## THE VOICE ON TAPE PHENOMENA: LIMITATIONS AND POSSIBILITIES

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For a number of years popular books have been published in which the authors suggest and assert that tape recorders can be used to communicate with the dead (Jurgenson, 1967; Raudive, 1971; Schafer, 1978).

Even if one accepted some of the voices as paranormal the voice phenomena do not provide any support for the survival hypothesis beyond that which can be claimed on the basis of other parapsychological findings. Indeed compared with other material (see Gauld, 1977) the case for survival based on voice phenomena seems to be relatively weak. Furthermore in most if not all cases, it is extremely difficult to obtain any reasonable evidence for paranormality. The following discussion is therefore limited to items which have a bearing on this question.

A reasonable case has been made for psychic photography (Eisenbud, 1977). More recently investigations in the microstructure of objects subjected to PK (Hasted, 1978; Hasted & Robertson, 1980) provide a further suggestion that it is not unreasonable to expect that audio tapes may be changed in such a way that new and perhaps recognizable sounds appear on account of PK. Bender (1971) suggested that this was probably the case when a few of the voices associated with Jurgenson were investigated. Jurgenson has been most cooperative and as Bender's report indicates, a considerable amount of equipment was used in an

attempt to eliminate counter hypotheses. This resulted in a considerable reduction of the number of voices which were selected for further more detailed analyses. However, as Sotscheck (1971) pointed out speech diagrams although useful, do not provide conclusive evidence when the question of paranormality is considered (Sotscheck, 1979).

The strongest assertion were made by Raudive (1986; 1971; 1973; 1976) who spent years of listening to tapes and who registered and classified with impressive patience thousands of voices (7200 in 1971) until his death in 1974. Smith (1972) critically discussed these claims and came to the conclusion that they do not support the survival hypothesis and that little if any evidence for paranormality can be found. This author is in agreement with these conclusions but some of the reasons suggested by Smith (e.g. speaking in light trance) are perhaps somewhat improbable. This is understandable as Smith had no personal experience of Raudive.

Raudive was obsessed with his voices, willing to spend endless hours listening to them and discussing them and he had the obstinacy and a presumably superficial knowledge of science with which he managed to impress a number of people.

It is somewhat surprising that he had a good deal of support from many professional people who could be expected to appreciate the flaws in Raudives so called scientific tests. It is worthwhile to note that few if any parapsychologists (perhaps easily categorised as members of the PA) ever supported his claims.

The impressive care which Raudive lavished on his tapes and voices must not be mistaken for scientific inquiry. His listening test was a crude example of a clearly non-scientific test which nevertheless fooled many people. In this test Raudive announced the meaning of a particular sound pattern first, and then played this sound pattern repeatedly. If the listener agreed that he could hear the sound pattern as previously announced, Raudive listed this success of his suggestion as an independent verification of this particular voice. However, if a subject had doubts and expressed a low degree of confidence in Raudive's suggestion, he was classified as being unable to hear. Obviously this test has no scientific merit whatsoever. There is absolutely no doubt that sounds which have some similarity with speech and which are presented in short bursts only (say 2 to 10 words) can be interpreted in a variety of ways and most subjects

follow any suggestions quite readily.

Briefly, voices are said to have appeared under the following conditions:

A taperecorder with microphone attached was played, for instance, in order to record birth songs. Replaying the tape it was found that human voices appeared on the tape. It was assumed that the microphone could not have picked up the sound of normal human conversation.

This method is now used with the following main variations: The taperecorder with microphone runs (a) while nobody is present, and (b) to record a normal conversation with intentional pauses for a clearer manifestation of the paranormal voices.

It may be useful to designate the above variations as microphone conditions (1). Other methods of recording voices can be summarised as radio conditions (2). This includes the modulation or modification of an actual broadcast, i.e. the speaker seems to carry on but his words are changed in a paranormal way. This is also claimed for music. It is also assumed that on frequencies between stations, new words are formed apparently with the assistance of the energy available. In trying to find these paranormal radio voices normal receivers are used, usually in the medium frequency range. Some recordings have also been made with diodes which will pick up a wider frequency range. Small transmitters normally in use for test purposes have also been tried in association with a radio receiver. The transmitter is adjusted until it surpresses the normal radio broadcast on a particular frequency to which the radio is tuned.

It may finally be useful to include as an additional set of conditions, storage and replay conditions (3). Most of the investigators found additional voices when replaying a tape they had previously analysed. However, they assume that most, and perhaps even all, of the additional voices may have remained unnoticed during the earlier part of the analysis.

