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SELECT COMMITTEE ON ASSASSINATION

(Mr. STOKES asked and was given permission to address the House for 1 minute and to revise and extend his remarks and include extraneous matter.)

Mr. STOKES. Mr. Speaker, as the former chairman of the Select Committee on Assassination, I have, from time to time, reported to the House about events that have transpired since the committee completed its work in July 1979. I rise now to bring to the attention of the House several items.

In its November 1980 issue, the Washingtonian printed a less than favorable article about the work of the select committee by one of its former investigators, Gaeton Fonzi. The committee's former chief counsel, Prof. G. Robert Blakey, who now teaches at the Notre Dame Law School, and its former deputy chief counsel, Gary Cornwell, wrote responses to Mr. Fonzi's piece. While Professor Blakey's short letter was published, Mr. Cornwell's fuller treatment was not. Because I believe these two statements should be part of the historical record, I ask that they be printed in the CONGRESSIONAL RECORD at the conclusion of my remarks.

In addition, Professor Blakey and Richard Billings, a key aid on the select committee's staff, have just published through the New York Times Book Co., "The Plot To Kill the President." The book is an effort to go beyond the findings of the select committee and name those who were behind the President's death. The authors asked me and our former colleague, Richardson Preyer, who was the chairman of the JFK Subcommittee, to prepare forewords for possible inclusion in the book. As it turned out, the manuscript exceeded its contracted-for length by over 50,000 words, and the editors at Times Books asked Professor Blakey and Mr. Billings to cut the manuscript down considerably. It was not, therefore, possible to include Mr. Preyer's and my remarks in the published book. Nevertheless, I would like to share them with the House, and I ask that they be included in the CONGRESSIONAL RECORD at the conclusion of my remarks.

Finally, Mr. Speaker, I note that on December 1, 1980, the Department of Justice released a report of the Technical Services Division of the Federal Bureau of Investigations on the acoustical studies of the select committee. The FBI report found that the scientific work done by the select committee was invalid. Although I asked the Department to work with our former staff and its scientists, the work was done in secret, and the FBI report was released before anyone connected to the select committee had a chance to look at it. We had hoped that collaboration would have been possible, since truth, not one-upmanship in public relations, was what was at stake. We had hoped, too, to avoid misunderstandings, for we knew that the Technical Services Division was relatively inexperienced in the acoustical field. The Department of Justice, however, did not choose to collaborate, and it must now suffer the consequences. Professor Blakey and our scientists have carefully reviewed the work of the FBI insofar as it was possible from the incomplete data released and have determined that the FBI fundamentally misunderstood our scientific and evidential ahalysis. There was, in short, no justifiable basis for the FBI conclusion that our work was invalid. Professor Blakey has given me a memorandum on the FBI report, as have our scientists. I ask that they be printed in the CONGRESSIONAL RECORD at the conclusion of my remarks.

Mr. Speaker, I have not yet decided how to pursue the matter of the performance of the Department of Justice in its handling of our acoustical studies. The National Science Foundation and National Academy of Sciences have underway a study of what, if any, additional work should be done in this area. When that study is completed, I will make a decision. Until that time, I will continue to keep the House informed of items relating to the work of the former select committee.

The material referred to above follows:

THE JFK ASSASSINATION: A "GREAT WHITE WHALE"?

I write to set the record straight, at least insofar as a two-page letter can adequately respond to an 80,000-word article, Gaeton Fonzi's "Who Killed JFK?" [November 1980].

Mr. Fonzi's thesis is that the investigation of the House Select Committee on Assassinations was a fraud. For those who care about the truth, I refer them to the committee's 686-page final report and its accompanying 27 volumes of supporting hearings and related materials. They speak for themselves.

But Mr. Fonzi goes beyond a general characterization of the public portion of the committee's work and levels a number of specific charges against me personally. Each of them is either simply false or, worse, a half-truth that misleads by what it omits. Their publication without giving me an opportunity to respond was shoddy journalism.

To note one example: Mr. Fonzi suggests that I came to the investigation professionally biased, believing that organized crime had had a hand in the President's death. Not true. In fact, I personally thought it highly unlikely that a conspiracy had led to the assassination and that, if it had, it would not have included organized crime, as the assassination of the President would have been too risky a venture for the mob. Nevertheless, I did not let my personal feelings affect my professional conduct.

Subject to inevitably finite resources, the committee's investigation was, therefore, structured to pursue all conspiracy hypotheses, including, most importantly, official involvement, whether domestic or foreign, as well as those embracing a variety of other relevant groups within our society, not excluding organized crime.

To take another example: Mr. Fonzi quotes me as saying that the committee's investigation was going to be the "last investigation," as if I had arrogantly believed that no one could add to or subtract from anything that I directed. A half-truth. In fact, I said it would be the last investigation unless it resulted in a major breakthrough that radically changed the view not only of the American people but also of its governmental leaders about those tragic events in Dallas seventeen years ago. If so, we then had the reasonable expectation that the Department of Justice would reopen the investigation and bring our congressional efforts to a lawful conclusion in a judicial forum.

On that score, I readily concede that I turned out to be wrong. We did make a major breakthrough—the development of scientific and other evidence showing two shooters in the plaza—but nothing that the Department of Justice has done since our final report shows any sign of a willingness on its part to reopen the investigation.

I have, however, neither the time nor the inclination to respond to each of Mr. Fonzi's misstatements of fact or distortions of the truth. Suffice it to say that he was not hired by me, as he was so lacking in professional objectivity that I would never have employed him in the first instance. As an investigator for Senator Richard Schweiker,

he had come upon a lead that purported to connect Lee Harvey Oswald to the CIA. He was convinced that he had the answer to the meaning of the President's death. (Staff members decisively referred to him as an "Ahab" and to his quest as a search for "Moby Dick.")

Nonetheless, I decided to retain him because I thought that his obsession would help assure that his aspect of the committee's investigation (Mr. Fonzi was but one investigator on one of two teams of lawyers, researchers, and investigators working on Oswald leads; he headed neither team) would receive its full due. In fact, it consumed a significant portion of our resources—personnel, money, and time.

The committee's investigation failed to find Fonzi's "Great White Whale," not because we—Fonzi and I—did not try but because the evidence was not there. Mr. Fonzi's article, in short, is not the truth about the committee's investigation but a sad self-revelation of a single man's monomania.

G. ROBERT BLAKEY,
Professor of Law,
Notre Dame Law School.

NOTE.—(Blakey was chief counsel and staff director of the House Select Committee on Assassinations.)

AT ISSUE: A FULL AND COMPLETE INVESTIGATION OF THE ASSASSINATIONS OF PRESIDENT KENNEDY

(A response to "Who killed JFK?" by Gaeton Fonzi in the Washingtonian)

(By Gary Cornwell, Deputy Chief Counsel, House Select Committee on Assassination)

It does not take a careful reading of "Who killed JFK?" by Gaeton Fonzi (The Washingtonian. November 1980) to realize the Fonzi's intent was to discredit the investigation of the House Select Committee on Assassinations. Nor must a reader be especially well-versed on the subject of the Kennedy assassination in general or the Committee investigation in particular to recognize that Fonzi, who served as a Committee investigator, had his own pet theory about the assassination—one that he had acquired before the Committee even existed— and that his failure to document the validity of this theory was a source of deep frustration. (Fonzi's theory, which is based on the testimony of an anti-Castro Cuban exile, Antonio Veciana, is that agents of the Central Intelligence Agency had masterminded the murder of the President. For evcidence, he relies on Veciana's statement that on one occasion Lee Harvey Oswald met with a mysterious individual, an apparent intelligence agent who was known to Veciana as Maurice Bishop.) The article does, however, contain severe distortions of fact and fallacies in reasoning which may have escaped the attention of the casual reader with limited access to reliable information, distortions and fallacies that were the result of Fonzi's bias, his frustration, and his apparent naiveté.

