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## PARAPSYCHOLOGICAL EDUCATION IN ARGENTINA

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In general I can say that parapsychology as a real science is taught in only a very few centers in Latin America and specially in Argentina; not only as regards the content or the methodology but the investigations and research work as well.

There exist innumerable centers and people who claim that they teach and investigate parapsychology but in fact what they really do is to present a mixture of confused concepts related to occultism, spiritism, and esoterism. Furthermore, almost everything that is transmitted in courses, conferences, broadcasting, TV, etc. considers historical aspects. They introduce facts which might have happened centuries ago as true, or pay attention to anecdotal, spontaneous events or present several hypotheses which still lack the necessary experimental demonstration. This method of teaching parapsychology has been misunderstood and it requires an adequate trial. Some others repeat what is already known, often misinterpreting without taking care of the variables of the personality and its connection with psi, or they practise occultism and magic in their own way. Apparently all these people ignore the present situation of investigation, its methodology and all the evidence accumulated from research in serious investigation centers, which is afterwards published in their periodicals.

This propagation of a pseudoparapsychology is very well known and it justly provokes rejection among these persons having a certain cultural level. As a result, two universities, the Catholic one in Buenos Aires and that "del Litoral" in Rosario which had included the teaching of parapsychology in its syllabus, decided to exclude that subject from it, although their professors were well informed in the field.

At present two universities have recently begun to teach parapsychology: the John Kennedy University in Buenos Aires and the Catholic University of Cordoba. The former does not have an appropriate plan of studies and investigation on the university level, but the latter, together with the National University of Chile, has the most important center nowadays. Later on I will refer to the teaching of parapsychology in the Catholic University of Cordoba.

There are some private institutions where parapsychology is taught, such as the Argentine Institute of Parapsychology in Buenos Aires, the Institute of Parapsychology of Rosario, Santa Fe and Cordoba. These Institutes include a small number of people and their teaching programs consist of historical aspects, methodology and experimentation. Very frequently in these centers we notice a certain polemic atmosphere and their members attack other people because of their mistakes or wrong orientations.

At present I am teaching parapsychology not only in the School of Psychology of the Catholic University of Cordoba, but in three other cities as well, Mendoza, Santa Fe and Parana, sponsored by their universities.

In my teaching I very specially stress the importance of personality variables to the phenomena. All the states of the subject, emotional, psychological and physiological, affect the manifestations of extra-sensory perception and the power of the mind over matter. These variables are, perhaps, the consequence of the subject's psychological states, or of his relation with the experimenter and the target stimulus. These three elements make up a triangle which must always be taken into consideration. All these present the parapsychological phenomenon as it really is—deeply human. It is not something abnormal, supernatural or mysterious at all. Since this was made clear, many professionals (psychologists, physicians, etc.,) stopped rejecting parapsychology and accepted it as another aspect of the human psyche and its dynamic.

In order to interpret accurately the results of the tests, I point out in my classes that apart from the personality's variables, the sex of the subjects must be considered. My basis is the following: if a transitory emotional state affects not only the subject's psyche but also the psi phenomenon, the fact of being a man or a woman is a profound component part of the human being and his personality, and it provides a special feature which in turn determines a different vision of the world and its role in it. Sex is not given by an anatomic and physiological difference only, but also creates functions which differ from each other and consequently the individual in different ways. Through the PK tests on seeds and plants I came to the conclusion that a man and a woman not only achieve different results, but if they work together on the same group of seeds, the result lacks significance. I have done this research work for more than four years and I have checked more than fifty thousand seeds.

