The events of 9/11 were huge. The body of evidence that the administration, or other agencies within the US government, were involved is also huge. The problem with summarizing the information is that the scale of the operation and its cover-up are so vast. Finding smoking guns is like picking up litter on a field. It's hard to move in a straight line. That makes it hard to create a simple narrative.

My personal questioning of the events of 9/11 began a few years later, when my sister went to a 9/11 conference and brought back books, DVDs, and enthusiasm. I watched the DVDs and became especially fascinated with one clip where the North Tower appeared to be literally erupting as it fell. One streamer caught my eye because I was able to follow its trajectory. I did some simple measurements right on the TV screen and estimated that the horizontal ejection velocity of that stream of debris was around 60 mi/hr. These ejections of material were from high in the building. How could heavy steel members be thrown sideways so fast when even the downward collapse had not picked up very much speed? This did not seem to me to be consistent with a purely gravitational collapse. I was hooked. I started using some video analysis tools I use in my teaching to analyze the motions of various ejecta and the buildings themselves.

Several videos of the collapse of both towers show waves of horizontal mass ejections that race down the faces of the buildings, nearly keeping pace with material falling outside the building, well below the zone of destruction itself. (YouTube: South Tower Coming Down and Race with Gravity.) The ejections appear to come from many floors at the same time, which is inconsistent with the idea that the ejections consisted of debris blown out floor-by-floor as the floors pancaked together. In addition to the massive waves of ejections there are many photographs and videos showing individual, focused, high-speed ejections of material many floors below the point of collapse. These are easily explained as explosive ejections. They are not convincingly explained as escaping jets of compressed air.

The lack of sufficient cause for the collapse has been thoroughly documented, disputed, rationalized, and obfuscated. The jet fuel would have burned off within the first ten minutes. Most of the fuel burned up in a fireball outside the building, especially in the case of the South Tower where the plane mostly missed the core columns. The fires in the buildings, beyond the first few minutes, were essentially office fires, and not very large ones at that, ignited by the jet fuel, like lighter fluid on charcoal. Jet fuel is kerosene. Temperatures from either kerosene or office fires are insufficient to melt, or even catastrophically weaken, the massive steel columns running up the core of the building. Even if the flames and air temperature were maximally hot, the large mass of steel would wick away the heat and not raise the steel temperature sufficiently. For the steel temperature to come close to the air temperature the fires would have to be of long duration, but these fires were very brief, on the order of an hour. There are photographs and
video footage of a woman leaning on a girder and waving in the hole where one of the airplanes crashed waiting to be rescued. This would seem to be direct testimony that the fires on the floors where the impact and the jet fuel had their greatest effect, had subsided, and the air and steel temperatures were moderate enough for people to walk around and touch the steel: nowhere near hot enough to cause failure of the structural steel columns. The fact that the fires were emitting black smoke is a sign that they were not burning at high efficiency, so high estimates for fire temperatures are unwarranted. Furthermore, no steel beams recovered by NIST during its investigation showed temperatures over a few hundred degrees—far below the temperatures needed to weaken steel. (The small sample of steel studied after the event is a problem in establishing steel temperatures conclusively, but by the same token, it speaks to the rapid and near-total destruction of the crime scene. Destruction of any crime scene is itself a crime. In this case it is part of an ongoing criminal cover-up of mass murder.)

On the other extreme of temperatures, the research of Steven Jones, Kevin Ryan, and others have established that there were very high temperatures present in the building, not just enough to weaken steel, but to melt it. They found evidence for thermite in the rubble pile. There were pools of molten steel under the rubble piles of Buildings 1 and 2 (the North and South Towers) and Building 7 that remained molten for weeks after the building collapses, indicating a continuing energy source. NASA thermal images show evidence of high temperatures on the surface of the rubble pile for literally months, indicating even higher temperatures below. Furthermore, several research groups found tiny iron spheres in the dust scattered all over Manhattan. These are from tiny droplets of molten iron that solidified before hitting the ground. For there to be tiny spheres of iron in the dust, there had to be temperatures above the melting point of iron, and a blast event to atomize the molten iron into droplets during the collapse of the building, for it to be distributed with the dust. These are droplets of iron, not steel. They did not come from the structural steel of the towers. Iron spheres are an expected byproduct of the thermite reaction. Along with the iron spheres, Steven Jones also discovered red and gray layered chips in the dust samples, which turned out to have the signature of thermite.