Most Americans, I believe, have an appropriate interest in the Kennedy assassination. They want to know who killed their President. They want to know whether they can rely upon the findings of the Warren Commission in 1964 and the House Select Committee in 1978. But because most people do not have the time and resources to seek the answers to their questions, they must rely to a considerable degree on what they are told by presumed experts like Fonzi. When they are told the government did not conduct an effective investigation and are led to believe that the CIA—or at least certain officials of that agency—had a hand in the President's death, more is lost than their faith in the American system of government: government policy is affected. Readers of The Washingtonian are the decision makers—members of congress, executive branch officials, politicians, judges, and citizens who cast votes—who will dictate the future conduct of such investigations; and it is they who will decide if and how the government, including the CIA, will be changed. Thus, if reliance upon "eye-witness" accounts such as Fonzi's is misplaced, if his attitudes and criticisms, however spurious, are made convincing by his talents as a writer, national policy of the future will be based on erroneous assumptions to our mutual detriment. For this reason the article merits careful analysis.

It may initially be helpful to consider what the article is not. It is not, as it proclaims to be, an article by a "top U.S. government investigator." Fonzi is a journalist by trade, and he was but one of many investigators employed by the Select committee. Although the article is title, "Who Killed JFK?", it does not provide an answer to that question. And while The Washingtonian boasts that the author broke "his oath of silence," thereby suggesting some grand purpose is to be served by the daring revelations to follow, the article is in fact little more than a retelling of Veciana's story of the mysterious Maurice Bishop (which the Select Committee had already published in its final report), embellished by Fonzi's speculations and opinions.

It is those speculations and opinions that are most troubling and detrimental, but before considering them in detail it might help to put them in perspective by taking a closer look at Veciana's story. To attempt to resolve the question, "Who Killed JFK?" by focusing exclusively upon the testimony of Antonio Veciana, as Fonzi does, a number of other questions must be answered. Was there a Maurice Bishop? If so, what was his real name and affiliation? (Fonzi speculates that Bishop worked for the CIA, dismissing the possibility that he was employed by another intelligence agency, domestic or foreign, or by some private organization.) Did Bishop really have an encounter with Oswald? (Veciana could be credible but mistaken about his observations, which he himself described as brief and fleeting. Such eyewitness accounts are widely viewed, at least by lawyers, as suspect.) Finally, even if Bishop did meet with Oswald, what was the significance? (While Fonzi would have his readers infer a connection between the meeting and the assassination, several other explanations are equally plausible, especially if we, like Fonzi, are constrained only by the limits of our imagination.)

These are all interesting questions, and they were so regarded by the Committee, which investigated them to the extent possible. But in Fonzi's suggestion that Veciana's story reveals who killed President Kennedy anything more than irresponsible myopia? does the importance of Veciana's account go beyond the fact that it was the issue that most interested Fonzi? And, most important, is the Committee's conclusion that Veciana's testimony did not establish CIA complicity adequate cause for asserting that its investigation was a "bureaucratic charade"?

Taken at face value, Veciana's story established no more than the following: he was associated in his anti-Castro activities with a man known to him as Maurice Bishop; Bishop appeared to have intelligence ties, though these ties remained unspecified; and this Bishop, about three months before the assassination, met with a man whom Veciana later identified from photographs as Lee Harvey Oswald. Anything more is sheer speculation. There is no information as to who employed Bishop, and there is no evidence that Bishop either had foreknowledge of or participated in the assassination. (Veciana specifically said he had no answers to these crucial questions, and efforts by Fonzi and the Committee to shed light on them independently were not successful.)

Fonzi's article is not, then, a revelation of "Who Killed JFK," nor is it an exposé of what "insiders know." What it is is one man's speculation about the CIA and his opinion of the Committee. Fonzi's frustration at not being able to prove a CIA plot is perhaps understandable; the way he has chosen to vent it, however, is not. He blames his frustration on insidious forces, intimating that had it not been for a continuing conspiracy (apparently between the CIA and the Committee) to keep him "very, very busy and eventually . . . wear [him] down," he could have established his case aginst Bishop and the CIA. This assessment of blame and unsupported speculation would not be so harmful if expressed privately or idly pondered by those who make no pretense of having "inside" information. It seems that nearly everyone I meet has his own theory about the assassination, and perhaps due to the character of the President and the nature of his death, emotional attachments to particular theories often develop. In that respect, Fonzi may be in good company—at least numerically. But Fonzi has now proclaimed himself an expert on the assassination, and his theory and his opinion of the Committee, by their publication in the Washingtonian, have gained a measure of credibility. So it is not enough to answer Fonzi by simply stating he is wrong.

Fonzi begins with a reference to the Committee's mandate, House Resolution 222, which called for "a full and complete investigation and study of the circumstances surrounding the assassination and death of President John F. Kennedy. . . ." He then asserts that, "like the Warren Commission, what the House Assassinations Committee did not do was 'conduct a full and complete investigation,'" and opines that ". . . what the Kennedy assassination still needs is an investigation guided simply, unswervingly by the priority of truth." Finally, Fonzi asks, "Is it unrealistic to desire, for something as important as the assassination of a President, an investigation unbound by political, financial, or time restrictions?" Although he apparently intended the question to remain rhetorical, it merits an explicit answer. Clearly, when you stop to think about it, the answer is yes, at least in this country, it is unrealistic.

Every day, citizens of this country are sentenced to long terms of incarceration, and occasionally even put to death, as the result of investigations that are not "unbound by political, financial or time restrictions." The time and financial restrictions result from the budgetary limitations of our police forces and investigative agencies, and the "political" restrictions arise from our basic system of checks and balances (limited power in the hands of any one institution) and civil liberty protections. Because our investigations are so limited, there are minimal criteria to test the sufficiency of the investigative efforts, at least whenever life or liberty is at stake: the short form expression of that test of minimum sufficiency is "proof beyond a reasonable doubt." Only in the world of Perry Mason must investigations produce conclusions with absolute certainty. In the real world, at least in this country, we long ago opted for a system that set political, financial, and time limitations on our investigations, with the result being that our investigations, even those concerning crimes "as important as the assassination of a President", are not guided "simply, unswervingly by the priority of truth."

Should the death of a President be deemed sufficient cause for changing our system of government? Should the Committees' first chief counsel, Richard A. Sprague, whom Fonzi appears to admire, have been granted what Fonzi believes he wanted: total power, and unlimited financial backing and time to pursue "the truth"? Should the political limitations have been removed so Sprague could have had unrestricted access to the CIA's computer system, its central indices, and all of its "raw" investigative files? Can we dismiss the CIA's interest in preserving its sensitive sources and methods as being of no national concern? Or is it that Sprague should have been given the last word on their protection or abrogation, so that the search for "the truth" would have had no roadblocks in its path? And what if in the end—after all CIA files had been reviewed and all agency officers, agents, and employees had been questioned under oath—there still was no absolute proof of Fonzi's theory? In the absence of a CIA confession, what then? Mass administration of truth serum? Jail terms for the recalcitrant at Sprague's whim? Or perhaps Congress should then assume absolute power, taking over the executive branch. But, even with absolute power, financial and time restrictions would still exist. Suppose Sprague wanted everyone who watched the motorcade in Dallas in November 1963 to be interviewed, no matter how long it took? And if his own investigative resources were insufficient, should Sprague have had the Dallas Police Department put at his disposal? Should we be willing to forgo policing the city of Dallas until the President's murder is solved? Until the CIA is proven guilty.

In his article Fonzi describes me as "brashly pragmatic." If that means I tried to make the most of the investigation, given the inherent political, financial, and time constraints, I take the characterization as a compliment. Nor do I object to the application of hindsight to assess performance and suggest what might have been done better, for I readily admit that some mistakes were made. I would never say that criticism of how the federal government too often operates is not needed. Nor would I suggest that so-called exposés of the inner workings of government, to be of value, must come from an unbiased source. I have spent my entire professional career working for the federal government, and much of my energy has been expended in criticizing the policies, procedures, and performance of the agencies I have encountered. I believe, however, that my criticisms have been—in intent and effect—constructive. Most of Fonzi's criticisms, on the other hand, are not constructive: they are based on gross distortions of the facts; they are impractical, and they serve only to undermine the credibility the Committee's investigation deserves. The Committee did conduct "a full and complete investigation," when that phrase is taken in context and the evaluation is based on common sense and reality; pursuit of the truth was the guiding objective, if not the only consideration; and for Fonzi to proclaim that the Committee's investigation was no better than that of the Warren Commission is an abuse of his abilities and reputation.

