which for the others. After receiving the answers the statements were again allocated to the subjects for which they were intended and for each subject the answers of the other subjects served as control data. The subsequent statistical analysis yielded a significant result. Hence this medium appeared to be able to provide more information than could be expected by chance. However, a replication study by C. V. C. Herbert (1937) with the same psychic and applying the same design failed to confirm this finding.

Pratt's method is a safeguard against the effect that people who believe the psychic's statements were intended for them actively search for events or circumstances in their life to match these statements. This bias can have a strong effect on the proportion of statements judged to be "correct." This was illustrated by D. Parson (1949) in a small study. He took the statements from a session of a psychic which by the target person were largely rated as very fitting to her situation. He found 4 other persons, matching the target person in sex and age, willing to take part in a "psychometric" experiment. A psychometric experiment means that the psychic uses an "inductor," an object belonging to the target person, as a means to obtain psychic impressions about that person. Hence the target person does not have to be present during the session. Parson added the statements of the original session to all four protocols and asked these persons, who did not know that statements from the original session not intended for them had been added, to rate all statements on applicability to their own situation. Considering only the added statements from the original session it appeared that two of the subjects also rated them as very fitting to their situation. For one of them the match appeared even better than the match had been for the real target person.

H. Bender in Germany became interested in the problem of the evaluation of psychics because of the achievements of the Dutch psychic G. Croiset. Croiset attained quite a reputation, among other reasons because of his occasional successes in tracing missing persons. Bender obtained the cooperation of Croiset and started a series of exploratory studies. One of these exploratory studies was the so-called Pirmasens series, in which Croiset made predictions about the person who would occupy a certain chair in a future lecture on parapsychology in Pirmasens. Bender was quite impressed by the subjectively evaluated results. He was amazed, as he expressed it himself, but, as he often stated, what was needed was a statistical assessment (Bender, 1957, 1984; Hoebens, 1984; Timm, 1984). Since these "chair tests" appeared to lend themselves well to quantitative evaluation, a series of experiments was started all involving chair tests. In a chair test the psychic makes statements about an unknown target person who in a future meeting will occupy a certain chair. Croiset made his statements in Holland, the meetings were held in Germany. A random procedure was applied to assign participants in the meeting to chairs.

These series of experiments turned out to be a continuous story of detecting and eliminating sources of error and of improving the statistical tools for analyzing the verbal material. The latter task was handled by the statistician U. Timm. In the period 1955 to 1966, 16 tests were carried out (Timm, 1965, 1966). Six of these tests yielded a positive significant effect; the significance of two tests is disputable (the significance disappeared depending on the type of controls applied) and eight tests yielded a clearly non-significant result. The overall conclusion was that Croiset's achievements were impressive enough to assume a non-chance effect on the data but that his contributions in terms of generating information about the target person were rather weak. In other words, even if one assumes a paranormal element the information he provided about the unknown target person appeared to have little value.

An interesting variation on this theme of the quantitative evaluation of impressions of psychics constitutes a line of research instigated by G. Schmeidler: the quantitative assessment of hauntings (Maher and Schmeidler, 1975). One of the first cases investigated by this method concerned an apartment where first a daughter, and later her mother, occasionally saw an apparition in certain places in the house. The emotional impact of seeing these apparitions was undoubtedly reinforced by the fact that only a few months before the father and spouse had passed away. The investigators reasoned that if these apparitions were really paranormal, then psychics might obtain impressions both regarding how the apparition looked as well as regarding the places it was seen. On the other hand, if the apparition was due to some sensorial illusion then one would expect that non-psychics would obtain similar experiences and hence would do as well as psychics in detecting the haunted spots.

So four psychics and eight skeptical non-psychics individually visited the apartment, accompanied by an uninformed co-experimenter and without the inhabitants present. They marked on a floor plan where they thought the apparition had appeared. The daughter and mother had indicated four haunted spots. In addition, a list was made up containing 37 characteristics of an apparition, of which 8 applied to this specific case. The results were not encouraging. One psychic was marginally-significantly correct in indicating the places, but wide off the mark as regards the characteristics of the apparition. Another psychic achieved the opposite results, a marginally significantly correct description, but none of the places were correctly identified. All other participants failed the test. Although the psychics did slightly better compared to the non-psychics, the difference is not impressive and might be entirely explained by the fact that psychics probably have more experience with cases of hauntings.

An original solution to solve the problem of the unreliable judgement of the correctness of statements by subjects was provided by Douglas Dean (1972). He also used precognitive statements, e.g. statements made by the psychic about future events but, unlike Bender, Dean asked subjects to formulate questions about unknown future events in their life, which were expected to take

place within 12 weeks, in such a way that they could be answered with yes or no. For instance, someone out of work looking for a job might ask: "Will I have a job on the day 12 weeks from now?" The psychic provided answers to all these questions (in total 285 provided by 94 subjects) based on her paranormal impressions. Dean also asked the subjects themselves to guess the answers. Then after the 12 weeks had elapsed subjects again provided the answers, but this time based on the factual situation.

Although the results cannot be evaluated assuming a $p = 0.5$ probability for each answer to be correct, it is possible to compare the psychic's predictions with those made by the subjects themselves. It turned out that the predictions of the psychic did not correlate with those of the subjects. Although one would expect the subjects, who are most familiar with their own situation, to be better able to predict their future that appeared not to be the case. The psychic won that contest and obtained a higher score on number of correct predictions. This in itself does not prove precognition, but it demonstrates why it is not surprising that there are people who become impressed by what psychics achieve.