During all my classes, I keep the matter open to discussion as to the cause and therefore the nature that provokes the parapsychological

phenomenon. While I develop the themes of the courses and explain the experimentation in each of the topics, we analyze the results obtained throughout all the years of investigation, the various conditions of research and the consistency of the results. Therefore, on the basis of this investigation, we analyze the possibility of inferring the factors which provoke the psi activity, the nature of its cause and its properties. According to the nature of the cause we will be able to plan a future investigation and confirm its properties. In this way we try to get to the core of the whole investigation that everybody wants to know. With this purpose in mind, I point out several explanatory hypotheses and the experimentation done to justify them. I bring up the weak aspects, what is still waiting for confirmation and what has already been proved as true. In such a way we analyze the theories of the "effluviums," magnetic and electric forces, the indeterminism of the laws of physics, quantum theory, law of relativity, field theory etc., and the theory of those who attribute the psi effect to communication with the dead. As a consequence of the analysis we can infer that neither physics, nor theories of collective unconscious or synchronicity, not even the communications with the dead, nowadays offer solutions to the problems of parapsychology. It presents difficulties in both its comprehension and interpretation of its way of behaving which demand solutions of their own. It doesn't seem to be necessary or possible, at least at the present time, to find the solution in other sciences, but to look for it within its own field, having in mind the characteristic of acting with absolute disregard of time and space.

We are convinced that in order to carry on a satisfactory investigation many other auxiliary disciplines are needed, that is to say, interdisciplinary work. Therefore it will be very difficult for a private Institute of Parapsychology to recruit all the essential specialists for the investigations. That is why our Institute has been created within the University. Thus we have all the necessary instruments for research and teaching and the indispensable advice of psychologists, psychiatrists, neurologists, general medical practitioners and technicians of all fields: physics, electronics, statistics, biology, agronomy, etc. At the same time there is a spirit of research, of investigation, together with a group of professionals trained for this kind of work. All this provides the necessary seriousness and the level required for a task of this sort. However this is not enough for the teaching-learning process in parapsychology. We think that both knowledge of this field and gradual experimentation should begin in the elementary school when the child first gets in touch with nature and starts asking the first questions, making the first observations and undergoing the first experiences.

During the development of the different topics in the syllabus, all teachers should explain to the children in their course the dynamics in the acquisition of information. That is to say the necessary sensorial response to different stimuli in order to know something.

To carry on an investigation properly, the receptive and trustful relationship between teacher and pupils and the psychological personal and familial situation of the children should be approached simultaneously. Once these conditions have been fulfilled we may plan a test with Zener cards, or its necessary adaptations, according to age and interest of the children so that they themselves can verify the existence of a way of cognition other than the one they are familiar with. In other words, to acquire information without the help of the present physical sensorial stimuli. Likewise we organize experiments with Dr. H. Schmidt's electronic machines fabricated in the laboratories of our School of Electronics.

I have carried out a number of PK experiments with elementary and high school students, the targets being the germination of seeds and the growth of plants. These children have already had information and experimentation on germination of seeds according to the programs. It is then that I suggest a different experiment. Two groups, one of boys and one of girls, are formed; each one has four hundred seeds. There is a third group with the same number of seeds as a control. Those seeds and plants will germinate and grow faster than the ones of the control group due to the children's wish to make them grow faster. This experiment lasts nine days. The results are surprising and the children themselves wonder at the difference.

This way of initiating children and youngsters in investigation, not only contributes to their education but it also allows them to know this other reality of the human being, the psi activity, providing them with the necessary elements to understand and interpret properly a number of facts which are often wrongly attributed to different causes and which they are bound to face in life.

At present a team of teachers and professors who work with me are producing a guide to experiments which together with brief and correct information will help the elementary and high school teachers in the production of tests for school children and youngsters. This has been done as a way of collaborating with teachers in the development of the searching and inquisitive spirit of their students as to the many problems and this one in particular, which they hear about at home or read in periodicals and science-fiction writings.

This gradual acknowledgment and apprehension of phenomena will furnish them with true criteria about this subject theme. It is not something magic, hidden, or a kind of communication with the dead,

but the natural potentialities of the human being. In this way they will get rid of the limitations imposed by superstition, misinterpretation, fears and dependence on the so called occult forces, which some people think of as impossible to overcome. This produces psychological states in people which can lead them to the verge of madness. This enlightening plan contributes to social education and mental health. I cannot now explain some of the consequences derived from the cultural and educational aspects.