The majority of my professional career has involved the trial of cases in federal court, and from that experience I've found that everyone has his own biases, prejudices, preconceptions. Not a single witness at any trial, nor a single juror sworn to determine the facts, nor even a judge, performs his duty in a vacuum divorced from the experiences of his life and the impressions they have made upon him. Yet the responsibilities of those persons—to testify truthfully, to weigh the evidence, to judge—are usually performed with a sufficient degree of objectivity. On the other hand, certain safeguards are built into a trial to minimize the effect of prejudice and its related influences (safeguards that too often have no counterparts in the publication of a magazine article). Witnesses are subject to cross-examination; jurors are "excused" from service when their level of bias seems too high; and cautionary instructions are given to the jury. An example of the latter safeguard is the common instruction on evaluating the credibility of witnesses:

"You as jurors, are the sole judges of the credibility of the witnesses and the weight their testimony deserves. * * * You should carefully scrutinize all the testimony given, the circumstances under which each witness has testified, and every matter in evidence which tends to indicate whether a witness is worthy of belief. Consider each witness' intelligence, motive and state of mind, and demeanor and manner while on the stand. Consider also any relation each witness may bear to either side of the case; the manner in which each witness might be affected by the verdict; and the extent to which, if at all, each witness is either supported on contradicted by other evidence in the case. Inconsistencies or discrepancies in the testimony of a witness, or between the testimony of different witnesses, may or may not cause the jury to discredit such testimony. Two or more persons witnessing an incident or a transaction may see or hear it differently; and innocent misrecollection, like failure of recollection, is not an uncommon experience. In weighing the effect of a discrepancy, always consider whether it pertains to a matter of importance or an unimportant detail, and whether the discrepancy results from innocent error or intentional falsehood. After making your own judgment, you will give the testimony of each witness such credibility, if any, as you think it deserves."

It is appropriate that Fonzi's testimony as a witness be so evaluated. I do not propose that it be rejected entirely, but his assertion that the investigation was a farce, that the Committee was guilty of distorting the way government should function, should be carefully weighed. What can be relied upon with some, if not total, confidence are recitals of events Fonzi witnessed. In fact, the precision with which Fonzi is able to recite conversations indicates he was recording them verbatim. (The time it must have taken to record conversations with other staff members makes me wonder if it was the preparation of his diary, not the demands of the Committee as Fonzi contends, that kept him "so very, very busy and eventually . . . [wore him] down.") That Fonzi is now able to accurately recite such conversations, however, does not necessarily enhance his credibility. First, one might properly question his motive in keeping such a diary, since he was not employed by the Committee as its historian. Did he set out from the beginning more interested in plying his trade as a journalist than in investigating the assassination? Further indications of such bad faith, and thus lost credibility, arise when Fonzi purposefully omits relevant details from conversations so as to distort their meaning. By way of example only, there is this colloquy in the article:

"When I joined the Committee, I thought . . . analytical reports would be especially useful because there was no other investigator with my experience. . . .

"Cornwell told me to stop them. 'I want your reports to be strictly factual,' he said. 'Just give us the information. I don't want any of your analysis going into the record.' That, I said, would require ignoring the validity of the sources of information. . . . 'All right,' Cornwell said, 'if you want to analyze the information, put it on separate yellow paper and I'll tell the mail room not to log it in.' I came to refer to this procedure as the 'Yellow Paper Ploy.' "

Fonzi omitted the explanation I gave for what he calls the "Yellow Paper Ploy." I told him I wanted the staff and the committee to be able to form its conclusions on the basis of the greatest quantity of information possible, and that meant that those conclusions should not be drawn until the end of the investigation after all available facts had been gathered. Since Fonzi, even at that early stage of the investigation, had already reached a conclusion of CIA complicity, he was obviously irritated when I refused to permit him to place this conclusion in our official record.

There are other distortions in the article that bear on Fonzi's credibility as a witness. He claims that Chief Counsel G. Robert Blakey "stacked" the staff with organized crime experts in an effort to prove a Mafia conspiracy. Who are these experts? (The article does not identify them.) Were they assigned to all of our investigative teams, regardless of the subject area for which the team was responsible? (The article does not say.) The fact is that apart from Blakey and me and two attorneys who were successively in charge of the team investigating organized crime (where you might expect to find some expertise on the subject area), there were no staff lawyers with previous experience in organized crime investigations.

Thus, if the investigation was misdirected by the influence of "organized crime experts," the influence could only have been exerted by Blakey or me. Yes, even Blakey and I are subject to the influence of our prior experiences, but Fonzi does not truthfully discuss the probable effect of that influence, or bias, if you will. He writes that we were predisposed to emphasize the possibility of an organized crime plot, and to devote our limited resources to that subject at the expense of his theory that the CIA did it. The fact is that from our experience we were inclined initially to assume that organized crime would not have killed the President, because historically the mob has not employed violence against government officials. Furthermore, as the investigation progressed, we devoted equivalent time and resources to each of the prominent conspiracy theories, focusing equally upon the possibility of involvement by the various government agencies, but organized crime, by agents of the Soviet Union or Cuba, by anti-Castro Cubans, and so on. In the end the Committee's conclusions were based on the relative strengths of the evidence: there were substantial indications of complicity by elements of organized crime, while participation by other groups, including a cabal of CIA agents, was deemed unlikely. In his article Fonzi makes no such comparison of

the relative strengths of the evidence, nor is he qualified to do so. His work for the Committee was restricted to his special area of interest, the anti-Castro Cubans, and he further confined himself by concentrating doggedly on a Veciana-Bishop-Oswald link.

Fonzi claims that the investigation was a bureaucratic charade, that what was important was not "what you do, but how what you do looks in relation to how everything else you did looks." He suggests that Chief Counsel Blakey's only objective was to protect the standing institutions of government—namely, the CIA—and not to investigate them. These allegations, I believe, are so patently false that they must be labeled either the product of a blinding bias, or as conscious, willfull misstatements. I suggest to those who can find the time that they evaluate Fonzi's charges in light of what new information the Committee developed and what it said about it. Contained in the Committee's report and 12 volumes of backup evidence is much new information about the assassination, information that no govenmental body had ever previously evaluated. It was on the basis of this information that the Committee was able to reach conclusions that seemed inconceivable when the investigation began and even now seem so extraordinary that their significance is difficult to grasp: President Kennedy was probably assassinated as the result of a conspiracy, and the federal government 15 years ago, when the assassination could have been most effectively investigated, botched the case.

Fonzi derogatorily describes Blakey and me as "hired hands" whose sole objective was to shield government institutions from effective scrutiny and criticism. Yet the criticisms of the FBI, CIA, Secret Service, and Warren Commission set forth in the Committee's report, which was prepared under the direction of Blakey and me, are both extensive and pointed. (By making his charge, Fonzi demonstrates his ignorance of the number of man-hours expended in compiling the data that led to our findings that the performance of those agencies had been less than adequate.) Had it uncovered credible evidence of conspiracy on the part of the CIA or any other government agency, which it did not, the Committee would have said so. But the important point is that we did look for such evidence, and owing primarily to the talents of Chief Counsel Blakey and the ability and stature of Committee Chairman Louis Stokes, the search was carried out in a reasonably effective manner (given, among other minor annoyances, the fact that Congress does not, and should not, have absolute power over the executive branch).

For the first time in history, Congress negotiated an agreement with the CIA for "unsanitized" access to its files. Admittedly, the agreement was not foolproof: the CIA possibly could have selectively withheld or destroyed files before turning them over to the Committee. Measures, however, were devised to prevent that. The files contained cross-references, for example, which could and often did lead our staff to request related documents. In addition, we interviewed former and current CIA officers about the nature of the agency filing system generally, and about the identity and location of particular files that might assist our investigation. While these safeguards still do not make the agreement foolproof, it was, I believe, the best that could be reached given the circumstance of two separate and independent branches of government.

