Dr. James E. Barger Testimony

HSCA Vol. II

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4.0.1.3

IDENTIFICATION OF WITNESS:

Dr. Barger was one of the acoustics experts who testified before the Committee.   At the time of the HSCA investigation, he was chief scientist and director of the Physical Science Division of the firm of Bolt, Beranek & Newman.   (See page 17 for his extensive educational and professional background.)

SUMMARY:

As part of the HSCA investigation, Dr. Barger analyzed the acoustics evidence that was gathered from examining a dictabelt of a police recording from the day of the assassination.   The dictabelt recorded the sounds picked up by a motorcycle radio that was stuck in the ''talk'' position. From a magnetic recording of the original dictabelt, Dr. Barger attempted to determine whether or not gunshots were actually recorded and could be identified and isolated from the rest of the sounds and background noise. To accomplish this task, Dr. Barger proposed to the Committee that he reconstruct the "events" of November 22, 1963.   During an extremely complicated and highly technical testimony, Dr. Barger explained to the Committee the sequence of reconstruction and analysis and the different types of tests that he employed.

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In laymens' terms, Dr. Barger's goals were to determine the position of the motorcycle in question and to replicate the sound of Mannlicher-Carcano rifle shots.   He would then record his findings and compare them to the recording from the original dictabelt.   In order to carry this out, Dr. Barger placed microphones in several locations on Dealey Plaza, primarily along the motorcade route, and he also employed marksmen to shoot 432 bullets from the sixth floor window of the TSBD and from the grassy knoll at four different targets.   He thereby created 432 echo patterns that could be compared with the impulse patterns on the police recording.   Using binary correlation, Dr. Barger attempted to "match" the two recordings.   Altogether, there were approximately 2,600 possible correlations.   In order to filter out many of these inaccurate correlations, Dr. Barger set the "correlation coefficient" at a threshold of 0.6.   Any results that were above 0.6 were considered.   He found 15 relevant correlations that produced four different impulse patterns.   From this evidence, Dr. Barger admitted a possible conclusion of his analysis was that four shots were recorded on the DPD tape and the acoustical sounds that may represent these shots could be spaced as follows: between the first and second approximately 1.6 seconds, between the second and third approximately 5.9 seconds, and between the third and fourth approximately 0.5 of a second, thus implying that there had to have been a second gunman.   In addition, he testified that the probability of two shots recorded was 95%; three shots was 60% or 70%; and four shots was 50%.

BACKGROUND:

17-69   Extensive discussion of the analysis of shock waves, echo
             patterns, and impulse patterns, paying particular attention to

elements of time and distance.

69-107   Questioning by Committee Members as to the accuracy and
           validity of Dr. Barger's reconstruction and analysis.