In April 2009 an international team of scientists published a seminal paper identifying the red and gray chips found in the dust as high-tech nano-thermite, also known as super-thermite. Unlike ordinary thermite or thermate, which could be considered high-temperature incendiaries, nanothermite releases its energy at a much higher rate because of the high surface-to-volume ratio of the particles. When combined with suitable volatile materials, nano-thermite can be formulated as an explosive. The ignition temperature is also much lower than ordinary thermite.

Everyone has seen the destruction of the Twin Towers. Many people have never seen, or even heard about, the destruction of Building 7, a 47-story building across the street from the North Tower. For many people it was seeing Building 7 fall that brought them into the 9/11 Truth Movement. Building 7 came down at 5:20 in the evening of 9/11, even though it was not hit by an airplane and only had fires on a few floors. If you have ever seen a controlled demolition on TV, that is what the collapse of Building 7 looked like. It was a bottom-up demolition.
It looks like the building is just sinking into the ground. The roof line stayed level as it fell, implying that the onset of collapse was simultaneous across the whole width of the building, and it came down in freefall, implying that it met zero resistance. I had heard others claim that it fell at freefall, which seemed hard to believe, so I measured the rate of collapse myself. I can confirm that the first 2.5 seconds of the collapse is indistinguishable from absolute freefall. Everything about the collapse points to controlled demolition. The 9/11 commission omitted any mention of the collapse of Building 7, and the main NIST investigation offered no explanation for its collapse.

Ironically, although Building 7 was ignored after it collapsed, there is ample evidence of foreknowledge. BBC and CNN both reported its collapse, complete with an explanation for why it happened, but they got their script wrong and did the report while the building was still standing. In both cases, the intact building is clearly visible behind the reporter announcing the collapse. There are also numerous video and narrative accounts of policemen and firemen clearing people away, saying the building was going to come down. Larry Silverstein himself, the owner of the building, at one point states that he and an unnamed fire department commander made the decision to “pull it.” He later tried to re-interpret his comments, but from the context of the original statement he was clearly indicating they decided to demolish the building. The problem with this statement, of course, is that the building could not have been set up for demolition by the fire department in a matter of hours. Demolitions require weeks of preparation. If the demolition was planned, then the incidents of 9/11 had to have been known, and planned, in advance.

I presented a talk on the physics of 9/11 at a physics teachers' conference at Occidental College in early 2008. The physics teachers in the audience certainly represent a sample of the population with above average intelligence and intellectual curiosity. Yet approximately one-third of the audience had never heard of the collapse of Building 7. Anyone who is "into" 9/11 has seen endless discussion of Building 7, but for those who depend on the mainstream media for their information, it never happened. Given that this was one of the most anomalous events of 9/11, there seems to be a clear conspiracy of silence in the media. Video footage was broadcast on the day of 9/11 itself, but whereas videos of the falling towers persisted on TV for weeks, Building 7 immediately disappeared from the scene.

As blatant as any of the events of 9/11 themselves is the existence of a cover-up. The security cameras at local gas stations and hotels that would have recorded the Pentagon crash were immediately confiscated and withheld from public view. Two New York firefighters have stated that three of the four flight recorders at the World Trade Center were recovered, but according to the 9/11 Commission that they were not. The steel from the World Trade Center site was quickly disposed of, the vast majority of it taken to Asia for recycling. The official investigators retained only a few unrepresentative samples. A structural engineer from UC Berkeley who went to the site as soon as planes were allowed to fly was banned from Ground Zero. He had to do his research in recycling yards as the evidence was being destroyed. The destruction of evidence was not mere oversight or carelessness by the Giuliani administration: it was done in the
face of a public outcry from firefighters and others who published angry complaints in the New York Times.

Not only was the physical evidence destroyed, the blueprints of the buildings were made secret and withheld from public view. They were not even made available to the investigators. Copies of some of the architectural and electrical blueprints of the North Tower were later made public by whistle blowers. They are published on the www.AE911Truth.org website and elsewhere. They confirm the existence of massive columns in the core of the building and cross bracing between the columns, contradicting early claims of the buildings' architectural inadequacy.

