When nobody knows nothing, Everybody is an expert

There are no scientific reports about what the airplane did to the structure of the towers because the rubble was destroyed before scientists had a chance to properly study it. We can only guess on whether the airplane was shredded into pieces; whether large pieces penetrated deep into the tower; and how much damage was done to the structure of the towers.

Also, there are no scientific reports on effect the fire had on the structure. We can only guess at the temperature the steel beams reached; which of the steel beams reached a high temperature; and what effect those high temperatures had on the structure of the towers.

The only source of information about the collapse are photographs and television news reports. Unfortunately, those images show only the outside of the building. This incredible lack of information about the World Trade Center collapse creates an interesting situation: ***there are no experts on the collapse.***

If FEMA had hired a group of scientists to analyze the collapse, those scientists would be the experts. FEMA would have been able to produce detailed reports and diagrams that show which part of the steel structure the plane damaged, the temperature reached at various locations in the crash zone, and which part of the structure failed first. If anybody had questions about the collapse, those scientists would be the authorities.

Unfortunately, the FEMA report is mainly just structural information about the buildings; it does not explain why the towers collapsed. Their report also has a few brief speculations as to the possible temperatures in the fire zone and the damage caused by the airplane, but their guesses are no better than anybody else's. Their guesses are based on images from video and photographs, rather than scientific analyses of the rubble. Each of us is capable of looking at those same photographs and speculating on what they mean.

How can conspiracy theories be disproved?

The lack of serious information makes it very easy to create a conspiracy theory, and very difficult to prove that it is incorrect. Conspiracy theories cannot be disproved with material from the FEMA report, or with the reports of other experts, because nobody knows anything about the collapse. Disproving a conspiracy theory requires looking the same photographs and news video that everybody else looks at, and then finding a more convincing speculation of what those photographs mean.

When everybody is blind

Nobody can seriously claim to be an expert on the collapse of the World Trade center simply because nobody had a chance to study the rubble. Everybody who has looked at the photographs and television news video knows as much about the collapse as the most knowledgeable scientists. Therefore, everybody who has viewed the photographs and video can claim to be an expert. I looked at the photos, for example; therefore, I am an expert. You will be an expert after you look at the photos in this book.

If you think my statements are a bit extreme, let's look at what some "official" experts are saying.

Charles Clifton, structural engineer

Mr. Clifton is a technical expert for the *Heavy Engineering Research Association* in New Zealand. One of his specialties is "determining the behavior of steel framed buildings under the extreme events of severe earthquake or severe fire." He wrote an analysis of the collapse of the towers that is referred to at hundreds of Internet sites, including universities that have the technical expertise to verify his analysis, such as the University of Illinois and the Institute for Structural Mechanics in Germany.

The first point I would like to make about his analysis is that he has a disclaimer that supports my previous remarks that nobody knows anything:

> *"I don't have access to material / data from the wreckage of these buildings so I am not in a position to make detailed observations."*

He admits that his lack of data from the rubble makes it impossible for him to truly explain the collapse, but he does not seem to realize that nobody else has any data, either. His remark would have been more accurate if he had written it this way:

> *"Nobody has access to material / data from the wreckage of these buildings so nobody is in a position to explain the collapse."*

His theory is based on photographs and TV news. He described it this way:

> *"On the basis of what I have seen and heard reported to date..."*

A "real" analysis is not based on what was "reported". Normally, scientists do their own research and verify all facts rather than believe what they saw on television. A serious report of the collapse would state: *"Our analysis of the steel beams in the rubble shows..."* rather than *"According to the Channel 4 Action Reporters..."*

Unfortunately, the rubble was destroyed, so we every analysis of the collapse is actually just an analysis of photographs and CNN reports. This creates the bizarre situation in which scientists and engineers write highly technical reports and then support their theories with remarks about what they saw on television. In fact, Clifton actually quotes a television reporter:

> *"Having done this calculation it is more easy to understand what our eyes showed us namely the planes slicing through the perimeter frames "like a knife through butter" as one reporter has stated."*

If Clifton had been able to inspect the rubble he would have been able to create diagrams of the steel beams in the building that would identify the steel columns that broke or bent when the airplane hit them. He would also be able to show us which of the floors and elevator shafts were damaged by the airplane, and how severe the damage was. Television reporters and magazines would reproduce his diagrams and quote passages from his report. Unfortunately, Clifton has no idea what happened when the plane entered the building, so the situation was reversed; i.e., he quoted television reporters rather than reporters quoting him.