Many cases are mentioned in popular literature in which a psychic apparently assisted police and relatives in tracing criminals or missing persons. As stated above, most of these accounts suffer from the unavoidable inaccuracy in presenting a complete picture of what actually happened. Thus although cases do exist in which psychics contributed to solving such problems, it is by no means certain that their contribution was the result of paranormal impressions. Experience and detailed knowledge of the circumstances has undoubtedly also played a role. An indication for the latter can be found in the difference in the degree of success between cases of missing persons and criminal cases. Cases of missing persons are rather restricted in possible outcomes and, at least in the Dutch situation, knowing certain details makes it often relatively easy to predict, for instance, that the missing person is probably drowned. On the other hand, crimes are often open-ended cases. If a person is abducted he might be kept or, in the case the victim was killed, be buried anywhere. Now one would not expect the fact that a missing person left voluntarily or that he was abducted to have a drastic effect on the paranormal impressions of psychics. However, it certainly does. Psychics are more successful in cases of non-crime-related missing persons than when crime is involved. The results of the following investigations illustrate this point.

In 1983 F. Heineken, head of the Heineken beer company, together with his chauffeur was abducted and held for ransom. The case was solved a few weeks later and the victims were found alive in an abandoned industrial area near Amsterdam. During these weeks over 100 paranormal impressions were received by the police in connection with this case. Eight of these contained sufficient specific information to take action, but none of these actions contributed to the solution. After the case was solved as a result of applying the usual police techniques, J. Neu (1985) analyzed the value of the supposedly paranormal impressions by comparing their content with the real data. He only found in three of them elements which resembled actual facts. However, when

it would have been possible during the case to select these three out of the other useless ones, the information contained in these impressions was so vague or irrelevant that they still would have been useless for assisting in the investigation.

An even more striking result was obtained in an abduction case which took place in 1989. This time the victim was G. J. Heijn, one of the directors of the biggest chain of food stores in The Netherlands. Again ransom money was demanded for his release. This case lasted much longer and a substantial reward was offered for information leading to the whereabouts of Heijn. No doubt both factors contributed to the much larger number of paranormal impressions received in this case, over 1500. Not only were impressions received, various psychics actively attempted to locate the hiding place of Heijn, using psychometric inductors which were put at their disposal by Heijn's family.

After this case was solved the outcome came as a surprise for everyone, including the police. Although money was handed over Heijn was never released. It turned out to be a single-handed operation in which the abductor had murdered Heijn shortly after the kidnapping. Because of the highly unusual pattern of the case it could have become a showcase for psychics proving everyone wrong. Not so. An ad-hoc evaluation of all these impressions and of the other psychic activities proved that none of them had even come close. In fact, it looks as if most of these impressions simply reflected the state of knowledge and speculation as presented in the media. Here again it was observed that even if one had known which impressions included some correct information, it would not have been of much use to the police (Gerding et al, 1989).

H. G. Boerenkamp, together with the present author, carried out an extensive and systematic study with a group of 15 psychics (Boerenkamp, 1988; Boerenkamp & Schouten, 1983). The study involved over 200 sessions in which psychics provided impressions about target persons unknown to them. Data were collected at the homes of the psychics and apart from constrictions imposed by the experimental conditions the psychics were free to behave as they were used to when interacting with clients. The same applied to the clients or investigators attending the sessions. Hence in a number of conditions feedback was allowed. Aims of the study were to describe what happens when a client consults a psychic; to evaluate the validity of the statements of psychics; and to investigate in a systematic way the effect of various conditions on the psychic's impressions. The evaluations were based on all statements made by the psychic and not only on the more interesting ones. Also for reason of comparison similar tests with matched groups of non-psychics were included.

In order to evaluate the enormous amount of statements obtained, over 10,000, a new method was devised. Normally in evaluations all statements are judged by all target persons. For this study that procedure was out of the question, not only because of the large number of statements but also because feedback was provided during sessions. The evaluation was split in two parts. First

the statements were judged by independent judges on their potential paranormal value. That value was based on the probability, given the information already available from the preceding interactions with the psychic, that the statement would be correct. Statements were also assigned a score for originality. Thus a statement on a topic which was never discussed before would obtain a high score for originality. Both scores were combined into one score for potential paranormal value. Subsequently only statements with sufficient potential paranormal value were retained for the final evaluation. By applying this "window" model, the number of statements was greatly reduced.

From the many interesting results of this study only a few are mentioned here. It turned out that the number of statements, or of paranormal impressions, is strongly correlated with the amount of externally provided information. The more information the psychic receives, for instance through feedback, the more impressions and statements result. The psychics were characterized by a personal style which hardly changed over the years that the experiment lasted. According to the external judges, only about 10% of the statements of the psychics could be considered to be of potential paranormal value. Of these statements on average again only 10% appeared to be correct. Hence of all the statements, roughly 1% is both specific and correct. This figure appeared not to differ from the results obtained by control groups of non-psychics. Thus, although psychics made many more statements compared to non-psychics, they did not do better than non-psychics.

Conclusions on Psychics

Considering the data from all studies in which mediumistic statements were quantitatively evaluated some conclusions can be drawn. The statistical tools at present available for assessing verbal statements seem quite adequate. However, it remains rather difficult to design a test which satisfies the conditions for proper statistical evaluation but at the same time does not restrict the psychic so much that the differences between real-life situations and experiment become too strong. For instance, most studies do not allow feedback from clients, despite the fact that feedback plays an important role in the psychics' daily practice. Also it is not easy to eliminate all the known sources of error. But it is questionable whether experimental designs which better match the normal working conditions of psychics would really yield more impressive results. The Boerenkamp study which did allow for feedback did not yield any evidence for better performance. It should also be considered that most experimental studies were done with the best psychics available at the time. Thus the achievements observed in these studies can be considered to be the best possible.