It is sometimes claimed that only through training over a long period will it be possible to hear and identify some of the weaker voices which have to compete with general noise on the tape, because they are only audible under extremely high amplification.

It is quite true that some improvement may be obtained through a

period of training, however an over-emphasis on this point has probably side-tracked the major problem whether evidence for the paranormality of the voices can be obtained. For this basic question only voices of considerable strength should be used which can be clearly heard by persons with normal hearing ability.

This author has clear evidence that Raudive who claimed to be a highly trained listener, made such substantial errors that it is highly likely at least in this case, that the repeated listening to faint sounds did not improve his ability to understand them but rather increased his tendency to interpret these sounds into familiar words, giving messages of a kind which he expected.

In 1970 Raudive was persuaded (with considerable difficulty) to make one of his original tapes available. For his 'tests' Raudive had copied only selected sections of this tape repeatedly and the original tape was obtained from which his test section had some of the clearest and loudest voices. In agreement with Raudive's wishes no copy of his original tape was made but during the period of a few days when it was available to this author (a native German speaker) it could be clearly established that the tape had a continuous German passage of about 37 words with some fading, making some of the words almost inaudible. A number of continuous words however, could be clearly identified and were recognized without exception (and of course independently and without prior prompting) by 8 native German speakers. Under similar conditions there was also unanimous agreement that the section was a continuous German passage. It was also established that the German words were spoken in such a way that the speaker was likely to have been a minister of religion or a person giving a religious talk. It was only after this conclusion had been reached that the date of the original tape recording was identified as Easter Sunday some years back. It was impossible to obtain detailed programmes about this day from German Radio stations but there seems little doubt that the recording (made under radio conditions) was part of a religious or similar broadcast by a German station. Even if one accepts some uncertainty as to the origin of the recording there is no doubt that Raudive who had a good knowledge of German but who is not a native German speaker, did not recognize the original passage as a continuous German one. Raudive used 5 languages to interpret the passage. He also catered for his apparent desire to be on good terms with famous authors of the past and cut up the original German word 'benoetigen' (clearly identified by all 8 German speakers) such that the 'noeti' part became Goethe. Raudive's messages in various languages had no

resemblance in content to the original German words which could be clearly identified.

It is perhaps not surprising that Raudive (not being a native German speaker and presumably with some hearing loss because of age) had more difficulties in recognizing the passage of words for what it was.

It is important to note though, that after Raudive had edited the original tape by presenting on a new tape only small cut out sections repeatedly, it was rather difficult to recognize the original words even if one knew them. Raudive himself saw the evidence for paranormality (and in his framework for survival) in the content of the messages which he recorded. As this example shows his interpretation had no resemblance with the original in a case which he himself had rated among the best and clearest.

This does not rule out the possibility that Raudive had recorded some paranormal voices but on the basis of the above example it seems fair to conclude that there is no hope of extracting them from among his enormous amount of tape material with any degree of assurance. In an independent investigation Ellis (1978) came to a similar conclusion although he had perhaps started off with greater hopes of finding support for Raudive's claims.

Even if the most publicized case for voice phenomena is extremely weak it does not necessarily follow that others may not succeed where Raudive has failed.

It is necessary though to emphasize that voice recordings include a vast variety of possible errors, some of them decidedly self deceptive.

Special difficulties which may lead to errors are the following:

- (1) The voices speak in languages not known or not well known to the listener. On the basis of the experience gained so far, it seems quite pointless to deal with these examples. Of course they may be considered by others who are native speakers of the language concerned.
- (2) The voices speak with a peculiar rhythm which is supposed to identify them as paranormal. There are numerous ways through which normal radio voices may sound like spoken with an unusual rhythm,

simply through some oscillation of the radio wave which is received. There is further evidence that radio voices which were identified as normal radio voices with a high degree of confidence and which did not show any of the rhythmic pattern, were not recognized as normal. By unusual editing (e.g. cutting out sections from a single word, see the Goethe example above) the normal speech rhythm may be disturbed and the impression of a peculiar rhythm may be formed.