Mr. Clifton is an expert on severe fires in steel buildings. Obviously, his experience with fires suggests to him that fire could not have caused the towers to collapse. His conclusion is that the *plane crash*, not the fire, was the main reason for the collapse:

> *"This impact damage - not the severity of the fire I contend is the principal cause of the ultimate collapse."*

Henry Koffman of USC

Many people believe the steel either melted or came close to melting. Henry Koffman, director of the Construction Engineering and Management Program at the University of Southern California, make such a remark in an interview:

> *"The bottom line, in my opinion, is that intense heat from the jet fuel fires melted the steel infrastructure, which went past its yield strength and led to the collapse of the buildings,..."*

Professor Eagar of MIT

Thomas Eagar is a professor of Materials Engineering and Engineering Systems. The *Minerals, Metals & Materials Society* published his analysis that explains the fire could not possibly have been hot enough to melt steel. His main points were:

- Steel melts at 1500°C (2700°F).
- Jet fuel produces a maximum temperature of approximately 1000°C (1800°F) when mixed with air in *perfect proportions*, but this only causes steel to glow a bright red. Therefore, theories that claim the steel melted violate the laws of physics.
- It is virtually impossible for an airplane crash to coincidentally mix the fuel and air in such perfect proportions that the maximum possible temperature is achieved. Therefore, the temperature of the steel was certainly *significantly less* than the maximum of 1000°C. Theories that claim the steel reached temperatures near 1000°C could be described as violating the laws of statistics.

Professor Eagar did not discover something new about fire. Rather, it has been known for centuries that hydrocarbons cannot melt iron. Centuries ago it was discovered that charcoal produces a higher temperature than hydrocarbons, but even charcoal cannot melt iron unless the charcoal and iron are placed in a properly designed furnace. Also, air is blasted on the charcoal to provide plenty of oxygen. This is where we got the expression "blast furnace."

Eagar points out that residential fires are usually in the 500°C to 650°C range, and if the steel in the tower reached 650°C (1,200°F) it would lose half its strength. However, Eagar points out that the towers were designed to handle such high wind forces that even at half-strength the towers were strong enough to stand up. Eagar's conclusion is that the collapse was due to the combination of a loss of strength from the high temperature and the *thermal expansion* in the steel beams that caused the beams to buckle.

What temperature does Eagar believe is realistic for the fires in the tower? His written report did not give an estimate, although he hints at 650°C. In a television interview he give estimates:

> *I think the World Trade Center fire was probably only 1,200°F or 1,300°F.*

The only problem with his estimate was that after three sentences he increased it

> *The World Trade Center fire did melt some of the aluminum in the aircraft and hence it probably got to 1,300°F or 1,400°F.*

I suppose if he had continued to talk, another few sentences the temperature would have climbed to 1500°F.

Eagar is one of the rare individuals who follows the laws of physics and statistics, but even he has no idea why the buildings collapsed. Since nobody analyzed the rubble, nobody can say for certain if the fire had melted any aluminum, or if the steel structure reached temperatures as high as 1,400°F, or whether any beams buckled. Like everybody else, this professor has no data to support his theory or his temperature estimates.

Professor Connor of MIT

An article in October 2001 of *Scientific American* quotes Connor:

> *"In my theory, the hot fire weakened the supporting joint connection"*

Since all joints and steel beams were sold as scrap metal or buried in landfills before anybody could analyze them, nobody knows what effect the fire had on those joints. For all we know the joints were weakened by the airplane crash, not the fire, which would mean Clifton was correct that the airplane crash was the most significant factor in the collapse. It is also possible that corrosion had weakened a lot of the joints years before the planes hit the building. Also, some of the bolts may not have been tightened properly, and some welds may have been defective. Those rusty and defective joints may have been the main reason the buildings collapsed; the airplane crash and fire may have only initiated the collapse.

Professor Bazant of Northwestern University

Professor Bazant published his theory in the *Journal of Engineering Mechanics.* He believes the fire was so hot that it caused the steel beams to bend and buckle. One of his remarks about the temperature:

> *...sustained temperatures apparently exceeding 800°C.*

Notice his phrase "apparently exceeding." Since he could not inspect the rubble, he has no idea what the actual temperature was. In his conclusions he puts the following remark in parentheses to prevent people from complaining about his 800°C (1470°F) estimate:

> *(though possibly well below 800°C)*

Bazant's theory requires the steel reach very high temperatures, but in his conclusions he admits in parentheses that the steel may have been well below 800°C. However, if the steel was "well below" 800°C, his theory becomes invalid. In other words, the remark he put in parentheses should have been written like this:

> *(Though possibly well below 800°C, in which case please disregard my theory.)*

Professor Bazant has no idea what was happening inside the towers; rather, he is merely speculating on the possible temperature.