Most studies did not yield significant positive results. Of those who did a number of them, as for instance the Hyslop study, were not free of various sources of bias. Of course, it is thanks to all these researchers that we now know all the possible errors which can be made in such studies. Of more im-

portance is that even when significant outcomes were observed, the results have not been really impressive. Even with a "star" psychic like Croiset at least half of the studies are a failure and when he succeeded the effects were not really strongly significant. In particular the informational "gain" in the statements of psychics appear rather low. Even if one were able to sort out the correct from the incorrect statements there is little useful information to be found.

This result will be at variance with the picture many people have of psychics. There are a number of reasons for this discrepancy.

First, as discussed in the introduction, nearly all studies focussed on the paranormal aspect. Therefore experimental conditions were created which often are quite different from real-life situations. That Croiset did not do well in all his chair tests does not have to be representative of his real-life achievements as a psychic.

On the other hand, the picture of the real-life achievements of psychics is usually also exaggerated. A few successful cases are widely published and often cited in books on psychics, but the many unsuccessful ones are not reported or quickly forgotten. In experimental tests as a rule all statements are included in the evaluation. In real life the bulk of the psychic's activities and statements are never reported and therefore the successes are usually reduced to a simple story: the psychic "saw" what was unknown at the time, making the case look more impressive than the facts warrant.

A third important reason is that clients of psychics are often impressed by what the psychic seems to know about them. This reinforces their belief that psychics do possess some paranormal faculty and hence they assume that this faculty can also be applied in other situation, for instance in the case of the identification of a criminal. However, if the psychic's successes with clients were based on non-paranormal processes, then of course it becomes likely that different circumstances result in different achievements, depending on whether the circumstances allow the psychic to gain information from these non-paranormal processes. The data suggest that the latter is the case. Psychics as a rule fail in open-ended cases, score occasionally in cases like tracing missing persons, and are at their best in making statements about clients who are present and with whom they can interact.

The data, especially those related to possible sources of bias in experimental studies, make it possible to identify a number of processes which explain the success of psychics in sessions with clients. This interpretation is not only based on the data of the research with psychics but also on my own experience from the many sittings I have had with them.

An Interpretation of the Psychic's Practice

A reading is normally a verbal interaction between a psychic and a client. The client consults the psychic mostly for advice on a specific problem. However, the interaction is mainly about matters familiar to the client, which at first glance seems not very useful and contradictory to the psychic's claims to

be able to see the unknown. But this serves an important function because it allows the client to check the truth of the statements and consequently enables the psychic to establish his authority. There is another reason for spending so much time on matters the client already knows. It serves as an important source for generating feedback, that is, information from the client. This enables the psychic to form a picture of the background of the problem. Therefore most statements by the psychic are, as Boerenkamp called them, of a rhetorical or open-ended nature. They are not just statements but are formulated in such a way that they stimulate feedback.

The role of the client in this interaction is often underestimated. Generally the client is much more active than is assumed. Most clients turn to a psychic for advice about important problems and are strongly motivated to make the session a success. The better the psychic appears, the more faith the client can attach to the psychic's advice. Hence the client will really make an effort in trying to find a confirmation of the verifiable statements by searching for facts or interpretations that make them fit. One might say: A psychic is as able as the client allows! Often the psychic helps the client. If the client can't find a match the psychic might offer a different interpretation for the statement. Then the client starts the search process again.

I am convinced that in most cases neither psychic nor client is aware of their respective contributions and of the psychological processes involved. In addition, a number of other psychological processes contribute to the apparent success of a sitting. These are:

In general the psychic controls the encounter to a much larger extent than the client might be aware of, thus mainly selecting topics he feels comfortable with.

Many topics for readings concern basic needs or fears that almost all people experience. General statements in these areas which create belief or self-assurance are often considered as correct and as very applicable to the client's situation.

The appearance of the client tells the psychic a lot about the person.

Clients might not be aware of their non-verbal reactions to statements on topics which are highly emotional for them. The psychic might not be aware that he or she processes such non-verbal feedback.

There is the previously mentioned tendency of clients to rate statements as correct by actively searching for a match, not only because they want the session to succeed but also because of the common tendency to avoid disagreements and dissonance.

People tend to attach more value and to better remember correct statements than they remember the neutral or incorrect ones. This holds especially in the case where a search process finally yields a satisfactory interpretation. The search process itself and the initial false interpretations are quickly forgotten.

- People are poor at estimating probabilities and might underestimate the probability of the correctness of statements, especially in the case of statements of a general nature.
- A tendency exists to attribute a paranormal character to all statements made in the paranormal phase of the sitting, even simple ones to which in a normal conversation no importance would be attached.
- Most statements have a variety of possible interpretations. This not only strongly increases the probability of being correct but also creates a situation that occasionally the client affirms a statement based on an interpretation which might be different from what the psychic had intended.
- Clients might strongly underestimate the experience psychics have. Clients tend to assume that when a psychic tries to obtain paranormal impressions normal psychological processes, like the effect of experience, are excluded. This is certainly not the case because, among others, one can clearly see the effect of the feedback on subsequent statements which demonstrates that the normal functions of processing information are still in operation.
- To a client his or her own problems and situation are unique. But that does not apply to the psychic. Most questions and problems they are confronted with are rather common.
- An interaction is an active process from which only those elements will be remembered which are of special importance. For the client these are in the first place the impressions of the psychic. Hence clients are inclined to underestimate their own contribution to the interaction, and the comments and feedback they provided.