- (3) Raudive claims that in order to maintain this rhythm the normal words are shortened or lengthened by changing the number of syllables in a word. Obviously this allows for an increase in faulty interpretation, i.e. the probability is much higher that the so-called changed word is really a normal word in a different language or perhaps two words.
- (4) During normal fading of radio programmes this process is a gradual one. In some recordings relatively loud sections appear suddenly and disappear suddenly. However it was demonstrated in the Institut at Freiburg by Mr. Lemke (Munich) that circumstances may occur where through the introduction (switching on) of an additional station, the wavelength of another station may alter instantaneously. Sudden appearance or disappearance can therefore not be taken as evidence for paranormality.
- (5) It is claimed that the voices speak during one sentence with different languages. In the extreme case five words may be spoken in five different languages. This claim is very difficult to verify as should be clear from problem no. 1. Most listeners cannot claim a really good knowledge of five languages and probably native speaking is highly desirable. The assumption that many languages are used, obviously makes self deception much easier. With some knowledge of some languages it is always possible to find a suitable meaning in some sequence of words which are only half audible and which may well all be spoken in a different language from those assumed to be used. Again the investigators of voices do not use this criterion consistently, i.e. a sentence may appear in one language (if the contents seem to be right) or in two or in more as the case demands. If it can be claimed that a few examples exist where in a sequence of words a clear change from one to another language occurs, it is still possible that this might have happened in a modern radio play or interview, but also through shortwave telephone transmission which under some circumstances may intermittently and in a mixed up way intrude into radio programmes (Lemke, 1970).

In summary, it may be said that as far as the radio conditions are concerned it is extremely difficult to exclude the possibility that a normal radio or similar transmission is mis-interpreted as paranormal.

It seems hardly worthwhile for a parapsychologist to start an investigation unless extremely clear and really extraordinary passages are presented. There will be some subjective differences as to what constitutes an extraordinary passage; it is the opinion of this author that there are few, if any, recordings that were done under radio conditions which would qualify.

Under radio conditions one research possibility exists to some degree, that is, if modulations of normal radio programmes are claimed to occur through paranormal processes. If it was possible with the assistance of a station, to obtain a copy of pre-recorded broadcast and, if this broadcast was monitored by a number of people located at various distances around the voice investigator as well as by the voice investigator himself, then a clear change of a broadcast would amount to an interesting phenomenon which is perhaps not yet convincing but which has possibilities to be controlled further. Longer recordings of the broadcast allowing for comparison between different receivers for periods before and after the voice phenomenon is claimed to take place, seem desirable.

(6) A further error may be introduced if in a microphone recording during which some conversation occurs, unconscious whispering or speaking takes place. There is little doubt that through the introduction of partly directional microphones some cases of unconscious speaking could be detected with virtual certainty which under different recording conditions most likely would have been assumed to be of paranormal origin.

The technique of directional microphones is relatively simple and only requires one independent track and one independent microphone per participant.

In addition there should be at least one further centrally placed microphone connected to one further independent tape track. A normal microphone can give sufficient level of directionality by placing a narrow conical cardboard tube around it into which the participant speaks.

If anything unusual appears on tape later it can be clearly

established who spoke during the period (as well as before and after) and whether the ostensible paranormal sound originated from one particular microphone or not. If this is the case the probability is high that the unconscious speaker is found. It should perhaps be emphasized that this unconscious talk goes on usually more frequently than is generally realized and even serious investigators who are determined not to make any sound are not free of it. It seems to be particularly prevalent if one participant wishes to say something but is prevented from doing so by the continuation of speech by someone else.

Spontaneous agreement with a remark of a speaker may also result in audible exclamations. It is important to note that serious parapsychologists were largely unaware of this. One of the most experienced investigators of the Freiburg team said spontaneously with the fullest conviction that particular sound phenomena which were suspected as originated from a particular speaker could not possibly be the voice of that person. Yet it was subsequently established that it was that person who had spoken without awareness. This example should clearly show that it is necessary to be extremely careful in order to avoid this kind of error.

A simple test under microphone conditions which can be clearly evaluated may be to divide 20 minute recording sessions into 10 two minute trial periods during which according to a random number table approximately half are supposed to remain silent while the other half is supposed to receive as many voices as possible. Independent judges could later estimate which trial periods according to some specified criterion are more or less silent. From a psychological point of view, this framework may not be suitable for some people but with due regard to the particular claims and idiosyncracies of particular people it will be necessary eventually to test the claims in such a way that both support or lack of it for the psi hypothesis can be stated in probability terms.

Altogether this seems a fairly negative account. It is written with the hope that it may help parapsychologists who are confronted with these claims for the first time. It may also help to start research with a better chance of tackling the problem involved.

There is also a very positive aspect in the numerous possibilities of self-deception to which the voice investigator is subjected. A medium trying to move an object through PK and who is actually able to

do it once in 500 trials can see in 499 trials that nothing is happening and he is likely to get discouraged. The voice investigator believes he is getting a rich harvest of voices practically all the time and this may actually ensure that a few genuine ones appear among many errors.

If these genuine phenomena are there, this situation which is rewarding for the medium, may actually persist long enough to allow parapsychologists to extract the genuine cases with sufficient evidence.

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