I would like now to detail how I have planned the teaching of parapsychology in the School of Psychology in the Catholic University of Cordoba, Argentina. I have taken into consideration three main aspects which I think are essential: theory, practice and the Institute of Parapsychology.

Parapsychology at the university level will become a compulsory subject for promotion from 1976 onwards. For the time being the Catholic University has accepted the Institute of Parapsychology on the same level as other Institutes. I have taken over the responsibility for both the teaching and the direction of the Institute. As such I often invite professors and students of the School of Psychology, of the other schools and other universities and different educational centers, to take part in the courses on parapsychology. Some years ago, the attitude of professors and members of liberal professions such as physicians, psychologists, lawyers, etc., was one of skepticism and rejection of parapsychology. It was thought to be dishonorable if a cultured person would care for such a "pseudo-science," one lacking any scientific basis. Nowadays this attitude has changed much but not in full. Those who have had the opportunity of learning of the research done in the last forty years in other centers of acknowledged scientific level consider parapsychology a science. Psi investigation has lost its mythical aspect, it has been stripped of all occultist connotations and can be carried on in laboratories. As I said before, introducing psi as a natural and normal psychic activity has encouraged many people to accept it; thus the number of students of different careers who attend my classes is quite considerable. However, due to the lack of time, many of them ask for the bibliography to get informed by themselves.

Others accept it as a science but are not interested in going deeply into it, as they do not find any connection between it and their profession whatsoever, and others accept some spontaneous cases as something exceptional and sporadic, but which cannot be called a science, as physics or biology, because the results are uncertain and the causes and laws which organize it are unknown.

The students of different university careers, specially psychology, are generally more open-minded and show greater interest in getting

information. They experiment and are the ones who have enough time to attend the courses. There is also a large group of employees mainly belonging to the civil service, who are willing to widen their knowledge. A number of them, mainly women, do predictions and clairvoyance, and come to us for an improvement of their natural abilities and so thus acquire a certificate which satisfies the practice of their abilities. The last mentioned group does not generally fulfill the necessary requirements to obtain the certificate issued by the University. The parapsychology course consists of two parts and it lasts two years. Each part consists of three ninety-minute classes per week for two months. A ninety per cent attendance and the submission of original research work are required to obtain the Certificate and the promotion. These rather hard regulations give the course a more serious tone. Most unfortunately, only a few submit this final research work. It is the students' task, mainly psychology students, to arouse the elementary and high school teachers' interest to apply the aforesaid tests to their students.

Extrasensory perception is studied and analyzed in the first year. The second year deals with the power of the mind over matter (PK).

I will explain briefly the content of each one of these parts.

#### FIRST YEAR THEMES.

1) After an introduction which stresses the remote existence of the parapsychological phenomena and the evolution of the present conception of their causes, there follows a brief study of the metapsychic qualitative phenomenology, what precedes it, and the difficulties of establishing a science with these elements. 2) Then the dynamics of the acquisition of information, sensorial experience and its limitations are analyzed. 3) Later, we analyze three kinds of extrasensory perceptions: clairvoyance, telepathy and precognition. To this we add the techniques for the different tests with the Zener cards and its adaptations; free subject tests, such as drawings and finally the use of electronic equipment. All this is done analyzing quantitative experimentation at the same time. 4) The next step is the study of personality variables, emotional states, stress-causing situations, different features of extroverted and introverted personalities, etc., and the relationship with extrasensory perception. Special emphasis is given to this study so that the research worker is furnished with the necessary conditions to foresee, interpret and understand the different investigation results, both in the high scores and in the systematic losses or oscillations within chance expectation. There exists a special psychological state which seems to be connected with the psi