Most clients and psychics will not be aware of the contribution of the processes described above. Therefore it is not surprising that often both parties are honestly impressed by the results of a session. Psychics might occasionally have impressions which are difficult to explain and which could be considered paranormal. However, from all available data it can be concluded that if so, it plays a very minor role in the regular psychics' activities. A paranormal faculty does not have to be assumed to explain their success in sessions with clients.

It is of interest to compare the readings of psychics with spontaneous paranormal experiences of normal people. From my experience with both types of research I have the impression that spontaneous experiences are often more impressive than readings by psychics. Of course in the case of spontaneous experiences the less impressive and trivial occurrences might be reported less often. Still this seems to me insufficient to explain the difference. Boerenkamp's research suggests that psychics behave rather stereotypically. This was already noted by Saltmarsh (1929). I believe that acting as a psychic easily results in stereotyped behavior and therefore actually has a negative effect on whatever paranormal experiences or faculties they used to have.

From this discussion it should not be concluded that psychics are to be considered as dishonest or even frauds, or that it would be senseless to consult a psychic. The experience psychics might gain in their profession should not be underestimated. Some psychics who specialize in, for instance, tracing missing persons might be more experienced with such cases compared to the average police officer and they usually are able to spend a lot more time on it. Whatever the source of their statements, their experience and expertise in certain areas might make it worthwhile to consult them for advice. But the criteria by which to select a psychic seem to me rather the expertise and experience of the person with the type of problem at issue, rather than an estimate of his or her supposed paranormal sensitivity.

Psychic Healing and Complementary Medicine

Psychic healing is a term used for a very old healing practice which is also called, among others, mesmerism, spiritual healing, ritual healing, paranormal healing, mental healing, psionic medicine, non-contact therapeutic touch, and therapeutic intent. Treatment is based on non-intervention. All the healer does is to concentrate on the patient and to wish the patient to heal. Since the concept of bad health as an imbalance is widely held, healer's often make "passes," movements of the hands along the body, which is supposed to restore the balance and consequently to improve health. Another idea, central to the treatment, is that healers are able to paranormally transfer energy to the patient by which health is restored. Because this transfer is not limited by distance psychic healers also occasionally practice healing-at-a-distance. With distance-healing the patient remains at home and at pre-arranged times the healer concentrates on the patient and attempts to heal.

Psychic healing is a form of alternative or complementary healing, treatments which are not part of conventional scientific medicine as it is taught in the universities. Most people evaluate psychic healing on the merits of the explanation supplied by its practitioners, the assumed paranormal exchange of energies. Here again I prefer to apply the pragmatic approach, that is, to distinguish between what healers do, healing patients, rather than the explanation they offer for what they do, e.g. that the healing effect is due to some particular paranormal process. Thus mainly those aspects which are relevant for the healing process are studied. Most important among these are: does psychic healing really have an effect on patients?; if so, is the effectiveness related to variables such as type of complaint or personality characteristics?; why do people turn to complementary healers?; etc. In order to establish how specific such data are for psychic healing, data on complementary medicine in general have also been included. Since healers apply their abilities nearly exclusively to humans, only studies involving human subjects have been considered. Also all studies not dealing with healing but with ostensible psychokinetic effects on subjects have been left out. A discussion of such studies becomes relevant only if the characteristics of psychic healing clearly point to a paranormal explanation.

Because simple terms like "improvement" and "effect of the method" can be really confusing as to what exactly they mean, it seems useful to first specify them. For a patient, improvement means in general that the feeling of well-being and the ability to function have bettered. This is a subjectively experienced improvement. To conventional medicine improvement usually means a better rating on some objectively measured variable, for instance lower blood pressure readings. This will be denoted as objective improvement. It is generally assumed in conventional medicine that subjectively-experienced improvement is a consequence of objective improvement and that hence the two are highly correlated. That assumption seems to me quite questionable. For some diseases it will certainly hold, but for many others it does not. Hence unless a clear correlation can be proven it seems to me advisable to consider both criteria as independent indicators for the effect of a treatment. For most patients the subjectively-experienced state of health might even be the more important criterion of the two. Also, in the case no objective cause for the complaints can be found, the subjectively experienced state of health is the only criterion left for measuring the effect of a treatment.

For patients the effect of a treatment is mainly associated with the difference in state of health between onset and completion of treatment. This difference will be termed the effect of the treatment. To scientists, though, the effect of the treatment is normally operationalized as a difference between experimental and control or placebo groups. This will be called the effect of the method.

In the following some studies on psychic healing will be described in which both objective and subjectively experienced changes in health were assessed. Also data on the effectiveness of other types of complementary medicine will be presented. Another important source of information are studies on sociological aspects of complementary medicine, studies in which the satisfaction of the patients with different types of complementary treatments were also often measured.

Studies on Psychic Healing

Few experimental studies on the effect of psychic healing, such as those by J. T. M. Attevelt and D. P. Wirth, are available which fulfill basic requirements such as matched groups and a double-blind design.

In earlier survey studies Attevelt (1981, 1982, 1983, 1988) found that 80% of asthma patients treated by psychic healers reported some degree of improvement. In cooperation with a university medical department an experiment was carried out in which objective measures for change in asthmatic condition were also applied: spirometer and peak flow meter readings.