There is abundant testimony from many eyewitnesses who reported explosions in the buildings long before they fell, including explosions in the lobby and basements. There is video footage of burn victims who were involved in some of these explosions. There is a video of firefighters using a pay phone interrupted by a loud, startling explosion in Building 7 long before it fell. It has recently been verified that that video was taken before noon. There is eyewitness testimony by a city official (Barry Jennings) of explosions in Building 7 even before the two towers fell. The leadership of the fire department had the presence of mind to interview hundreds of firefighters—who clearly would have some standing as expert witnesses—in the weeks after 9/11. Many of them testified to explosions in the buildings prior to the collapse. Their testimony was locked away, and released only through recent court action.

The 9/11 commission itself was a result of long and loud pressure by the families of 9/11 victims. Launching an immediate investigation would seem to be a no-brainer, but it was resisted for over a year by the Bush Administration. When the administration finally acquiesced, it appointed Henry Kissinger—one of the least transparent figures in American history—to head the commission. Public outcry and conflict-of-interest resulted in his withdrawing his name. The commission was overtly balanced, with five Republicans and five Democrats, but the Executive Director, who tipped the balance and steered the commission behind the scenes, was Philip Zelikow, a close associate of Condoleezza Rice. In violation of the rules of the commission, Zelikow now appears to have remained in contact with the White House during the investigation. Also, the commission adopted rules that it would present a "consensus" report, meaning no controversial or dissenting opinions would appear. As noted above, they made no mention whatsoever of Building 7 and they suppressed any testimony that would call the official account into question.

Reasons for suspicion go on and on. The scientific investigators for 9/11 have come under scrutiny. NIST, the National Institute of Standards and Technology, was the government agency assigned to investigate the building collapses. The NIST report on Building 7, which was released for public comment in August 2008, claimed that the collapse of Building 7 took 40% longer than a freefall collapse. This is a blatantly false claim. I and others challenged them on this point, and in the November 2008 final report they had a revised analysis in which they admitted a 2.25 second period of freefall, but buried it in a deceptive framework and ignored the obvious implications. Freefall can only occur if all
resistance has been removed, simultaneously across the whole width of the building within a small fraction of a second. This is a smoking gun for use of explosives. NIST refused to even look for evidence of explosives. NIST is thus clearly playing a role in the cover-up.

Going beyond the events at the World Trade Center, there is evidence that multiple war games, some of them involving hijackings and terrorist attacks on buildings, were going on during 9/11 that confused the response to the actual airplane attacks. Some of these activities involved injecting false blips on radar screens that may have made tracking the actual hijackings difficult or impossible. There were the notorious anomalous "put options" on United Airlines and American Airlines stocks (essentially bets that the stock price would go down), indicating apparent foreknowledge, and the subsequent whitewashing of this fact. There were the totally unbelievable personal artifacts of the hijackers (including passports supposedly found on the streets of New York City and at the Shanksville crash site, when much more durable artifacts vanished entirely). To plant such false artifacts implies complicity in a cover-up of the facts and a spinning of the facts to justify targeting Arabs. To plant them within a day of 9/11 implies preparation and therefore foreknowledge.

There is no public evidence that any of the supposed hijackers were actually on any of the planes. There are informed opinions by flight instructors that some of the purported pilots were virtually unable to fly. Some of the supposed hijackers had been trained at CIA facilities in Florida, had taken courses at Monterey Naval Postgraduate School, were allowed into the US with questionable visas, and were under FBI surveillance. How is it that the 19 supposed hijackers, some of them reportedly still alive, were identified almost immediately, when the other side of the official story is that we were taken by complete surprise? Whether the supposed hijackers were onboard or not may be a moot point. There is evidence that all three of the planes that crashed into buildings (the two towers in New York and the Pentagon) flew on flight paths into their targets that were virtually impossible for human pilots to manage.

Add to the facts of the day the potential motives of the administration and others involved. The Bush presidency, starting out with record-low approval ratings because of the contested 2000 election, had consistently sinking approval ratings through the first eight months of his term. All the while the Neocon think tank, Project for a New American Century, made no secret of its ambitions to stir up an aggressive US foreign policy, even saying in its own literature that achieving its goals would require a "new Pearl Harbor." PNAC got its Pearl Harbor. Bush got the biggest shot-in-the-arm approval-rating jump in US history. The Patriot Act, which was prepared in advance and awaiting an incident, made its instant debut. The Neocons got their wars in Afghanistan and Iraq, both of which were planned long in advance, and they had a War on Terror that could be (and was) used to justify any act they desired. The elder George Bush had stellar approval ratings while the Gulf War was in progress, but lost ground as soon as it ended. George W. Bush repeatedly and publicly reveled in being a "war president"... in a war of his own making, which from the outset he declared would last for decades.

