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## Study Backs Theory of 'Grassy Knoll'

Second Gunman New Report Says Fired at Kennedy

By CEORGE LARDNER JR.

The House Assassinations Committee may have been right after all: There was a shot from the grassy knoll.

That was the key finding of the congressional investigation that concluded 22 years ago that President John R Kennedy's murder in Dalba in 1963 was "probably... the result of a conspiracy." A shot from the grassy knoll meant that two gunteen must have fired at the president within a split-second sequence. Lee Harvey Gawald, accused of firing three shots at Kennedy from a perch at the Texas School Book Depository, could not have been in two places at

A special panel of the National Academy
of Sciences subsequently disputed the evidence of a fourth shot, contained on a polce
distabelt of the sounds in Dealey Plaza that
day. The panel insisted it was simply random noise, perhaps static, recorded about a
minute after the shooting while Kennedy's
moloicade was en route to Parkland Hospital.

A riew, peer-reviewed article in Science and Justice, a quarterly publication of Britain's Forenic Science Society, says the WAS panel's study was seriously flawed. It says the panel failed to take into account the words of a Dalka patrolinan that show the gunshol-like noises occurred "at the exact instant that John R. Kennedy was assassinated."

In fact, the author of the article, D.B. Thimas, a government scientist and JFK ussassination researcher, said it was more than 95 percent certain that there was a short from the grassy knoll to the right of the president's limoustace, in addition to the three shots from a book depository window above and behind the president's limoustace.

G. Robert Blakey, former chief counsel to the Fouse Assassinations Committee, said the NAS panel's study always bothered him because it dismissed all four putative shots as random noise—even though the three soundbursts from the book depository matched up precisely with film of the assassination and other evidence such as the echo patterns in Dealey Plaza and the speed of Kennedy's motorcade.

This is an honest, careful scientific examination of everything we did, with all the appropriate statistical checks," Blakey said of Thomas's work.

"It shows that we made mistakes, too, but minor mistakes. The main thing is when push comes to shove, he increased

Arrow at left shows where Dallas Police Officer Bobby W. Hargis had gone to search grassy knoll shortly after President Kennedy was shot.

the degree of confidence that the shot from the grassy facil was real, not static. We thought there was a 55 percent chance it was a shot. He puts it at 96.3 percent. Bi-ther way, that's 'beyond a reasonable doubt."

The sounds of assassination were recorded at Dallas police headquarters when a motorcycle patential made and a policy head at Dallas police headquarters when a motorcycle noise which in the "on" position, deluging his transmitting channel with what seemed to be motorcycle noise. Using sophisticated techniques, a team of scientists enlisted by the House committee filtered out the noise and came up with "audible events" within a 10-second time frame that it believed might be gunfire.

The Warren Commission had concluded in 1964 that only three shots, all from behind, all from Sowald's rifle, were fired in Dealey Plaza as the motorcade passed through. But the House experts, after excessive tests, found 10 echo patterns that matched sounds enamanting from the grassy frond, in traveling carefully measured distances to nearby buildings and then bouncing off them to thit the open motorcycle transmitter.

They also placed the unknown gunnan behind a picket fence at the top of the grassy frond, in front of and to the right of the presidential limousine. The House com-

mittee concluded that this shot missed, and that Kennedy was killed by a final bullet from Oswadd's rife. Thomas, by contrast, believes it was the shot from the knoll, seven-tenths of a second earlier, that killed the

Arrow indicates window at the Texas School Book Depository from where Lee Harvey Oswald is believed to have fired at the motorcade of President Kennedy.

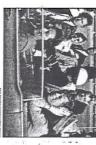
down, said in 1982 that the noises on the tape previously literalified as gamshols—were recorded about one minute after the president was shot."

The NAS experts, headed by physiciat Norman R. Ramsey of Harvard, treached that conclusion after studying the sounds on the two radio channels Dallas police were using that day. Routher transmissions were made on Channel One and recorded on a dictabelt at police headquarters. An auxiliary frequency, Channel Two, and recorded on a dictabelt at police headquarters. An auxiliary frequency, Channel Two, was dedicated to the president's motorcade and used primarily by Dallas Police Chief Jesse Curry; list transmissions were recorded on a separate Gray Andograph disc machine.

The shooting took place within an 18-second interval that began with Curry in the lead or a monouncing on Channel Two head or amonucing on Channel Two the the gunshols were picked up on Channel Two and entirely and better the last gunshot on Channel Two and the supposed gunshot noises came "too late to be attributed to assassination of the claimed that the supposed gunshot noises came "too late to be attributed to assassination of the supposed gunshot noises came "too late to be attributed to assassination of the supposed gunshot noises came "too late to be attributed to assassination of the supposed gunshot noises came "too late to be attributed to assassination of the supposed gunshot noises came "too late to be attributed to assassination of the supposed gunshot noises to channel was a supposed gunshot noises to ch

tion shots." What actuissued his "f actually happened was that Curry ais "go to the hospital" order right

president.
The NAS panel, assigned to conduct further studies after the committee closed



Kennedy is shown in Dallas on Nev. 22, 1963, one minute before he was shot. A new study supports the theory that a second gunman was involved in his assassination.

after the first shots were fired, wounding Kennedy and Texas Gov. John Connally. The final bullet was fired in almost the same instant that Curry uttered his command. A minute later, Decker, riding in the same car with Curry, grabbed the mile and