

Professor Mark Weiss Testimony

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Michelle Seguin

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IDENTIFICATION OF WITNESS:

Professor Mark Weiss was one of the acoustics experts who testified before the Committee. At the time of the HSCA investigation, he was a professor in the Department of Computer Science of Queens College of the City University of New York. (See page 555 for his extensive educational and professional background.)

SUMMARY:

Professor Weiss' primary goal was to perform a refined analysis of data presented by Dr. Barger relating to the third of four gun shots identified from the DPD dictabelt. This particular shot was thought to have originated from the grassy knoll. In presenting the evidence, Professor Weiss emphasized that he applied fundamental principles of acoustics during his analysis of Dr. Barger's evidence; he did not require any advanced techniques. Weiss explained his approach: Each position in the plaza has a unique set of echoes associated with it; if a sound heard on the police tape was the sound of gunfire, then one ought to be able to find a position for that microphone and for the gun such that one could predict a pattern of echoes that would match the sounds heard on the police tape. In order to make this prediction, Weiss required the following information: Dr. Barger's test data; the location of the sources of sound; the location of

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the reflecting surfaces; the location of the motorcycle; and the velocity of sound in the air as a function of the temperature of the air on November 22, 1963. Utilizing all of this information, Weiss first determined the time from when the first sound of the rifle was received to the time the echo was received. He added this amount of time to the direct time to calculate the total time to go from the source to some echo-generating surface and to the microphone. As the professor explained, now that one knows the total time, one can predict the total path length. This length was calculated by taking the total time and multiplying it by the velocity of sound and computing the result in feet. Professor Weiss was able, therefore, to predict a pattern of echoes that would match the sounds heard on the police tape. In conclusion, Professor Weiss testified that there was a probability of 95% or better that a shot was fired from the grassy knoll.

BACKGROUND:

565-582 Professor Weiss' detailed explanation of the way in which he predicted the echo patterns that matched the sounds heard on the police tape.

594 First application of the principles of acoustics to ascertain the precise origin of a gunshot.