activity: hypnotism. The characteristics of this state are analyzed: personality dissociation, the pouring of the unconscious through a diminishment or annulment of the conscious, which causes the appearance of possible extrasensory perception latent in the unconscious. The investigations carried on in the state of hypnosis are studied and compared to results obtained in a vigilant state (without the intervention of other variables). 6) There exist other psychological states reached through such chemical procedures as drugs and which are also manifestations of the mind. Together with this, other techniques are studied to produce altered states of consciousness through physical procedures or mental concentration through meditation. We analyze the possible relationship between these states and psi activity through the knowledge and discussion of investigations carried out in these special states, as well as the possible connection with the brainwaves. 7) A widely known subject is extrasensory perception in animals and plants. Being a science we cannot depend on anecdotes; therefore the investigations carried out in laboratories are analyzed. What is under discussion is whether the provoked phenomenon has really been isolated to such an extent that we should attribute the obvious effect solely to the animals, excluding the experimenter. We analyze the parallelism found in many experiments between the experimenter's psychological state and the results of the experiments on animals which would point out the real reason for the results. Besides, if poltergeist cases are the spontaneous result of human being's PK it would follow that animals should produce the same results if they had the same PK ability, something which is still unknown. The supposition of the existence of psi in animals would go against the evolutionist conception of the appearance of intelligence when the organism has reached the most complex state, and obviously psi is an activity of the intelligence. On the other hand, the general belief of the existence of ESP and PK in plants is a misinterpretation of certain experiments. 8) Bearing in mind what has been analyzed in the above mentioned sections and the consequences derived from the different investigations carried out, we try to learn the conception of man provided by parapsychology and if the research work done up to now permits a comparison between man and machine or, on the contrary, if the results demand a different dimension to explain psi activity. The different explanatory hypotheses of the nature of the psi phenomenon and its cause are developed and analyzed. We also analyze the possible relationships between parapsychology and religion, if they are antagonistic situations or mutually exclusive or if they have anything in common. 9) Finally we explain some of the

mathematical techniques used in the different statistical test analyses, as well as the standard results (CR Test of Variance, Student t Test etc.)

#### SECOND YEAR THEMES.

1) We first explain the historical antecedents of the known spontaneous cases of PK which show the existence of this activity throughout the centuries, though its effects were attributed to very different causes from the ones we know today. At the same time we analyze the qualitative experimentation of the metapsychical period. 2) Further ahead the quantitative experimentation is studied as the mind acts over movable, static and living targets. We analyze the classical test techniques with dice, discs, and marbles, their changes and adaptations as well as experimentation with electronic equipment, animals and plants. I specially emphasize my investigation on the power of the mind over living targets (rye seeds) as regards sex, age, emotional states, number of subjects, considering as well the distance between targets and subjects, and time. In my opinion this is an unknown field, as no investigation has been carried out regarding these aspects of the PK experiments. As mentioned before, I have been working on this research for four years, which has been partially replicated by the University of Cuyo in Mendoza. I think that it is not only an original investigation but also a very valuable one for the conclusions derived from these experiments. I reported it partially at the XV Annual Convention of the PA held at Edinburgh in 1972 and will also report it at the XVIII Convention which will be held at Santa Barbara. All this information is published in detail in the textbook "Parapsychological Phenomena. Psi in the Lab", Chapter V. 3) In the same way that we have already analyzed the personality variables and their influence on extrasensory perception, we deal here with their gravitation on the PK phenomenon. 4) The following step is the exposition of the most common and acceptable hypothesis formulated to explain the PK effects as telergy, magnetic forces, field theory etc., pointing out the aspects which are still to be confirmed, their weak and strong points. 5) Finally the various mathematical techniques used in the statistical analysis of PK tests are stated.

This is the information aspect of the courses which I teach at the Catholic University of Cordoba as well as in the other universities and educational centers. We realize that information is not enough, so we also have a laboratory with traditional and new elements to carry out different tests and the necessary advice for the psychological evaluations of the subjects. We have issued Zener cards with pertinent



instructions and record sheets; we have the electronic equipment designed by Dr. H. Schmidt with the new adaptations planned and carried out by the Electronic Department of the School of Engineering. We also have the necessary elements for the tests with plants, etc.