Larry Silverstein, the leaseholder of the destroyed buildings of the WTC complex,
also had adequate motivation. He leased the World Trade Center towers from the New York Port Authority in the summer of 2001, just months before the attack. His contract had an escape clause so he would owe nothing if the buildings were attacked by terrorists. Furthermore, he insured the buildings against terrorism and sued to collect twice the insured value, claiming two independent terrorist attacks. On the surface it was a terrible investment. The occupancy was chronically low, and the buildings required asbestos cleanup that would cost hundreds of millions of dollars. The Port Authority had tried repeatedly and unsuccessfully to get demolition permits.

Many people I have talked with are unwilling to consider any of the facts discussed so far on the premise that massive conspiracies just can't happen because someone would be sure to blow the whistle. With all the talk of conspiracy theories, I decided to go back and look at the incident that brought that term into our lexicon: the John F. Kennedy assassination. I started with the classic movie, *JFK*, directed by Oliver Stone. I highly recommend it, especially for those of you who were born since the assassination.

One of the other videos I watched was *JFK: The Case for Conspiracy* by Robert J. Groden. One of the core sections of the video is a series of interviews with a nurse and eight doctors from the Parkland Hospital in Dallas, where Kennedy was taken immediately after being shot, and three technicians at the Bethesda Naval Hospital who were eyewitnesses to the autopsy. All twelve of these people gave virtually identical accounts of John F. Kennedy's wounds. They all described a massive exit wound at the rear of the skull, with a large chunk, about the size of a fist or a baseball, entirely missing from the back of his head, implying that the shot came from the front. This meshes perfectly with the Zapruder film, which shows the fatal shot hitting Kennedy in the forehead, with material being blown backward. The X-ray and photograph in the Warren report, however, show the back of the head intact. The Warren Commission was urged to show these to the doctors at the Parkland Hospital, but Commission members refused. When the makers of the film years later confronted the doctors with these photographs, all but one of the doctors stood by their accounts and said the photographs and X-rays were faked. (One doctor, Dr. Marion Thomas Jenkins, said he must have been mistaken and would not contradict the official photographs, although up until seeing the official photograph his account was completely consistent with the other doctors.) Several described in clinical detail exactly which bones of the skull were shattered and which parts of the brain they saw through the opening in the skull or lying on the table. (See also this History Channel clip that covers much of the same information.)

This film left no question in my mind that the assassination of JFK involved multiple shooters, including at least one from the front, a direction incompatible with Oswald's supposed location in the upper floor of the Texas School Book Depository, above and behind Kennedy. The Warren Commission swept aside all of this strong evidence for a second shooter, and apparently faked evidence to cover up the discrepancy. Dissenters from the official explanation were branded as "conspiracy theorists" or "conspiracy nuts" and presumed to be mentally unstable.
People today pooh-pooh conspiracy theories on the premise that with so many people involved it would be impossible to avoid spilling the beans. The flaw in that reasoning is that both in the case of JFK's assassination and 9/11 the beans have been spilled all over the table. Video evidence shows a shot from the front, and hundreds of eyewitnesses to the assassination place the shooter(s) behind the fence on the grassy knoll, to the front of Kennedy's car. Multiple doctors' expert testimony corroborates this conclusion but is excluded from the record. To succeed, a massive government conspiracy need not go flawlessly. It can succeed through sheer bluster, raw political power, falsified evidence, an intimidated or otherwise compliant press, mindless denunciations of dissenters as lunatic fringe conspiracy theorists, and repeated application of the BIG LIE.

We see this same methodology in the repeated Black Box Voting scandals, in starting a war with Iraq based on lies, and in the events of 9/11 themselves. Truth is more or less irrelevant, since raw power prevents it from being acted upon. Contradictions are buried, covered up, or simply left uninvestigated. Therefore it doesn't matter if the truth comes out. All they need is some pretext to dismiss it, no matter how flimsy. The only way the 9/11 Truth Movement, the Black Box Voting movement, the Out of Iraq movement, etc. can succeed is to muster the political power to prevail. Without that, all the administration has to do is act as though nothing is amiss and do nothing. The inattentive public can be counted on to go along with whatever they are told. Truth can play a role to the extent that it helps galvanize the movement, but fighting Fox News-style propaganda to win the minds of the masses is an uphill battle even for truth.