As I said, our investigation, like any human endeavor, can be constructively criticized using the benefit of hindsight. I am reminded by Fonzi's article of two issues that Blakey and I pondered during the investigation, which we perhaps should have decided differently. The first has to do with staff selection. We were aware of the possible effects of bias upon the functioning of our staff, and while we tried to secure as much expertise as possible (e.g. an attorney experienced in organized crime investigations to run the team assigned to that area of the investigation), we also tried to avoid hiring anyone who had previously worked on the Kennedy case and might have preconceived notions about it. We made only a very few exceptions to that rule: one was Gaeton Fonzi.

The second issue we pondered involved the size of our investigative staff, which consisted primarily of homicide detectives. It was of the highest quality, consisting of dedicated professionals. But for one significant reason this was not a typical homicide investigation: we were 15 years late. Governor John B. Connally vividly made the point when he appeared at our hearings. He said he had traveled over the world since 1963, and every one he had talked to could remember with precision where they were when they first heard that President Kennedy had been assassinated. On the other hand, we found in our investigation that most people had no recollection whatever of where they were on the morining of November 22, or the day before, or the week before. This does not mean that our investigators were of no value. On the contrary, they gathered valuable information about relationships between individuals of interest to us, and they performed other very useful functions. (Most significantly, it was our investigative staff that made the most important discovery of all: it turned up the Dallas police dispatch tape, which ultimately established that two gunmen fired at the President.) But due to the lapse of 15 years we were forced to rely more heavily on an analysis of scientific data and on a review of voluminous files of government agencies, such as the FBI, CIA, and Secret Service, that contained data recorded in 1963 and earlier years, and somewhat less on traditional investigative techniques. This shift in emphasis away from traditional investigative techniques was frustrating for many of our investigators, and it made Blakey and me wonder whether we should not have retained a somewhat smaller investigative staff, and spent more of our limited resources and time on scientific analysis and file reviews.

Such second-guessing of our investigation notwithstanding, I believe the American people got a comprehensive investigation. We did not answer all the questions, but we did focus our attention on the major areas of interest. Further, we took a hard look at those specific issues in each area that appeared likely to shed new light on the related questions of conspiracy and the performance of government agencies in 1963-1964.

An excerpt from Fonzi's article is worth repeating, since its significance apparently escaped him when he wrote it. In the summer of 1979, for an undetermined reason, Antonio Veciana was wounded in a shooting assault. His daughter, a reporter for the Miami News, in reflecting upon the attempt on her father's life, told of her pride for her father's efforts as an anti-Castro leader, and Fonzi quoted from her story. "My American friends never understood the politics or the violence that comes with Latin politics," Ana Veciana wrote. "To this day I have not been able to explain, but only to describe, the passion Cubans feel for the freedom that's taken for granted in this country." Like Ana Veciana, I believe we often fail to appreciate our freedom, and we often forget that it comes at a price. Maybe Fidel Castro could have conducted a more "full and complete investigation." No doubt, he would have had more power to do so in his country than the Committee was granted by the Constitution. But one price we pay for freedom is that "even for something as important as the assassination of a President," our investigations include some compromises, and their results, in the words of Chairman Stokes, often contain some "loose ends."

STATEMENT BY LOUIS STOKES, CHAIRMAN, HOUSE SELECT COMMITTEE ON ASSASSINATIONS.

When I became chairman of the House Select Committee on Assassinations in March 1977, I faced a series of immediate crises. The Committee's funding resolution had barely been approved by the House, and confidence in our ability to accomplish our work with dignity and objectivity was not high. But I knew what needed to be done, and one of my first tasks was to appoint a new chief counsel and staff director. After the resignation of the original chief counsel and staff director, we were, so to speak, an army with a new commander-in-chief but no field general. In April I appointed a task force headed by Congressman Christopher J. Dodd of Connecticut to conduct an exhaustive search. Based on the recommendations of the American Bar Association, the Federal Bar Association, the National Association of Trial Lawyers, the Association of American Law Schools, the National District Attorneys Association, the American Civil Liberties Union, and the NAACP Legal Defense Fund, we developed a list of 115 possible candidates, of whom thirty-four were selected for interviewing, and thirteen were actually interviewed. In May the task force recommended three of the thirteen. When one of the finalists dropped out, my choice was narrowed to two, and I selected G. Robert Blakey, then a professor of law at the Cornell Law School. In my judgment, Blakey exemplified the criteria of the Committee's search: investigative experience, prosecutorial experience, administrative experience, integrity, and professional standing. He also had another valuable asset, which was knowledge of the peculiar folkways of Congress, for our investigation was, after all, a congressional investigation.

When Congressman Dodd asked Professor Blakey if he might be interested in the job, he said no, but on reflection he agreed to talk to us. In addition to meeting with the Committee, he had a full and frank discussion with me about what needed to be done and how our task should be accomplished. (It was during that conversation that the decision was reached to announce Professor Blakey's appointment at a press conference in which it would be announced that there would be no more press conferences until our report was written, and our work would proceed without further public fanfare.) As I look back on the course of our work from that point—from June 1977 to July 1979—I realize how fortunate we were that Professor Blakey changed his mind. Without his selfless and untiring efforts, our work could not have come to a successful conclusion.

Now that Professor Blakey and his colleague, Richard N. Billings, have written their own book about the death of President Kennedy, I would like in this foreward to put their work in the context of our investigation, since much of what they have written, though not all, is the product of their experience with the Committee. In so doing, however, I want to make it explicit that while I firmly believe that all those who care about truth and justice must take this

book seriously, I do not necessarily share all of Blakey's and Billings's individual conclusions. Let me start by explaining the mandate of our Committee, as it was set out in our resolution, which was passed by the House of Representatives in September 1976. It can be summed up in three simple questions: Who assassinated President Kennedy and Dr. King? (The Kennedy assassination was one of two aspects of our investigation; the other was the murder of Dr. Martin Luther King, Jr.) Did the assassin or assassins have the help of coconspirators? How well did the responsible federal agencies perform before and after the respective assassinations? By December 29, 1978, at the final public hearing of the Committee, I was able to reflect on how well we had answered those questions. We had clearly established that the assassin of President Kennedy was Lee Harvey Oswald, which was in keeping with the findings of the earlier official investigation. We had, however, developed significant new evidence of a conspiracy that was afoot in Dallas on November 22, 1963, which ran counter to the determination of the FBI and the Warren Commission in 1964. Further, we had assessed the performance of the principal agencies—the FBI, the CIA, the Secret Service and the Warren Commission—and found that their performance left something to be desired. (There is a certain irony in the fact that our findings in the King assassination were nearly identical: James Earl Ray was the assassin, as the FBI had established; there was evidence of a conspiracy, which the FBI had failed to consider; and agency performance, principally that of the FBI, was sadly lacking, both in its treatment of Dr. King before his death and in the investigation of his assassination.) As our public hearings ended in December 1978, I noted that the Committee had gone as far as it could; we had fulfilled our legislative obligation. For the Committee to have proceeded to investigate the issue of individual responsibility further would have been unnecessary and inappropriate: necessary because we had learned all that we needed to know to recommend legislative reform, which we did, inappropriate because our mandate called for fact-finding for the purpose of making recommendations, not an assessment of individual responsibility. As establishing personal guilt is rightfully allocated under our Constitution to the executive branch and the judiciary, further investigation by us would have been improper.

I recognized then, of course, that there were loose ends at the termination of the Committee's existence, and there still are, although I am glad to see that Blakey and Billings have made an effort to tie down a good many of them. Obviously, it is to be regretted that there are matters outstanding, but as I said during our public hearings, life itself has many loose ends. It may well be that all the troubling issues that have been raised about the deaths of President Kennedy and Dr. King will never be fully resolved, for it has been many years since they died. Some uncertainty is inevitable in an uncertain world.

Finally, I would like to repeat my closing remarks at that last public hearing in December 1978, for they are still appropriate in 1980. Never again should our society respond as it did in the aftermath of the assassinations of these two great men, who did not receive in death an investigation commensurate with the dignity of their lives. We cannot, of course, rewrite history. We cannot bring back John F. Kennedy or Martin Luther King, Jr. But the past must be a guide for the future. We must promise ourselves that this history will never be repeated.