Patients were invited to take part, and based on diagnostic data taken after registration, 32 groups of three patients each were formed, matched by age, gender and medical conditions. Patients of each triplet were then randomly assigned to three conditions. Patients of the "optimal" conditions were treated by psychic healers according to the routines applied in their daily healing prac-

tices. Patients of the "distance" condition were treated by the same healers from behind a one-way screen. The healers participating in this study were all confident that effective psychic healing under such conditions was possible. The "control" condition was in all respects comparable to the "distance" condition, except that no healers were present behind the one-way screens and hence no psychic treatment was actually given. Patients of the "distance" and "control" conditions did not know to which condition they were assigned.

The design allowed one to distinguish between the effects of psychological factors associated with the patients, e.g. the degree of improvement of the "control" condition; a paranormal effect, e.g. the difference between improvement in "distance" and "control" conditions; and of psychological factors associated with the healer, e.g. the difference between "optimal" and "distance" conditions. Treatments lasted for a period of eight weeks, one treatment a week, because from previous surveys it was known that improvements could be expected in eight treatments. Both objective, on a blind basis, and subjective measurements were taken during the period of the study. The medical aspects were supervised by a physician.

Patients of the "optimal" condition improved significantly on peak flow measures. Improvement in subjectively-experienced state of health was reported by half of them. Two patients reported deterioration. Similar results, however, were observed for the other conditions and according to an analysis of variance the groups did not differ in degree of improvements, except for a trend that, subjectively experienced, the patients of the "optimal" group appeared more improved. Thus some positive effects were observed but largely due to psychological factors associated with patients and healers. Correlations between after-treatment measurements of peak flow meter and subjectively experienced health was significantly positive ($r = .32$). However, from the size it is clear that there still remains quite a discrepancy between objective and subjective measures of the medical condition (Attevelt, 1988).

A second study with a similar design involved patients suffering from hypertension (high blood pressure). This time each group involved 40 patients. To avoid a regression to the mean artefact the high blood pressure levels within each group varied from nearly normal to seriously high. The experiment involved 15 treatments, each lasting 20 minutes. This study involved a triple-blind design, because the statistical analysis was also performed without the statistician knowing the relationship between sets of data and conditions.

All groups showed a marked decline in blood pressure over the 15 weeks the experiment lasted. Mean blood pressure values for the "distance" conditions was systematically lower than those of the other conditions and a multivariate analysis showed a weak significant difference ($p < .05$) between groups. However, a direct comparison between "distance" and "control" condition yielded a non-significant result. Subjective improvement was reported by 83% of the subjects in the "optimal" conditions as opposed to about 40% for the other conditions. Hence it seems that the treatment had an effect mainly related to

psychological factors associated with the patients. Some evidence was found for the contribution of a paranormal factor, but the size of this effect was small compared to the contribution of the factors associated with the patients. Again a difference between subjectively experienced improvement between "optimal" and other conditions was observed, indicative of an effect of psychological variables associated with the healers. Interestingly patients who used medication and those who did not improved to the same degree. No significant correlation was found between blood pressure levels and subjectively experienced state of health (Attevelt et al, 1987, see also Beutler et. al, 1987, 1988).

The two Attevelt studies demonstrate that psychic healing can result in objective and subjective improvement in patients, but that these improvements are mainly due to psychological variables associated with the patients and, to a lesser extent, of psychological factors associated with the healers. The effect on the patients seems substantially larger than the effect of the method. The Wirth (1990) study involved not real patients but healthy subjects and the healing was directed at artificially induced dermal wounds. Similar experiments by F. Knowles, who first applied healing to induced wounds, had failed to demonstrate an effect but Wirth was more successful. Dermal wounds were inflicted on the arms of 44 subjects, after which each subject was randomly assigned to treatment and control group. The experiment involved 16 five-minute treatment sessions for the experimental group. Wound sizes were measured on a blind basis on days 8 and 16. On day 16 the proportion of healed versus non-healed subjects was significantly different indicating that Non-Contact Therapeutic Touch, as the authors labeled the treatment, can be effective.

Other studies with Therapeutic Touch, a term coined by D. Krieger, have yielded mixed results. Some found evidence suggestive of an effect of the method, others not. However, the quality of most of these studies does not seem optimal. Few applied a double-blind procedure. Especially the comparability of treatment and control groups with respect to variables which influence the dependent variable is often disputable. Since most studies involved relatively low numbers of subjects, just randomly assigning subjects to treatment and control groups is a risky procedure. Groups should be matched as regards the variables which influence the development of the illness. Assuming that the results have not been influenced by all such possible sources of bias, these studies suggest that occasionally an effect of the method occurs but that, as observed in the Attevelt studies, the strength of such effects is not impressive (see also Benor, 1990).

Some studies on psychic healing are available in which objective measures of health conditions were taken but which do not conform to the strict procedures normally applied in experimental research. Still they have yielded some surprising results. Back in 1949 the Dutch neurologist Musaph studied paralyzed patients treated by the psychic and healer Croiset. The combination of healer and psychic in one person, as with Croiset, is not unusual. Musaph did

observe various interesting reactions like sudden contractions in the paralyzed limbs. Then Musaph carried out several small experiments in which he found that these reactions were not associated with the moments the healer attempted healing but rather with the moments the patient expected the healer to concentrate on him. Musaph himself was able to induce similar reactions by different methods and concluded, that psychic healing was actually a form of psychotherapy (Musaph, 1949).