The lab has a double function: 1) to do the routine work, training those who start or do the courses in investigations so that they acquire the necessary skill; 2) to carry out investigation work in new aspects which is done by post-graduates and students. We bear in mind the fact that both informative and practical teaching would be transient, rootless if it were not given permanence and continuity. That is to say, we need something stable which can be in itself a center for consultation and orientation, to serve the purposes of a permanent guidance for teachers and students of the University of Cordoba and other educational centers and people in general. It is for this reason that the Institute of Parapsychology was created with a staff including professors from the School of Psychology, members of the liberal professions and people acquainted with this subject-matter.

This Institute of Parapsychology started in 1973 in the Psychology Department of the School of Philosophy of the Catholic University of Cordoba. It was officially recognized by the Educational Committee of the University in 1974, as part of the investigation and education activities. This Institute fulfills a double function: 1) to provide the necessary interdisciplinary advice in the different areas, on investigations and problems which may come about in the field of parapsychology and its relationship with such areas as psychology, medicine, psychiatry, philosophy, theology, anthropology, etc.; 2) to take care of the subject matter of these sciences which either have a connection with or derivations in the field of parapsychology. The aim is to provide and look for mutual interdisciplinary guidance specially in the anthropocentric sciences.

The Institute is opened to all serious investigations in any areas related to parapsychology. It rejects no hypothesis; on the contrary it tries to look for and find the appropriate methodology and techniques, efficient and valid for the investigation. The Institute does not accept as true any kind of research work which is still in the stage of investigation or which does not go beyond the limits of a work hypothesis or theory. Both in teaching and research work we are open to what has been scientifically demonstrated in other centers and all creditable publications in this field.

Another feature of our Institute is its dynamic, that is to say, the activity it displays. It has a library which may be consulted by all those

who require information. It may be considered the most complete and specialized library in parapsychology in Argentina. Periodical meetings are held to discuss the investigations done at the Institute, their evaluation or necessary corrections plus the discussion of investigations carried out in other centers. Our Institute organizes and teaches courses on parapsychology at the School of Psychology of the Catholic University of Cordoba as well as in other universities. It promotes publications, both general information and the highly specialized. It presents a wide panorama of parapsychology through different media such as radio, newspaper, television, round tables, panels etc.

We have been often consulted by bishops, priests, families, about different cases of poltergeist, bleeding religious images, people undergoing extraordinary phenomena, etc. Some of these cases were fully studied by a specialized team at the institute, others were investigated by psychiatrists and physicians. We also advise educational centers which are willing to get information or do their own experiments. I have not heard of any other center in Latin America which experiments in parapsychology and develops such a wide and coordinated educational activity and on a university scientific responsibility level.

The only periodical on parapsychology published in Argentina is the quarterly journal "Cuadernos de Parapsicologia" which is edited by Mr. Naum Kreiman, Director of the Institute of Parapsychology in Buenos Aires. This periodical publishes experiments carried out in other centers as well as at the Institute, and articles from other publications as well.

What can we think about parapsychology and its relationship with other sciences? Must we consider it as an independent science? According to the aforesaid, its relation to other sciences is clear and obvious. Nevertheless if we consider its specific feature, that of having no physical stimulus up to now, parapsychology is situated in a unique position, different from those which require a physical stimulus. However, some people prefer to incorporate it in conventional psychology, since it deals with human and knowledge phenomena, while others consider parapsychology a science totally independent of, though slightly resembling physics, specially if the PK effect is taken into account. These people have given several names to psi activity such as: psychobioenergy, psychobioelectronics, psychobiodynamics, etc. trying to explain parapsychology through psychology, biology and physics. However, the data provided by the quantum theory, the physical law of indeterminism, the theory of relativity and cybernetics

are not enough to satisfactorily explain psi activity. In addition we can say that up to now parapsychology could not be placed in such models especially if we consider its distinguishing feature: the disregard of matter (time and space). What is then the relation of parapsychology to other sciences and their branches?

If, in order to understand this relationship and the placement of parapsychology among other sciences, we consider its effects, such as acquisition of information and action in the physical field by unknown stimuli notwithstanding, we will be focusing on a secondary aspect. On the contrary, it is essential to consider the level at which PK action, knowledge or activation takes place; that is to say, attention must be paid to the level in common of both activities. They are unified by the deepest psychic zone commonly called "unconsciousness."