WASHINGTON, D.C., *July 1980.*

STATEMENT BY RICHARDSON PREYER, CHAIRMAN, JOHN F. KENNEDY SUBCOMMITTEE

The importance of this book—and it is an important book—is that it carries the analysis of the evidence in the assassination of President Kennedy well beyond the point that the Committee was able to reach in the time available and with the constraints under which a committee of Congress must work. As to the constraints, this is as it should be, for individuals may speak with a freedom that a committee of Congress does not have. But putting their analysis and conclusion aside, the evidence Blakey and Billings have marshaled is extremely impressive. I was able to review the facts presented to the Committee not only as one of its members, but as a former federal judge, and, as such, I subjected the evidence to the severest sort of tests. In the end, I came to conclude that it was not a question of whether there had been a conspiracy in the Kennedy assassination, but a question of who the conspirators were. Our conclusion was, therefore quite different from the one that was reached in 1964.

Much of the evidence that was put before us consisted of the statements of witnesses whose reliability had to be doubted to some degree due to the passage of time, if for no other reason. Witness testimony or circumstantial evidence alone would not have been sufficient to lead me to vote to reverse the historic verdict on President Kennedy's death, but there was evidence that did. My judgment did not rest on it alone, as I carefully reviewed the entire record, but the acoustics evidence was the crucial part that, to me, tipped the balance toward conspiracy. The acoustics evidence, a tape recording of the actual sounds of the assassination, was most convincing of the presence of two gunmen in Dealey Plaza. Its detail fit comfortably with the detail of real life. As analyzed by our panel of experts, the tape appeared to me to be unassailable: 22 echoes of shots from the Texas School Book Depository, as well as the grassy knoll, reaching the position of a moving motorcycle, which was located in photographs just where the acoustic experts said it would be. Since echoes travel and reflect at known speeds, the police tape had to have been recorded in Dealey Plaza or its exact acoustical replica, which obviously does not exist. In addition, the wave-forms produced by the sounds on the tape had the unique signature of supersonic bullets, and they matched in time the physical reactions of President Kennedy and Governor Connally, as they were recorded in a film of the assassination by Abraham Zapruder. Finally, the wave-forms were consistent with the position of the motorcycle. Certain spikes on a graphical display of the tape coincided with the sound of shots coming over the windshield of the motorcycle before it turned into Dealey Plaza, and other spikes coincided with shots fired from the side and rear of the motorcycle after it had made the left-hand turn from Houston onto Elm Street. In view of this kind of evidence, I came to believe, as I said at a press conference on July 15, 1979, the day we released our final report, that it would take a greater leap of faith to reject what the tape told us than to believe it. We should not shrink from the implications of the evidence.

The hard scientific evidence of a second gunman, therefore, altered my perception of the witness testimony and the circumstantial evidence, which no longer had to be the proof of the pudding. I was, for example, particularly impressed with a group of witnesses from Clinton, Louisiana, who testified to the presence in their town in September 1963 of Lee Harvey Oswald together with one David W. Ferrie, a character from New Orleans who was employed by the organized crime leader of that city, Carlos Marcello. Frankly, I was prepared not to put much stock in what the people from Clinton had to say, for they had come forward during the discredited investigation of New Orleans District Attorney Jim Garrison in 1967. (Actually, one of the Clinton witnesses, a Louisiana state legislator, told us he had notified the FBI upon seeing Oswald's picture in the newspaper after the assassination.) But when they appeared before the Committee in executive session in 1978, they struck me as sturdy, honest folk, who had no reason to lie and whose testimony was candid and consistent. The other evidence that I find most impressive as it has been marshaled in this book was not all the product of our investigation; much of it is presented here for the first time. It is the evidence that describes the nature of organized crime and then links Jack Ruby to organized crime, which in turn links organized crime to the assassination. Here we see, for example, the role of Ruby, minor though it may have been, in an organized crime activity in Havana in 1959. (As a member of the Committee delegation that traveled to Cuba, I had a opportunity to evaluate this information firsthand.) Having established Ruby's organized crime association beyond any doubt, Blakey and Billings go on to show that there was no convincing reason, other than his organized crime association, for Ruby to murder Oswald. I could almost contradict myself and say the Ruby link to organized crime is the proof of the pudding. Coupled with the police tape, it leaves little question of the existence of a conspiracy and who, in all likelihood, engineered it.

One other comment needs to be made about this distinctive book. There is an abundance of books about the Kennedy assassination, and I have read a good many of them. Yet I found this book uncommon, and not because I worked with and know the authors. This is a distinctive book because. Blakey and Billings bring the reader into the reasoning process. Rather than expect readers to accept a conclusion at face value, they invite them to make their own evaluation of the evidence. This is an open-minded and objective analysis. While not all people will agree with all of its conclusions, myself included, it makes an honest effort to come to grips with the evidence. I commend it to those who want to learn the truth about the events in Dallas in November 1963.

WASHINGTON, D.C., *July 1980.*

MEMORANDUM ON THE ANALYSIS OF THE ACOUSTICAL EVIDENCE THAT SHOWS THAT TWO SHOOTERS WERE IN DEALEY PLAZA ON NOVEMBER 22, 1963

(Notre Dame Law School)

COMMITTEE CONCLUSIONS AND RECOMMENDATIONS

On January 2, 1979, the House Select Committee on Assassinations reported its judgment that "[s]cientific acoustical evidence establish[ed] a high probability [95%] that two gunmen fired at President John F. Kennedy" in Dealey Plaza, on November 22, 1963. H. Rep. No. 95-1828, 95th Cong. 2nd Sess. p. 1 (1979). The Committee also concluded the President was "probably assassinated as a result of a conspiracy." Id.

The Select Committee's acceptance of the acoustical evidence showing two shooters, one from the Texas School Book Depository to the rear of the President, and one from a

grassy knoll area to the right front of the President, was based on a variety of factors. See generally *id* at 65-91. Twenty-one ear witnesses, for example, gave testimony in 1963 that they heard a shot from the grassy knoll area, from which the scientific evidence indicated the second shooter fired. Included among those witnesses were a motorcycle policeman to the immediate right rear of the President in the motorcade, a Secret Service Agent to the left rear of the President in the motorcade, a Korean War combat veteran, who was standing on the grassy knoll area in the line of fire, and a railroad employee, who was observing the motorcade from a railroad overpass immediately in front of the motorcade, each of whom testified that they heard shots from both the Texas School Book Depository and the grassy knoll. In addition, at the point from which the shooter fired, fresh footprints in the damp earth were found behind the high picket fence on the knoll, and smoke was seen and smelled near the fence at the time of firing. Finally, a policeman immediately after the firing stopped a man leaving the picket fence area, who falsely identified himself as a Secret Service Agent.

The acoustical evidence, which consisted of a recording of the sounds of the assassination accidentally broadcast by a motorcycle policeman in the Plaza to the police dispatcher and recorded on the police dispatch dictabelt, was also independently corroborated by other scientific evidence. Photographs were located of the motorcycle policeman in the precise position that sounds on the dictabelt indicated he should be in. A film of the events of the assassination showed action in the film that confirmed that the shooting was occurring at the times in the film and from the directions that the dictabelt indicated. Timing and direction were also corroborated by ballistics evidence, neutron activation analysis, and the work of a forensic pathology panel that reviewed films and x-rays of the President's body.

After making its findings on the manner of the President's death, the Committee recommended that the Department of Justice and the National Science Foundation "make a study of the theory and application of the principles of acoustics to forensic questions, using the materials available in the assassination of President John F. Kennedy as a case study." Id at 9.

NATIONAL SCIENCE FOUNDATION STUDY

On August 14, 1980, the National Science Foundation authorized $23,360 for a study (independent tests were not contemplated) by the National Academy of Sciences on the work of the Select Committee. The study was to be headed by Professor Norman S. Ramsey of Harvard. The report by the panel was due in January, 1981. The expectation now, however, is that it will not be completed until the end of March or the early part of April, 1981.

On December 1, 1980, a report of the Technical Services Division of the Federal Bureau of Investigation on the work of the Select Committee was released to the public. See 126 Cong. Rec. H 12369 (daily ed. December 11, 1980). The 22 page report, which was not accompanied by supporting documentation and did not rest on independent empirical work by the FBI on the dictabelt or sounds in Dealy Plaza, found that the conclusions of the Select Committee were "invalid," since it was neither shown that gunshots were on the dictabelt nor that sounds originating in the Plaza were recorded on it.