A similar but even more dramatic result was obtained by Rehder, the head of a German hospital clinic (Rehder, 1955). He had three seriously-ill patients for which conventional medicine apparently had done what it could do. So Rehder took the unusual step of asking a well-known psychic healer to apply healing-at-a-distance on these patients. The patients were not informed about this. No effect at all was observed. Then Rehder, like Musaph, started some experiments of his own. He took much effort to convince these patients of the tremendous healing powers of this healer, gave them books to read about the subject, and did everything to inspire confidence that this healer would cure them. Then he told the patients that healing attempts would start at a certain date and time, knowing that at the stated moments the healer, who this time was not informed, would not be active at all. All patients recovered rapidly and within a few months all were able to leave the hospital. According to Rehder, if nothing works then often belief still does, especially in patients who have suffered a long time and who are really desperate.

One of the most extensive earlier studies on objective and subjective effects of psychic healing has been reported by Inge Strauch, from Bender's institute in Germany (Strauch, 1958, 1963). During seven months in 1955 a well-known healer treated 650 patients in the institute. Data on medical history, psychological variables and subjectively-experienced changes in health were collected. Two physicians medically examined a subgroup of these patients in order to obtain data on objective changes in health due to the treatment. About 75% of the patients had suffered for more than five years from their complaint. Asked how satisfied these patients were with the conventional medical treatment they had had, 54% reported that it had helped them to some degree.

At the end of the study it appeared that 61% felt subjectively improved and 10% felt deteriorated. According to the physicians, objective improvement was observed in 11%, no change in 75% and deterioration in 14% of the patients. However, they had a somewhat unorthodox way to establish these figures. They rated the change in health not as a difference between objective measures before and after treatment, but as a difference between the objective changes observed and the objective changes they themselves expected for those patients. Hence the figures tell us more about how able they considered themselves to predict changes than that they are an indication for the results of the treatment. The correlation between subjective and objective improvements appeared very low.

The majority of the patients reported subjective sensations during treatment. This proved to be a good predictor for likelihood that the treatment would result in the patient feeling better. Personality variables did not distinguish between the "benefit" and "no benefit" patients.

The studies described above all involved some assessment of objective changes in health due to psychic healing. Not all studies are described here. It looks as if psychic healing does have an effect on the health of the patients. The effects seem much stronger for subjectively experienced state of health than for objectively measured health criteria. It appears very important that the patient knows that treatment is applied. The effect due to the method itself is weak or non-existent, whereas psychological variables associated with the patient and with the healer-patient interaction contribute most to the healing effects. In none of the studies were strong negative effects of the treatment observed.

Data on Effect Studies for Other Complementary Treatments

Recently some studies have been reported which present overview data on effect studies for homeopathy and acupuncture. Jacobs et. al (1991) have reviewed the literature on effectiveness of complementary treatments on rheumatism. Most studies involved special diets etc., not relevant for the present topic, but studies have also been included on the effect of acupuncture and of manual therapy on rheumatism. Of the methodologically acceptable studies involving acupuncture, nine did not and two did provide significant evidence for an effect of the method. For manual therapy the score was even. Two resulted in a positive effect, two did not. The authors conclude that most complementary treatments are not more effective than control or placebo treatment.

ter Riet et al (1990) did a similar literature survey on the effect of acupuncture on chronic pain. They found 51 controlled clinical trials. According to methodological criteria, for instance related to the application of double-blind and randomization procedures, studies were classified on a 100-point quality scale. On average the quality of the studies appeared rather mediocre and no study obtained more than 62 points. In over half of the studies no effect of the method was observed, and of the 24 studies in which a significant difference was observed only eight had a methodology score of 40 or higher. Considering the mixed results and especially the low overall quality the authors thought it wise not to draw any conclusions concerning the efficacy concerning acupuncture on chronic pain.

A similar overview study by Kleijnen et al (1991) concerned the effect of acupuncture on asthma. Thirteen studies were found but again the average quality was low. Eight studies reported a positive effect of the method, but only three of them obtained a methodology score of over 50. It appears that the success decreases with the quality of the studies. Hence it is concluded that the

efficacy of the method is not proven. A similar result was observed in an overview study of the effect of acupuncture as an aid to quit smoking.

The efficacy of homeopathy was studied by the same authors (Kleijnen et al., 1991). An exhaustive literature search revealed 107 controlled trials in 96 published reports. Again the above-described classification according to methodological criteria was followed. Although again the low-quality studies dominated, this time 22 studies achieved a score of 55 or higher and 16 studies a score of over 60. According to the authors of the studies, in 81 trials a positive effect of the method was demonstrated and in 24 trials not. However, in 42 trials the reporting was too inadequate to check the authors' claims. If only the 22 best studies are considered 15 trials showed a positive effect. In contrast to the studies described above the proportion of significant outcomes for the better quality studies is not significantly lower than for the lower quality studies. Thus, to their own surprise, the reviewers had to conclude that so far the evidence looks positive. However, the low methodological quality of most studies prevents drawing a definite conclusion.

In some of these overviews it was noted that since most studies concerned the effect of the treatment on subjective symptoms substantial improvement in the control groups could be expected. Hence it seems safe to assume that, as was observed in studies on psychic healing, with these treatments the psychological variables associated with the patients have a much stronger effect than the effect of the method itself. Another similarity between these overviews is that in some studies the effect of the method could be demonstrated, in others not. This indicates that none of these treatments exerts a strong effect due to the method itself. No indications were found for a trend that the experimental group would do worse than the control groups. Hence it appears that these methods do not have strong negative effects on the conditions of the patients.

Further Data on Psychic Healing and Complementary Medicine

A number of studies, mainly of a sociological nature, have provided data on various aspects of psychic healing and of complementary medicine in general. These aspects involve, among others, the number of people who turn to complementary practitioners, socio-economic data on these patients, the nature of the complaints for which treatment is sought, the improvement due to treatment, and possible negative effects. I will not discuss these studies here, since they represent the bulk of the overview presented elsewhere (Schouten, 1992b), but will summarize the results. Most of these studies are from Western Europe.