We are accustomed to act in accordance with sensorial stimuli. However, we meet here something which is not sensorial and in spite of this it is real and will happen with manifestations belonging to the unconscious: hallucinations, convictions, dreams or physical effects. These in turn would be provoked by what underlies the unconscious, such as automatism, and these provoke the spontaneous effects we call a poltergeist. Then psi activity would be the way out for the extrasensorially incorporated, since this is not easily achieved without using the senses or expressing a deeply rooted wish that maybe the individual has never consciously admitted. Therefore, to place psi activity we must turn to human depth psychology and on this level we find that the unconscious dynamic uses these resources to reach the conscious level and deliver its content. Consequently, parapsychology, in its relationship to other sciences, should be placed within the study of depth psychology, of unconscious dynamic, together with all the influences, implications and gravitations it exerts over all activities and the development of the human being and, at the same time, over all sciences related to the human being.

As a result of the above mentioned, we can say that parapsychology is a normal psychological activity, not a strange or magic one; and that man sometimes expresses himself through his senses and other times without them.

Finally I would like to mention a fact which in itself illustrates the genuine interest the Argentine people have, to seriously and deeply know what parapsychology is. Mr. Sobrino Aranda, a National Deputy, introduced a bill in the National Congress in which he suggested that all Universities should include parapsychology in their syllabuses. This bill became law in 1974.

*DISCUSSION*

BELOFF: I would like to say, first, that I am full of admiration for your tremendous championship of parapsychology in your country. But I couldn't help wondering, while you were speaking, whether you weren't perhaps a little complacent about the educational value of parapsychology in all circumstances, particularly, for example, where young children are concerned. Children's thinking is ordinarily full of magical notions. I mean, children very naturally take to magical ideas, and if you convince them that they have the power simply to make plants grow and such things, aren't they going to have a little bit of difficulty in coping with scientific ideas in school and when they grow up, learning, as it were, the ordinary scientific approach? Won't this produce a certain kind of conflict in their minds? This would worry me a little, but perhaps you have your own solution as to how these many different kinds of ideas can be integrated.

NOVILLO: You are right that there is a danger of misinterpretation since this experiment seems to exercise a kind of magical power. But, on the other hand, it presents a good opportunity to give a proper understanding of this human ability with which they are already acquainted through TV, radio, newspapers, etc. At the same time, it is necessary that the teacher has a clear idea of the psi dynamics. The teacher then can explain later to the children the meaning of the research work. If the subjects are young boys or girls, this explanation is done either by myself or by my assistants.

I started my investigations about the growth of plants at Durham, North Carolina, in an elementary school where the teachers were nuns. They accepted it quite willingly and the children were very enthusiastic. When my experiments were over, the students were given a few days to perform their personal research projects in order to appreciate the scientific method of research. I was greatly surprised when the children spontaneously presented the influence of music in the growth of plants.

Throughout the four years of my research, I had to deal with different kinds of subjects varying in age and culture, and I never heard of any magical interpretations.

MORRIS: What percentage of your results where you worked with the boys and girls separately were significant?

NOVILLO: I have conducted more than forty experiments and most of them were significant. My main goal was to research the relation of

PK ability to the sex of the subjects; and within my experiments, as I have quoted in my paper, I analyzed other variables influencing the results, such as emotional changes in the subjects, the influence of men and women together on the same group of seeds, etc. In general I can say that the results produced by the men in regard to the height of the plants was greater than that produced by the women. In addition, I can say that the results produced by women were nearer to those produced by the control group.

To determine whether the difference in the results had to be attributed to the sex of the subjects, I used mixed groups of men and women to influence the same group of seeds and in this particular circumstance, the experiment lacked significance. It seems a cancellation effect. Looking for the evidence of the influence of the sex in psi ability, I had two groups of girls and a control group in several experiments; and two groups of boys and a control group in others. In the experiments with the boys, the results are significant if we compare the height of the subjects' plants with the height of the control plants; but there was no significant difference in regard to the height of the plants achieved by the two groups of boys. In the experiments with the girls, the height of their plants did not yield any significant result.