According to the FBI report, the scientific analysis relied upon by the Committee necessarily rested on the authenticity of the dictabelt, that is, upon findings that the sounds on the dictabelt identified as gunshots by the committee originated from within the Plaza and that the sounds themselves were gunshots. According to the FBI report, these two elements could be proven if it could be acoustically shown that the information the committee analyzed was unique to Dealey Plaza "to the exclusion of all other locations" or that "eyewitness testimony" could be adduced independently to establish them. The report then noted that other work done by the FBI in connection with the shootout between the Communist Workers Party and the KKK in November, 1979, in Greensboro, N.C., had found a shot whose echo pattern in fact matched the alleged grassy knoll shot within the same degree of tolerance as that accepted by the committee for its match. Consequently, the FBI report concluded that the two elements could not be shown acoustically since it was clear that Greensboro, N.C., was not Dallas, Texas. The FBI report then simply asserted that "no conclusive" eyewitness testimony had been presented to the Committee that the motorcycle microphone was recording in Dealey Plaza and that shots were in fact recorded on it.

COMMENT ON FBI CRITIQUE

The FBI report on the work of the Select Committee fundamentally misunderstood[1] The scientific analysis relied upon by the committee; it did not make a finding of identity (100 percent) between an alleged shot from the grassy knoll and a known shot from it; the finding was of a 95 percent probability of a match. Stated another way, the Committee's study recognized that there was, in fact, a 5 perecent chance that the information of the dictabelt did not represent a gunshot from the grassy knoll. (A finding of identity (100 percent) was not practical because of the imprecise character of the dispatcher's recording equipment.) Consequently, the purported "find" by the FBI of a match from Greensboro, N.C., did not undermine the Committee's scientific analysis.[2] Hence the statistical probability of 95 percent was not altered by the purported finding of an obviously mistaken match, and the FBI's assertion that the Committee's acoustical analysis was "invalid" does not withstand close analysis. The Committee's final acceptance of the 95 percent side of the probability rather than the 5 percent side, moreover rested on the coherence, noted above, of the scenario of the assassination (timing and direction of the shots) portrayed on the dictabelt with the available scientific and other evidence establishing what happened in the Plaza, a coherence not even addressed, much less refuted, by the FBI report.[3] Finally, the assertion by the FBI that there was "no conclusive" non-acoustical evidence that would independently establish the authenticity of the dictabelt and the Committee's analysis of it was nothing more than an assertion. Not only did it ignore the evidence noted above, seemingly, too, it necessarily rested on the underlying assumption that only direct evidence can be used to authenticate the dictabelt, that is, testimony immediately touching on how and what the microphone was recording. In fact, the authenticity of the dictabelt obviously can be and was established by the abundance of circumstantial evidence that corroborated the version of the assassination recorded on the dictabelt.[4]—G. Robert Blakey, Professor of Law, February 17, 1981.

BOLT, BERANEK & NEWMAN, INC.,
Cambridge, Mass., March 27, 1981.

Hon. LOUIS STOKES,
House of Representatives,
Washington, D.C.

Dear Congressman Stokes: We received on 2 December 1980 the copy of the FBI review of "The Acoustical Reports Published by the House Select Committee on Assassinations" that you graciously sent us. As we declared in our joint public statement of 4 December 1980, a copy of which is attached, we stand firm in our conviction that our findings are logically and scientifically correct and we disagree completely with the conclusions of the FBI. Their review of our work found that we ". . . did not scientifically prove that a gunshot was fired by a second gunman from the grassy knoll area of Dealey Plaza . . .," and that we ". . . did not scientifically prove that the Dictabelt recording of Channel 1 of the Dallas Police Department radio system contains the sounds of gunshots . . .". We have studied the FBI's report and we find that the FBI failed to understand either the methods that we used or the nature of the problem that was posed to us. As a result, in their report the FBI asserts premises that are irrelevant, makes deductions from our report that are incorrect, and presents findings that are unsupported.

The House Select Committee on Assassinations (HSCA), under your chairmanship, selected Bolt, Beranek & Newman, Inc. (BBN), to analyze a Dictabelt recorded by the Dallas Police Department (DPD) on November 22, 1963 to see if it contained sounds associated with President John F. Kennedy's assassination. This DPD Dictabelt contains recordings of transmissions from a mobile police unit whose microphone was on before, during and after the assassination. BBN was asked to determine if the mobile

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[1] The most charitable reason that can be offered on why the FBI report misunderstood the scientific and analytical work of the Select Committee is that the Bureau's technicians were inexperienced with the sophisticated statistical and acoustical procedures employed by the Committee's scientists. (Until the work of the Committee, the Bureau had never examined similar acoustical issues.) In addition, for reasons that remain obscure, the Bureau declined to work with the Committee's scientists in the preparation of its critique of their work, preferring to review it in secret and to release the critique publically before the Committee's scientists had the opportunity to comment on possible misunderstandings. A less charitable comment would note the apparent institutional unwillingness in 1980 to admit that the FBI failed to investigate adequately the death of the President in 1964.

[2] According to the FBI, its "find" matched a 50 millisecond echo pattern used by the Committee's scientists. In fact, the 50 millisecond echo pattern was only used by the Committee's scientists in the preliminary study. The FBI did not, therefore, assert that the 30 millisecond echo pattern relied on by the Committee for its final judgment matched the Greensboro shot. Because the time span (50 vs. 30) is much smaller, the possibility is much higher of finding another match falling within the 5% margin of error. It remains to be seen, therefore, if a "mistaken match" can be found for the full 30 millisecond echo pattern.

* '30' SHOULD BE '320'

[3] Bertrand Russell, *The Problems of Philosophy* p. 140, dealt with coherence in this fashion: "In regard to probable opinion, we can derive great assistance from coherence, which we rejected as the definition of truth, but may often use as a criterion. A body of individually probable opinions, if they are mutually coherent, become more probable than any one of them would be individually. It is in this way that many scientific hypotheses acquire their probability. They fit into a coherent system of probable opinions, and thus become more probable than they would be in isolation * * *"

[4] That an FBI technical report would even implicitly suggest that a fact may be shown only by direct evidence is ironic, as it "is now well established that circumstantial evidence is no less probative than direct evidence * * *" *United States* v. *Dodge*, 538 F.2d 770, 787 (8th Cir. 1976)(Webster, J.)

First, the FBI observes that we might have shown that all recorded events both just preceding and just following the four impulse patterns originated in Dealey Plaza. We had found that this otherwise sensible method could not be relied upon because we were able to show that not even all recorded events during the time span of the four impluse patterns originated from the same radio transmitter. Since all of these transmitters might not be co-located, we could not assume that all recorded events came from the same place. Even though we did not employ this first method of the three proposed by the FBI, they evidently did—for they conclude that this method ". . . reflects contrary information". We interpret this conclusion of the FBI to mean that the presence of transmitters with unknown location diminishes the likelihood that the transmitter that recorded the impulses was in Dealey Plaza. Thus, their first method simply is a definition of the problem to be solved. Our method was actually to solve the problem. We determined where in Dealey Plaza the transmitter would have had to be if it were to have recorded the assassination gunfire sounds as they appeared on the DPD recording. It was found later by the HSCA that there was a motorcycle with a radio transmitter where we had found it must be. We are unaware of any contrary information contained in our results, and we believe that the FBI conclusion is unsupported.

Second, the FBI observes that we might have shown that the impulse patterns being analyzed were unique to Dealey Plaza. This method is the one that we developed when in 1976 we determined from recorded sounds at Kent State University the locations of the weapons that fired the first several shots back in 1970 by Ohio National Guardsmen. Analysis of the DPD recording did not admit a direct use of this method, because we had no prior knowledge about where the DPD recording microphone may have been—as we did for the Kent State recording.