Number of People Who Consult Complementary Practitioners

Averaging the data from 15 studies it appears that 22% of the population has at least once tried a complementary treatment. Not surprisingly this percentage increases substantially to an average of 65% when only patients are considered. About 80% to 90% of the patients first consult a conventional practition-

er and most patients who turn to complementary medicine keep in touch with their general practitioner or specialist. Hence patients clearly do not view these treatments as an alternative to conventional treatments but as complementary. This finding has been the reason that throughout this paper the term "complementary medicine" has been used. A positive correlation is observed between the use of conventional and complementary medicine. Patients who consult complementary practitioners are above-average users of the entire health system. This seems mainly a consequence of the long illness histories these patients have. From these data it is clear that complementary medicine cannot be considered as a potential competitor for conventional medicine. This implies also, that legalizing complementary medicine will probably not reduce the costs of the health care system, as some of its proponents argue.

Characteristics of Users of Complementary Medicine

Females constitute on average two-thirds of the patients of complementary medicine. Most patients are between 40 and 60 years of age whereas the older age group of over 60 makes relatively less use of complementary treatments. Socio-economic and educational levels are on general higher compared to patients who do not use complementary medicine, although that might not be true for patients of psychic healers. Most patients suffer from chronic complaints. For instance, in the Attevelt survey study it was found that the average duration of the complaint for patients of psychic healers was over seven years.

Nature of the Complaints

Complementary treatment is sought for all sorts of complaints, from simple colds to cancer, but as a rule all patients are still mobile and able to visit the healer. The musculo-skeletal problems like rheumatism dominate with on average 32%, followed by psychic disorders of all kinds. Chronic pain as a symptom is mentioned in about half the cases. In general there appears little relationship between type of complaint and type of complementary medicine.

Motivation to Use Complementary Medicine

Interestingly, none of the characteristics usually associated with patients of healers, such as a preponderance of females or of middle-aged patients, seem typical for users of complementary medicine. This follows from a few studies, especially the one by van Sonsbeek (1983), in which multivariate analysis was applied on background data, collected from a large national sample, of patients of complementary practitioners and patients who did not use complementary treatments. The two groups of patients did not differ at all. Only a tendency was observed that patients of complementary practitioners have a somewhat worse state of health. Few patients appear to turn to complementary medicine for principal reasons, for instance because they believe in the philosophy behind the treatment, or because they were dissatisfied by the communi-

cation and relationship with their conventional practitioners. There is mainly one pragmatic reason to turn to complementary medicine, and that is that the conventional practitioner did not solve the ailment they suffered from.

Improvement Due to Complementary Treatment

From 25 studies figures are available on subjectively experienced degree of improvement. On average 65% (median = 70, range 17% - 91%) of the patients report improvement. Ten studies also provided figures on deterioration. Here the average turned out to be 8% (range 1% - 21%). For serious diseases like cancer or for patients with an extremely long illness history benefit percentages are lowest. The subjectively experienced improvement seems mainly related to either a reduction in seriousness of the symptoms, for instance pain, or to an increased ability to cope with such symptoms.

It is of importance to note that the data suggest that as regards the effectiveness figures not much difference exists between the various types of complaints nor between the various types of complementary medicine. Only the seriousness and duration of the disease seem to have an effect on the benefit rate.

Negative Effects of Complementary Treatment

There is little indication that complementary treatment as such could have a bad effect on patients. In so far as negative effects have been observed, they appear a consequence of the patient either delaying seeing a conventional practitioner or terminating medication without first asking their doctor. Hence potential harmful effects of complementary treatment can be avoided if care is taken that the patient continues to consult conventional practitioners.

Main Conclusions From All Data

Despite the sometimes not optimal quality of the studies I think that the data allow us to draw some tentative conclusions. It is apparently important that the patient knows that healing is attempted. Although this clearly appears the case for psychic healing, I suspect that this also applies to the other types of complementary medicine. In most studies the effects on objectively measured criteria have not been impressive and if objective changes occurred, they often also occurred in the patients of the control group. The changes in experimental and control groups are in general larger than the difference in changes between these groups. In fact, in many studies no effect of the method, a difference between experimental and control groups, was noticeable. Complementary medicine clearly has the strongest effects on subjectively experienced states of health and variables associated with the patients seem to have the strongest influence. From the available data it appears that as regards effectiveness not much difference exists between either the type of complaint treated or between the various complementary methods. This suggests that the effects of all these different methods, despite the different philosophies on which they are based,

are largely due to the same processes. It should be noted though that in only a few studies was the effectiveness of different types of complementary medicine directly compared.

An Interpretation

Because the effect of the method appears small or non-existent in complementary medicine including psychic healing, it follows that the concept of the paranormal cannot really provide an explanation for psychic healing. The data indicate that the healing effects in all forms of complementary medicine are mainly related to variables associated with the patients and, to a lesser extent, psychological variables associated with the healer. No indications were found of a relationship between effectiveness and type of treatment or type of complaint (apart from seriousness of complaint). It is therefore more likely that the same explanation holds for all of these different complementary treatments and that the methods themselves contribute only little to the total effect of each treatment.

The concept of placebo is familiar in the health sciences and, according to Fields and Levine (1981), probably accounts for more subjective improvement than any single category of active drug. Placebo response is inherent to all healing situations and hence also in complementary treatment. Still there are some differences, among others as regards effect size, which suggest that the effects of complementary treatment are not entirely synonymous to placebo effects. Or perhaps the conditions under which complementary treatment is given are extremely favorable to generate placebo responses. However, since the placebo response itself is still not well explained I do not think there is much to be gained by calling the results of complementary treatment just "placebo" or "suggestion." That would merely mean replacing one term with another and would contribute little to an explanation of the phenomenon.