I have also conducted other experiments where the distance between subjects and targets was several meters or even hundreds of kilometers, and sometimes the number of subjects in each group has varied. In spite of these changes, I achieved the same significant results as before and thus no relation was found regarding these changes of distance and number of subjects. In other words, to have one boy or girl or several boys and girls in each subjects group; or to be close or far away from the targets exert no influence on the results already obtained from the experiments.

SCHMEIDLER: You said so many interesting things that mostly I was just listening and trying to absorb it. But I'd like to ask about one particular matter, concerning sex and its relation to results. Might you be willing to subsume it under the general topic of attitude and personality? I'm not trying to say that sex is a matter of personality, but that the way sex affects PK results might be through its effect upon a person's attitude. For instance, when you, as an enthusiastic male experimenter, come in and set a scientific experiment to boys, they're more likely to identify with you and with the experiment, I should think, than girls are. It would seem to me that if you could possibly recruit an equally enthusiastic and convincing and likeable female experimenter to come in and present the same material both to girls and to boys, you might find a reversal in sex patterns. And as for the effect you found with

mixed groups, I would tie that in, tentatively with the Mihalasky and Dean finding, that where there were groups of either mixed sex or mixed race or mixed professional achievement, the sub-group that was dominant, that represented the great majority, got higher scores at ESP than did the non-dominant sub-group. This is the sort of thing that I've been finding very recently. Just last month it turned up in research. That is, when there were only one or two males in a mixed group, the females had higher scores. When there were only one or two females, the males had higher scores. The sex that was more comfortable and presumably more at home in the situation, did better. Perhaps, in Argentina where there is a mixed group, there is less feeling of comfort in making things grow together, than there would be with the two sexes separated, where each would feel more at home.

NOVILLO: Dr. Schmeidler—your research is about ESP?

SCHMEIDLER: Yes.

NOVILLO: What I want to say is that sex is a fundamental component of a human being. There is a difference between men and women and, consequently, it must affect psi ability in several aspects. Remember, Dr. Schmeidler, that I was not alone in conducting these tests about the growth of the plants. There were female teachers dealing daily with the students, both boys and girls. The teachers were sure that the girls' results would be better but this was not so, despite the fact that there were sometimes fewer boys or a large number of girls. I also had female assistants, but I never talked about my expectations in the results of the tests. I have sometimes anticipated a particular result in the boys' group and nevertheless it was not so. Thus there does not seem to have been my influence on the subjects' attitude. In addition, for the height obtained in the targets, it doesn't matter whether the subject was a man or a group of them, or a woman or a group of them. What I want to say is that the number of subjects in each group does not affect the results, at least, in my PK experiments.

Some people have said that these results could be the hormonal effect of the subjects over the seeds or plants. Nevertheless we have to remember that the subjects who came daily for a few minutes to the laboratory were children eight years of age; and when the subjects were older persons, there was distance between targets and subjects: from meters to hundreds of kilometers.

In the experiments with the children eight years old, the girls yielded higher results than boys, although the boys' number was larger than girls'. But in the adults, it was the men who achieved the higher results.

ROGO: Last night I was talking with Dr. Morris and Dr. Stanford and we were discussing the fact that on U.S. campuses there seems to be a slight tendency for Catholic universities to be a little more open to parapsychology, and I was wondering how you felt the acceptance of parapsychology in Argentine education related to the predominant Roman Catholic tradition and population in South America.

NOVILLO: I think—at least this is my position—in my University, that parapsychology is a science, there is no problem. If it is a science, it is a truth. I am not afraid about truth, and if parapsychology is truth—there is no problem.