Our method for coping with this problem involved two techniques. The first technique (during the August 1978 acoustical reconstruction in Dealey Plaza) was to record the sound of the test shots at 36 different locations along the motorcade route. We then compared the DPD recording impulse patterns with each test shot recorded at each location to see if any combinations of test shot and microphone location showed a high correlation. We further recognized that even the 36 microphone locations that we used would not show precisely all the unique impulse patterns that are possible, because of the time it takes for acoustic impulses to travel from one microphone to the next. Therefore our second technique was to add a margin of uncertainty to the test shot echo patterns. This margin was to accept the coincidence of an impulse in a DPD impulse pattern with an echo in our reconstruction pattern if the two occurred with ±6 msec of each other. This process destroyed the uniqueness of our reconstruction echo patterns, but the 6 msec coincidence margin resulted in only a small increase in the likelihood that unrelated sources of impulses could generate patterns that would match the Dealey Plaza patterns. We demonstrated this fact by calculating that only 13 out of about 2,000 impulse patterns produced by a random process would, on the average, match the four DPD recorded impluse patterns. We chose the random process for which all possible combinations of impulse locations in a finite number of time windows are equally likely to occur. We believe that this random process models quite well all possible permutations of the locations of echo-producing objects.

But the key to our method, and the source of our method's power to discriminate between gunfire recorded by a microphone in Dealey Plaza and any other source of impulses on the DPD recording, was to test for the DPD microphone trajectory. We found that the locations of our microphones that picked up the reconstruction echo patterns that did match with four time-ordered impulse patterns on the DPD recording moved in the direction of the motorcade and at its rate of advance. Thereby, what we gave up in uniqueness of the reconstruction echo patterns we gained back by requiring a coherent microphone trajectory as an important, and obviously necessary requirement. The odds are vanishingly small that any process could generate four different impulse patterns in a time sequence that causes each one to match a different reconstruction echo pattern measured at each of four microphones separated by the three distances dictated by the speed of the motorcade.

The most meaningful and the most direct method of verifying whether we have proved that the impulse patterns on the DPD recording are caused by gunfire in Dealey Plaza is to examine independent evidence about the motorcycle trajectory and about the shot timing sequence that our analysis revealed. We did not hypothesize this trajectory, nor did we hypothesize the timing sequence. The HSCA did find that both the motorcycle trajectory and the shot sequence we found were consistent with independent photographic evidence.

Finally, the FBI asserts that the third of three methods that could determine whether the DPD sound patterns that we tested originated in Dealey Plaza requires proof that someone saw a stuck microphone on Channel 1 in Dealey Plaza. We know only of the testimony of Officer McLain that his microphone often stuck open, and that it might have been on Channel 1. Therefore we did not devise our analysis on the basis of this method.

On pages 14 and 15, the FBI report finds that the 50 msec time span analyzed by Weiss and Aschkenasy does not provide compelling evidence of a match. We agree. We based our assessment of the third-shot match achieved by Weiss and Aschkenasy on their finding that 10 coincidences occurred between the 14 DPD impulses and the 17 reconstruction echoes that occurred in a 320 msec time span. The FBI offers no explanation for this occurrence, which is most unlikely if the source of both impulse patterns was not a common one. The common source would have to be gunfire in Dealey Plaza because that is how the reconstruction echoes were obtained.

On page 15 the FBI report asserts that the record sound of a gunshot at Greensboro, N.C., was found to represent "The same impulsive pattern sound on the DPD recording during the Presidential assassination in November, 1963". The report says that a probability of 95% or better can be assigned to the similarity between the Greensboro pattern and the alleged third shot pattern on the DPD recording. The data to back up this statement are not contained in the FBI report. We don't know how many impulses are present in the first 320 msec of the Greensboro impulse pattern. We do not know how many of these impulses are coincident with the 14 DPD impulses. Nor do we know what time-window was used for judging coincidence.

Because the data are not revealed by the FBI, we cannot critique their conclusion that the two impulse patterns represent each other to better than 95% probability. But even if the data were found to back up the 95% probability asserted by the FBI, no one could conclude from that fact that our technique was invalid. If the FBI tested each of their 39 echo patterns against the third impulse pattern on the DPD recording, they should expect to find about two such matches assuming that the Greensboro echo patterns are about 320 ms long. One cannot tell how long are the patterns in the FBI report, for they have omitted the time scale on the waveforms they do show.

On pages 17 and 18 the FBI offers some data (without time scale) from Greensboro to show that other impulsive sounds produce echo patterns, besides gunshot. Of course all sounds produce echoes from any impedance discontinuity—whether impulsive sounds or continuous sounds. Our analysis did not in any way assume that because there were echo patterns, therefore the favored sources of these sounds were gunshots.

Neither BBN, nor Weiss and Aschkenasy used the presence or absence of a shock wave to determine if an impulsive sound was a gunshot. It would be wrong to do this. The shock wave occurs only if the projectile is supersonic, and only then if the angle between the line connecting the observer to the weapon and the projectile trajectory is less than the complementary of the Mach angle.

On page 20 the FBI report lists five topics that they describe as problem areas and inconsistencies. Topic 1 refers to Table 4 of the W&A report, in which predicted gunshot echoes are arranged alongside those impulses in the Dictabelt recording that are closest to them in time. It certainly is true that several of the impulses that are listed in this table are less than one millisecond apart. The sentence cited by the FBI, in which W&A state that impulses that are so closely spaced are treated as one impulse is not inconsistent with these data since the statement refers to the method that was used to count the number of impulses that exceed the noise threshold. This is made explicit by the very next sentence, in which the number of such impulses is specified.

Topic 2 refers to the fact that BBN demonstrated that loud impulses such as gunshots are distorted upon transmission through the DPD radio system. We demonstrated this to show why we would base our analysis technique solely on the time-of-arrival of an impulse—and not on the shape or amplitude of the impulse. The time that each impulse is transmitted by the radio is not distorted by the fact that the impulse is loud; only its shape and its amplitude.

Topic 3 observes that no microscopic examination of the DPD dictabelt was conducted to see if the patterns analyzed are caused by surface imperfections. Of course the patterns we analyzed are caused by surface impressions—that is how the recorder works. We did not find periodic impulses, such as would be caused by surface scratches that span more than one groove. We did find more loud impulses on the DPD recording than we found in the reconstruction impulse patterns. These were due to a variety of causes, including keying transients and probably surface imperfections as well. To suggest that the entire impulse patterns were caused by surface imperfections simply is to describe the physical manifestation of any unknown source of noise. We have tested the sensitivity of our technique to noise with our calculations to show the likelihood that noise will resemble gunshot echo patterns in Dealey Plaza.

Topic 4 questions BBN's treatment of the matches between reconstruction echo patterns and DPD recording impulse patterns that do not lie on the about 11 mph locus. We agree that three or four loci could be about equally accepted. If there were no other evidence to help choose between them. However, the motorcycle noise is seen to diminish about four seconds before the spot where we have found that it was at the instant of the first shot. Since the motorcycle was then approaching a 120° left turn, it would have to slow down at that time. The locus we chose is the only one that allows for that. Finally, photographic evidence was found by the HSCA that showed a motorcycle on the locus that we had chosen. That independent verification is the best reason for rejecting as false alarms the matches found along other loci.

Topic 5 deserves more explanation than has been given by Weiss and Aschkenasy. The slight time stretch introduced by them is more rigorous than the FBI supposes. We were unable to determine the exact recorded time scale because there were few clues. But an exact time scale could not be determined anyway because there is always a flutter induced in the time scale by the recorder speed fluctuations. We did determine that the DPD recorded time scale was 6 percent slow ± about 1 percent. Scientific procedure requires that all possible time scales within the range of possibility that we had determined, be searched to see if any time scale within this range produces a good match. Thus Weiss and Aschkenasy did search those values and they found a value of 4.3 percent that fits in the range extending from 4.0 percent to 6.0 percent that we had determined.

In summary, we do not find any insights, data, or arguments in the FBI report that we believe will support their conclusions that our tests of the DPD recording are invalid.

police unit with the open microphone was in Dealey Plaza during the assassination; if so, had the sounds of shots been recorded; the number of shots and the interval between them; the origin of the shots and the type of weapon used.