From the material used for this overview on complementary medicine I believe a number of processes can be deduced which contribute to the reported effects of complementary medicine.

Often the treatment explicitly focuses on the ailing part of the body. It has been demonstrated that this occasionally results in physiological reactions such as an increased blood circulation or contractions. This might contribute to an improvement. Also treatment might have other effects like profound relaxation which could have a beneficial effect on the ailment, as for instance in the case of high blood pressure patients. Conventional medicine assumes that the subjectively experienced health is a consequence of the objective health condition. Therefore conventional medicine cannot deal well with situations in which the opposite would hold, e. g. when the illness might be influenced by psychological factors. Part of the effect of complementary treatment might be an increased ability of the patient to cope with the illness and its symptoms which could then result in objective improvement.

Patients probably have a different expectation from complementary treatment than from conventional medicine. Conventional medicine presents a strong image of itself and consequently patients often expect conventional medicine to cure them. Complementary practitioners do not have such an image and thus the expectation patients have from these treatments is on average lower. They just expect, or hope, to improve. Consequently satisfaction will be easier to achieve for complementary practitioners. This holds especially when the complementary practitioner accepts a supportive rather than an authoritarian role. In addition especially chronic patients turn to complementary medicine. These patients will often feel rather desperate and hence are perhaps even less critical and less demanding than other patients when it concerns the expected results of complementary treatments.

Only few patients turn to complementary medicine for ideological reasons, that is, because they accept the belief system on which the treatment is based. Most come mainly for purely pragmatic reasons. That makes it easier for these patients to try different types of complementary treatment. But also within one type of complementary medicine it is easy to change from one practitioner to another. I believe that especially this possibility to search is very important and that it eventually contributes strongly to the effects of complementary medicine.

One advantage of this search process is that it allows the patient each time when needed to take action about his problem and to try something new. In conventional practice it is often difficult to change one's general practitioner or specialist. If no success is achieved the patient soon reaches a dead end. With complementary medicine there is always the possibility to try a new remedy. Even in conventional medicine there are many examples that new remedies can have a much stronger positive effect than, in hindsight, can be explained by the effect of the method.

Another advantage is that the search process allows the patient to search until a healer is found which psychologically is an optimal match for the patient. This might explain why most healers have a circle of patients who are really devoted to them. In such circumstances the interaction between healer and healee can be quite effective.

Thirdly this search process allows the healer to take advantage of the natural ups and downs in the subjectively experienced state of health. Normally an up situation will not get a special meaning if there are no changes in treatment. But when searching, an up situation might coincide with the onset of a new treatment; thus the confidence of the patient in a successful result might be greatly enhanced.

- An essential part of most complementary treatments is the holistic approach and the associated stress on a more healthy life style. In conventional treatments similar advice is given but often as supplementary to, for instance, medication. But in complementary medicine such advice is

often central to the treatment and therefore the patient might make a more serious effort to comply with it.

The methods applied in complementary treatment appear to have little effect themselves and therefore are rather harmless. But as a consequence patients using these methods adopt a more normal lifestyle without medication or other intervening mechanisms. Leaving the body to fight on its own for a while might create better conditions for the start of a self-healing process and for the buildup of improved resistance.

I am afraid that also occasionally a patient is simply fooled by a complementary practitioner in that the healer diagnoses an illness from which in fact the patient does not suffer, or which is much less serious than the patient is made to believe. Such diseases are of course easy to cure. I suspect that diagnoses of that kind are sometimes the explanation of the occasional stories about miraculous healing performances.

The tentative conclusion that the effectiveness of the different complementary treatments is probably due to the same processes rests partly on the finding that the effectiveness of all these treatments seems more or less equal. However, this finding rests on the data of only a few studies. Further data on this issue are needed and might prove that the above mentioned conclusion has to be revised.

It appears to me that complementary medicine deserves a place in the health care system, although a modest one. It can have positive effects especially on the subjectively experienced state of health and therefore seems better able to deal with complaints for which no objective reason can be diagnosed. However, it should be clear that conventional medicine remains superior for all diseases and complaints which can be objectively diagnosed and for which a scientifically proven remedy is developed. Negative effects from complementary treatment can largely be reduced by ensuring that the patients remain under supervision of conventional medicine. Unfortunately the sometimes strong emotional rejection by conventional practitioners might make it difficult for the responsible complementary healer to check whether the patient is really doing so.

The acceptance of complementary medicine, and the incorporation of its positive aspects into conventional medical practice, might become much easier if state of health could be considered as a multi-dimensional concept in which objectively measured state of health and subjectively experienced state of health are seen as two basically independent components. If conventional treatment has a positive effect on both dimensions so much the better. However, from a pragmatic point of view there is nothing amiss with treatments which, when other methods fail or can't be applied, make people feel and function better and which in themselves do not have any negative side-effects.

Applied Parapsychology

From both overview studies it appears that psychics and healers can be successful for clients, although in the case of psychics the informational value of

their impressions is very limited; but the characteristics of the phenomena point to a different explanation for these achievements than the belief system behind these practices suggests. Unexplainable events might occasionally happen suggestive of a paranormal element, but the main achievements seem due to different processes. This explains perhaps why psychics and healers as subjects have hardly contributed to recent successful developments in parapsychology such as Ganzfeld and RNG research.

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