Nobody knows nothing!

Some of the "experts" know more about fires or engineering than you and I, but they do not know what happened inside the towers after the airplanes crashed into them. The experts are looking at the same photographs and CNN video that you and I have seen. We are all experts on the collapse because nobody analyzed it; we are all experts because we are equally ignorant about what happened that day.

The experts cannot even agree on whether the towers were designed properly. For example, the October 2001 issue of *Scientific American* quotes Robert McNamara, president of the engineering firm McNamara and Salvia:

> *"the World Trade Center was probably one of the more resistant tall building structures, <...> nowadays, they just don't build them as tough as the World Trade Center."*

The FEMA reports also implies the towers were strong:

> *The floor framing system for the two towers was complex and substantially more redundant than typical bar joist floor systems.*

Other "experts" claim that older buildings stronger than the "lightweight" and "economical" World Trade Center. Still other "experts" write articles that imply that the towers had an unusual "tube" design which was not as strong as the older, more conventional buildings.

Which of these experts is correct? Were the towers made of thin, light weight steel in order to save money? Or were the towers stronger than the older buildings? Was the "tube" design the reason the buildings collapsed, or was it reason the towers were "one of the more resistant" of buildings?

Information is not easy to find

An article in *Science* magazine mentions that William Grosshandler, chief of the fire research division of Building and Fire Research Laboratory of NIST wants his lab to analyze the smoke plumes from the towers:

> *"But that sort of analysis requires high-quality video and still photos of the smoke plume, which have been hard to come by.*

Associated Press, Reuters, and other conventional news agencies will gladly provide photos, but locating photos and video taken by individuals is extremely difficult. Many citizens got together to give blood and raise money, but not many people want to help gather information for an investigation. To make the situation worse, some people have made accusations that the our government confiscated the video from some security cameras and individual citizens, perhaps to "limit" the investigation.

The difficulty in acquiring information has caused news reporters to provide inaccurate information. This exasperates the problem because many people will spread that inaccurate information. Two examples are from *U.S.A. Today* and *U.S. News and World Report*.

U.S. News and World Report

This magazine has an article that claims the temperature was beyond the maximum possible temperature of about 1800°F:

> *Weakened by the nearly 2,000-degree heat, the remaining columns buckle.*
>
> *The structural steel above and around the fire begins to expand and soften like heated plastic in the intense heat.*

Their report on the Internet had not been corrected as of June, 2002. They also claim that the top of the South Tower "rotated slightly." Their diagram (Fig. 2-1) has an arrow to indicate the direction of rotation. However, I cannot see the top of the tower rotating when I look at videos or photographs. Then their next diagram (Fig. 2-2) could mislead readers into assuming the collapse started at the ground after the top stopped rotating. This drawing contradicts photos of the event.

Figure 2-1

Figure 2-2

US News & World Report incorrectly imply the collapse of the South Tower started at the bottom.

Their drawing of the North Tower also implies it collapsed from the bottom. More amusing is the smoke ring around the middle of the tower; it reminds me of the rings on the planet Saturn (Fig. 2-3). Some interesting ribbons and puffs of dust formed as the towers collapsed, but they did not look like Saturn's rings.

US News & World Report also incorrectly imply the collapse of the North Tower started at the bottom.

Figure 2-5

U.S.A. Today

They posted an animated collapse at their Internet site. Rather than tilt and rotate, their animation shows the South Tower falling vertically (Figs. 2-4 and 2-5). They also claim that the final pile of rubble was six or seven stories tall. However, photos show the top tilted as it fell, and the piles of rubble were low to the ground, not six stories tall. On September 23, the government agency *NOAA* flew an airplane over the World Trade Center to create a three-dimensional elevation map of the area, and their maps also show the piles of rubble very low to the ground.

Figure 2-4

U.S.A. Today incorrectly shows the top of the South Tower falling vertically. It actually tipped towards Building 4, possibly as much as 24°

It was the North Tower that fell vertically.