KRIPPNER: I'm still speculating on Dr. Beloff's comment, which I thought was very well put, regarding the magical thinking that many children go through and that even emerges from time to time in adults, and how this affects educational procedures. I don't think we've given enough thought to this, in the conference. Furthermore, I don't think parapsychologists have really done much work on this topic. It might very well be that in educating for parapsychology, somewhat different strategies and techniques are going to be used at different age levels. If we examine Piaget's theory on developmental stages we notice that he's proposed a number of terms that display differences in children's thinking. We have the movement from the motor to the motor-visual, to the visual-motor to the visual. We have the shift from concrete to abstract thinking; we also have the shift from pre-operational to operational thinking. It would seem to me that any instruction that we give young people, especially very young people, in parapsychology is going to have to consider these modes of thinking very carefully.

Jerome Bruner once said that any academic topic can be taught to any person no matter what that person's age may be; it just needs to be adapted in accordance with that person's developmental status. Now, of course, I'm sure that parapsychology was the last thing that Bruner was thinking of, but I do think that parapsychology is a proper example in terms of how these adaptations might have to be accomplished. I certainly don't have any answer for this and I'm not even saying that magical thinking is always negative. It might be there are events in the world and events in parapsychology which ultimately are going to have to be explained aside from cause-and-effect thinking. But Dr. Beloff did put his finger on a very important issue here, and those of us who at any point are going to be working on parapsychological issues with very young children, should give this matter some thought, should read the studies of children's thinking, should examine fantasy among

children—even altered states of consciousness among children,—and see where these data apply.

STANFORD: I wanted to raise a question, specifically a matter in your course outline. I noticed that in both courses you seem to be placing the matter of statistical evaluation as a last topic for discussion. It seems to me that that should have come earlier in the course so that people could have better comprehended the studies, the adequacy of the evaluation. Perhaps you would like to comment on why you do place that at the end of the course rather than elsewhere.

NOVILLO: I am following my text book in my courses and if you would see it you could realize that from the beginning I am dealing with statistics because the basis of my lectures and explanations are the research work performed in different laboratories where statistics are fundamental. At the end of the courses, I explain in full the meaning and use of the statistics: different techniques for the evaluation of the tests: CR, Test of Variance, Student t Test, etc. Sometimes I do not need to explain very much about statistics because the students are familiar with them, for example, students of psychology, physics, engineering, etc., but for others it is a difficult subject, for example, for law students, liberal arts majors, etc.

Starting the course by explaining statistics would not be a good method especially for the students not acquainted with mathematics. If they want to have a fuller knowledge after my explanation and the use of the text book, they can consult specialized books.

RAO: I have two very brief comments. One is, I think, some sort of a comment on the possible interpretation of your PK results. I have a guess that, probably, you were the subject in those PK experiments and not your students. You also mentioned about long distance PK experiments, and if you, by any chance, stumbled on this hypothesis of sex differences, maybe you are using your PK on these plants all through, so that your own assumptions are getting confirmed.

The second one, as I heard about the legislation in your country in 1974, making parapsychology compulsory . . .

NOVILLO: Not compulsory—recommendation.

RAO: O.K., recommendation.

NOVILLO: Recommendation only. Congress recommended to the universities to include in their syllabus the teaching of parapsychology. *Recommend*, and not one university has accepted.



RAO; Does it mean if you accept you get more money from the government?

NOVILLO: I don't understand. Please repeat that.

RAO: If you accept this recommendation, do you get more money from the government?

NOVILLO: We don't receive any money from the government. Not one penny.

RAO: In our country, the Catholic schools teach Bible to the students, and some Hindu schools teach the *Gita* and I hope parapsychology will never be in that position.

NOVILLO: I don't know what is happening in your country. In my country it is different. In regard to the first part of your question, I think I have partially answered it already. I do not believe I have unconsciously been a subject myself in my research work. Several times the results of my experiments were absolutely contrary to my expectations. If I had been the subject throughout the more than forty experiments (each lasting ten days) I would be exhausted. Nevertheless I have had consistently good results in research. It is also not easy to influence two targets simultaneously and get significance; and I was conducting the experiments with blind targets as well. If such was the case, that I was the subject, I find that hard to believe.