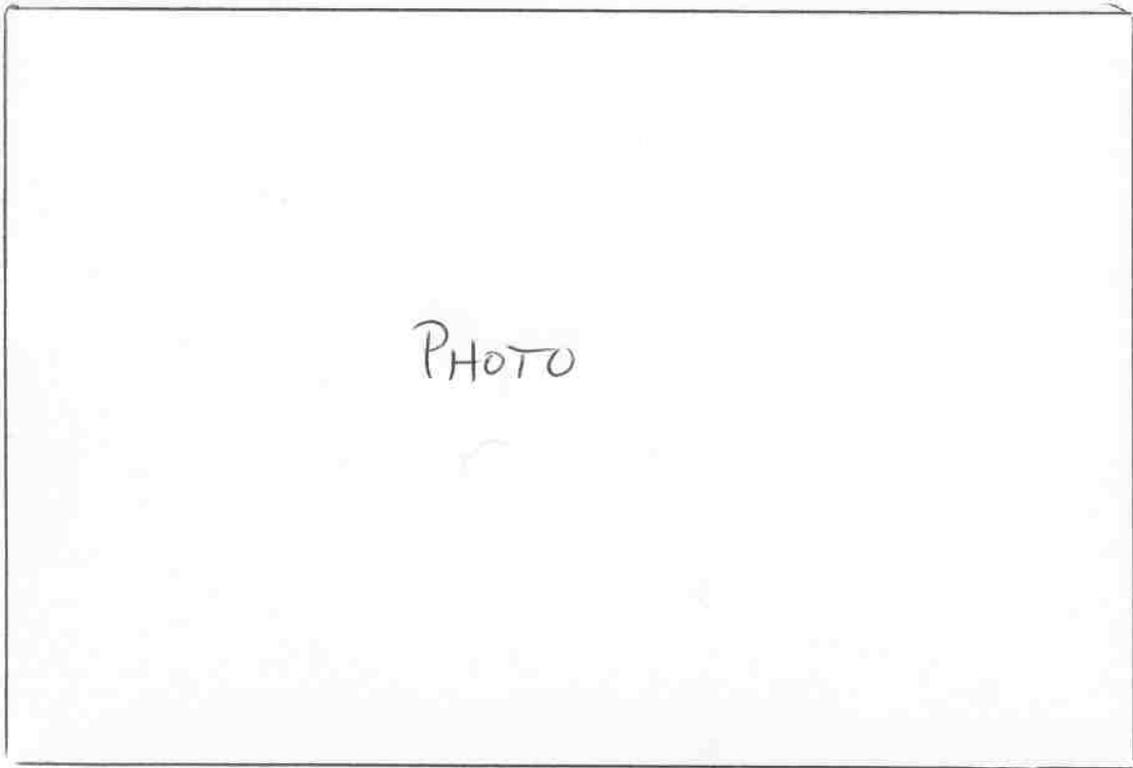


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Sept. 18, 2001

Hi Clayt – I’m taking your advice and writing down what I remember from last Tuesday, although I doubt that what I have to say will be of much interest to anyone. The simple fact is that I was oblivious to what was going on, from beginning to end. Actually, that’s probably what kept me alive, because if I knew what a terrible mess I was in, I probably would have dropped dead on the spot. (“Don’t shoot, Davy, I’m coming down.”)

Our office was on the 74th floor of WTC 1, (The North Tower) which was the first to get hit. My cubicle was in the south-west corner, with a beautiful view of the Statue of Liberty and the Hudson River. I was working on the computer when there was a big “boom” and the building shook, probably a foot or so where I sat. Next came a strange sound like hail hitting a window, but with some additional scratchy noises, while a blizzard of papers and sheet metal flew past the window. Some of it was burning, but most was just letter size documents, which you could almost read as they flew past. Up through the window, I could see a huge cloud of black smoke coming from the floors above.