BBN found that the recorded sounds on the DPD Dictabelt, in particular four groups of impulses, were consistent with the sounds that would have been recorded from a transmitter with an open microphone moving in Dealey Plaza, if four gunshots were fired during the assassination in a specific sequence. BBN found the sequence and the origin of gunshots, and the path of the moving microphone that are needed to produce the sounds actually recorded by the DPD. The combination of these findings, as well as the timing of the impulse groups on the DPD Dictabelt, led BBN to conclude that it is very unlikely that the four impulse groups recorded on the DPD Dictabelt could have been caused by another source.

Subsequent to the BBN analysis, the HSCA examined films of the motorcade that depicted, at the time of the assassination, the part of the motorcade route where BBN had found that the mobile police unit with the open microphone would have to be. The HSCA observed in these films that there was indeed a motorcyle following the path described by the BBN analysis, even though the motorcade order of vehicles described in the Warren Commission report had not placed any motorcycles near that path during the time span of the assassination. Moreover, the HSCA concluded that the specific time sequence of the probable gunshots matches closely the time sequence with which the occupants of the presidential limousine reacted to the shots.

Although the HSCA found that the BBN findings were corroborated by other non-acoustical evidence, the BBN analysis left some uncertainty about the number of shots and their origin. BBN did not prove, nor did it attempt to prove, that the sounds recorded on the DPD Dictabelt were produced by gunfire in Dealey Plaza. The BBN analysis did not exclude the possibility that some unknown source could produce impulse sounds similar to those observed on the DPD Dictabelt. To reduce the uncertainty about the third impulse group, Professor Mark R. Weiss and Mr. Ernest Aschkenasy were asked to examine the sounds in that group and, if possible, establish with greater confidence if this impulse group corresponds to a gunshot sound generated on the "grassy knoll" of Dealey Plaza during the assassination of President Kennedy. To this end, Professor Weiss and Mr. Aschkenasy (W&A) took a different approach to the study of those sound patterns on the DPD Dictabelt that BBN thought might represent the third of four shots.

In effect, W&A were asked that if a gun had been fired on the "grassy knoll" on that occasion, would the sounds of the gunshot as received in Dealey Plaza, and transmitted and recorded by the DPD radio dispatch system resemble the third group of impulses observed on the DPD recording. This question can be answered unambiguously if the position of the shooter and the location of the microphone that picked up the sounds were known, and all of the components of the DPD radio system were known and available. While none of the listed facts are known for the case, W&A were able to use an elementary method, based on fundamental principles of acoustics, that yields a numerical probability of whether the DPD impluse group corresponds to gunshot sounds generated on the "grassy knoll". W&A gathered and examined all the available information about Dealey Plaza and the events that occurred there, and about the DPD radio dispatch system. W&A then isolated a reliable measurement that could be used to compare gunshot sounds to the DPD impulse group in question. Applying this measurement to an assumed gunshot, for the conditions given in the question, and to the DPD impulse group, W&A were able to compare the two and derive a probability of correspondence.

The approach taken by BBN and W&A is appropriate, relevant, and correct for the task. Either the FBI failed to understand or chose to ignore it, since it is not included with the methods listed in the FBI's report. On page 13 of their report, the FBI asserts that "there are at least two known acoustical and one non-acoustical method that could determine whether the four specified impluse patterns on the DPD recording originated from Dealey Plaza, Dallas, Texas, diuring the Presidential assassination on November 22, 1963." The methods that are proposed by the FBI demonstrate that they failed to understand the nature of the task since these methods are inappropriate for the problem at hand.

The first method proposed by the FBI is to show that "the other information on the DPD recording just before, during and just after the pertinent time period was exclusively from Dealey Plaza." This method is appropriate only if all of the sounds recorded in the pertinent time interval were transmitted by the same one microphone. However, as was stated in our reports, sounds transmitted by other microphones also were recorded in this interval. Therefore, this method cannot be used to show that the sounds in this interval originated exclusively in Dealey Plaza. The FBI acknowledges that this method cannot be used. On page 14 of their report, they state that "The first acoustical method cannot be used to validate that the designated impulsive information originated in Dealey Plaza, since other sounds during the pertinent portion either did not originate from Dealey Plaza or their origin is unknown." Yet, after providing some examples of these sounds, the FBI then concludes that, ". . . this method does not show that the designated patterns originated from Dealey Plaza, and in fact, reflects contrary information." Since a method that ". . . cannot be used to validate that the designated impulsive information originated in Dealey Plaza. . ." inevitably will fail to do so, the first part of the FBI's conclusion is meaningless. The second part of the conclusion, in which the FBI states that this method ". . . in fact, reflects contrary information." implies that the method somehow reflects evidence that the impulse sounds did not originate in Dealey Plaza. This part of the conclusion is entirely unsupported. Neither the failure of this particular method to demonstrate that the stuck microphone was in Dealey Plaza, nor the evidence that transmissions from microphones outside Dealey Plaza also were recorded in the pertinent segment of the DPD recording indicates that the stuck microphone was not in Dealey Plaza or in any way provides any information that reflects on where the microphone actually was located.

The second method proposed by the FBI is to prove "that the (impulsive) patterns represent sounds from Dealey Plaza if the information being analyzed is unique to Dealey Plaza to the exclusion of all other locations within the range of the DPD radio system." This method cannot be used even if it can be shown that the sequences of echoes for gunshots fired in Dealey Plaza are unique to that locale. The noise on the DPD Dictabelt, the uncertainty in the location of the moving microphone and, in the case of the "grassy knoll", the uncertainty in the location of the gun preclude the use of uniqueness as a basis for determining the origin of the recorded impulses. BBN was able to use the principle of uniqueness in the analysis of recorded gunshot sounds when they determined the location of the weapons that fired the first several shots at Kent State University in 1970. They were able to do so in that instance because they had prior knowledge of where the recording microphone had been located. No such prior information is available for the microphone that recorded the sounds on the DPD Dictabelt.

In their report to the HSCA, W&A presented the concept of uniqueness to illustrate the relationship between the location of a gun, a microphone, a group of echo producing surfaces and the echo pattern that will be recorded by a microphone. Apparently, the FBI misunderstood this part of the W&A report since they thought that this illustration represents the second method proposed by the FBI. This is seen on page 14 of the FBI report where they state that "the second acoustical method utilizing the alleged uniqueness of the designated sound as applied by Weiss and Aschkenasy, also cannot validate that the impulsive information is from Dealey Plaza."

The only scientifically valid approach that can be taken for the problem at hand is incorporated in the methods used by BBN and W&A in their analysis, yet excluded by the FBI. This approach establishes a basis for calculating the probability that echoes of the gunshots fired in Dealey Plaza and the specified impulse groups on the DPD Dictabelt represent the same event. As it happens, the analysis reveals a high probability that the microphone that transmitted the sounds heard on the DPD Dictabelt was moving in Dealey Plaza at the time of the assassination, and that the recording contains the sounds of gunfire. The analysis also shows that, with high probability, the third group of impulses identified by BBN corresponds to a gunshot sound fired on the "grassy knoll" of Dealey Plaza.

We have attached a memorandum detailing more fully our disagreements with the FBI. We welcome responsible inquiries from any concerned party and hope that this letter and the memorandum will dispel any further confusion.

Respectfully yours,

James E. Barger, chief scientist, Bolt, Beranek & Newman, Mark R. Weiss, professor, Department of Computer Science, Queens College of C.U.N.Y.; Ernest Aschkenasy, consultant, New York, N.Y.

MEMORANDUM

To: Hon. Louis Stokes, Member of Congress, House of Representatives, Washington, D.C.

From: Dr. James E. Barger, Dr. Theodore L. Rhyne, Mr. Edward C. Schmidt, Dr. Jared J. Wolf, Bolt Beranek and Newman Inc., Cambridge, Mass. 02138.

Date: March 27, 1981.

This memorandum details our disagreements with the FBI critique, found on pages 13 through 20 of their review, of our tests on the Dallas Police Department recording.

On page 13 the FBI asserts that there are "at least" three known methods that could determine whether the four impulse patterns we found originated from Dealey Plaza. Their subsequent discussion of their three methods, to the exclusion of the method we actually used, does not constitute a rational or an effective critique of the findings we obtained from the DPD recording.