Figure 2-3

U.S.A. Today claims the final pile of rubble was 6 or 7 stories tall. While the tips of some pieces of steel may have reached as high as 6 stories, the bulk of the rubble was low to the ground. There were even some pits below ground level where basements caved in.

Maps of the Pentagon are incorrect

Recently Steve Koeppel, a former Air Force pilot, pointed out to the Internet site *thepowerhour.com* that some maps show the airplane hitting the Pentagon at the wrong location. For example, a map by *Los Angeles Times* (Fig. 2-6) shows the crash location at the southeast wall, but the true location is the northwest wall. Furthermore, according to military officials, the airplane hit the Pentagon at an angle rather than perpendicular, which means it was heading northeast when it hit, as the drawing of the plane shows in the corrected map (Fig. 2-7).

U.S. News and World Report shows the plane hitting the Pentagon while diving at a steep angle (Fig. 2-8), but according to military officials

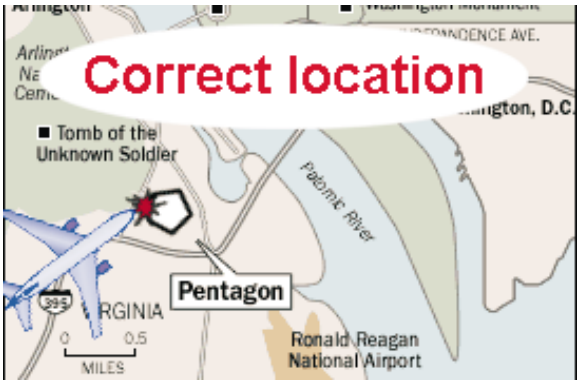
Figure 2-7

*The Los Angles Times shows the plane hitting at the **southeast** wall*

Figure 2-6

*The correct location was the **northwest** wall.*

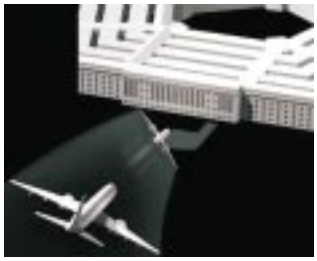
Also, the plane was traveling northeast, so it hit the wall at an angle.



it came in almost horizontal, and it was skimming the surface of the grass. It was so close to the ground that it knocked down a lamp post along the highway in front of the Pentagon.

Figure 2-8

The plane did **not** *dive towards the Pentagon, as US News & World Report shows.*



One *Washington Post* drawing is correct, but their closeup shows the plane hitting perpendicular to the building (Fig. 2-9).

Figure 2-9

The plane did **not** *hit the Pentagon perpendicularly, as one Washington Post drawing shows.*

The *ArmyTimes* also goofed (Fig. 2-10).

Figure 2-10

The ArmyTimes incorrectly shows Flight 77 hitting perpendicular to the building.

One of the few drawings that follows the official military explanation is from the group involved with Thierry Meyssan who wrote *The Frightening Fraud* (Fig. 2-10).

Figure 2-11

This 3-D simulation by the French group that wrote The Frightening Fraud shows the plane at the correct angle and distance above the ground.

A warning about Internet photographs

There are thousands of photographs and video segments of the World Trade Center attack on the Internet. As is typical of Internet images, they have been compressed to reduce their size. The three images in Figure 2-12 are an example of extreme compression.

Notice a dark blob appears to travel across the sky (towards the right). Some rumors on the Internet claim the blob is proof the attack was a fraud and that the U.S. military was involved. The reasoning is:

- No commercial aircraft was flying at that location, so it must be a military aircraft.
- Since the military denies their aircraft were in the area at the time, the military must be involved with this attack.

Before you believe such a weak theory, note that other photographs show both TV news and police helicopters in the area, so the blob could be one of them. It is also possible that the blob in is just an “artifact” caused by the software that compressed the image. However, I suspect somebody edited the images and deliberately created the blob to fool people. (Some images on the Internet have been obviously edited to deceive people, such as the images that show faces in the smoke.)

While it is possible that the blob is a military aircraft, you should not believe a theory that is based on compressed images. Demand the original, high-resolution images.

Figure 2-12

Three frames of video that have been compressed to the pont of absurdity.

They may have been edited, also.

A lot of information about the September attacks is inaccurate, and it is not always corrected when the mistakes are discovered. Hopefully the photos and drawings in this book will clear up some of the confusion on what happened that day.

Notes

This is the Internet version of Chapter 2 of *Time For Painful Questions*.

If this material interests you, go to:

www.dpgear.com