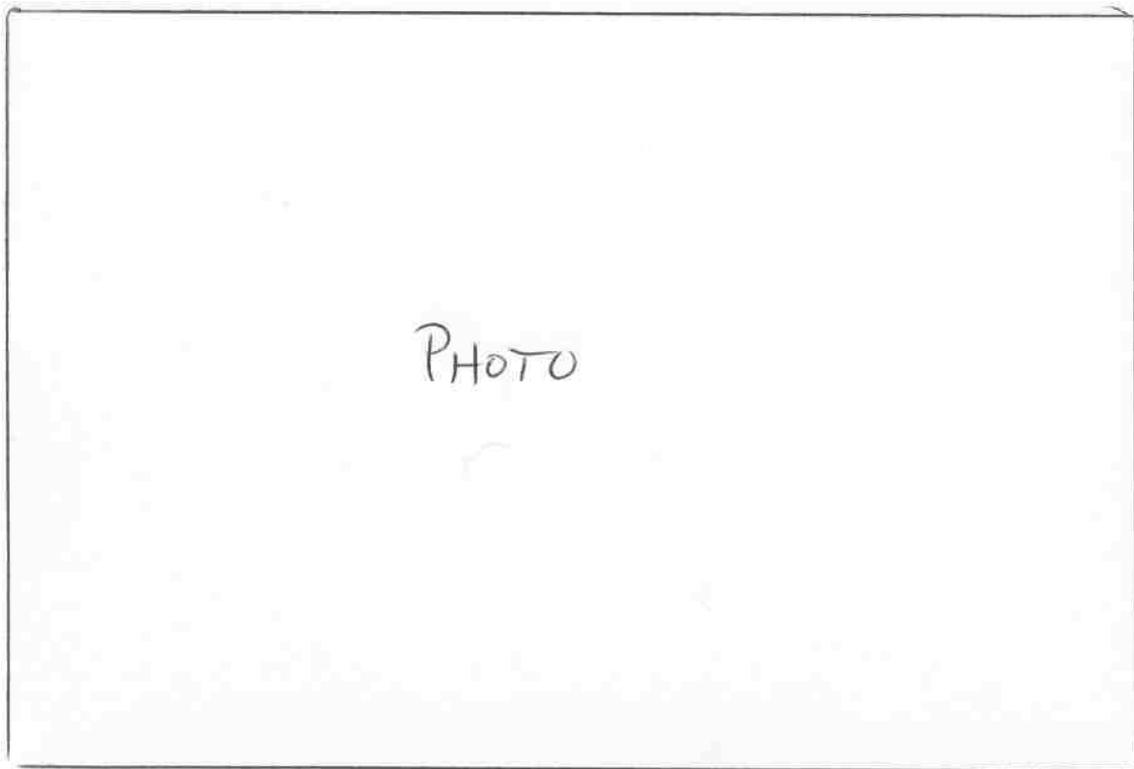


WTC#3 (3)

[Looking out our office window to the south.]

The fire alarm went off, flashing and beeping, and people started to leave. I heard my boss yell “OK people, let’s go – we’re getting out of here”. But not yours truly. I had decided, a few years earlier, that if the building were bombed, I would not be one of the first ones out. My reasoning had nothing to do with “women and children first”, but was based on some IRA attacks where two bombs were used, one to stir people up, and the second to kill large numbers when they came together during evacuation. Not leaving immediately was my first really stupid idea.

As it turned out, I was not the only one to hold back. One of my co-workers, whom I know well and respect highly, also decided to wait for a few minutes for the smoke to clear. It seemed a good time to call my wife and let her know I was all right. This sounds harmless, but the way I did it was bad idea number two.



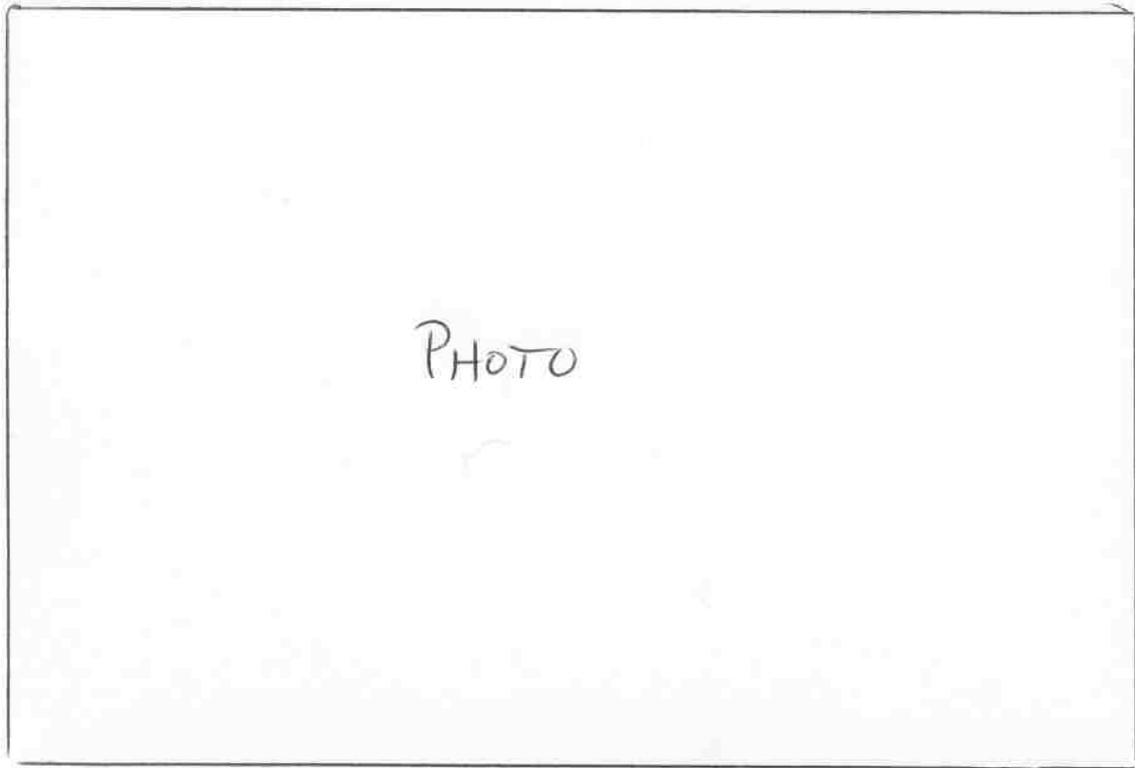
WTC#9 (1)

[The central core hallways, where the elevators and stairs were had some smoke in them. The photo might be showing it smokier than it actually was.]

My phone worked, but the phone at her school didn’t, so I couldn’t get through. While waiting to try the line again, I decided to send her an e-mail which she could read when she got home. The e-mail went out immediately, and I congratulated myself on being such a considerate husband. I tried the phone again, and although I couldn’t get an answer, the automated service offered to take a message.

[I didn't leave a message the first time I tried calling my wife because I didn't want to spend \$0.50 for the automated service. I had regained some of my common sense by the time I got around to calling again, when I sprung for the fifty cents.]

I left word that there had been some kind of explosion in the building, but that I was fine, and that I intended to remain in the building to let things settle down. This was also what I had put in the e-mail.

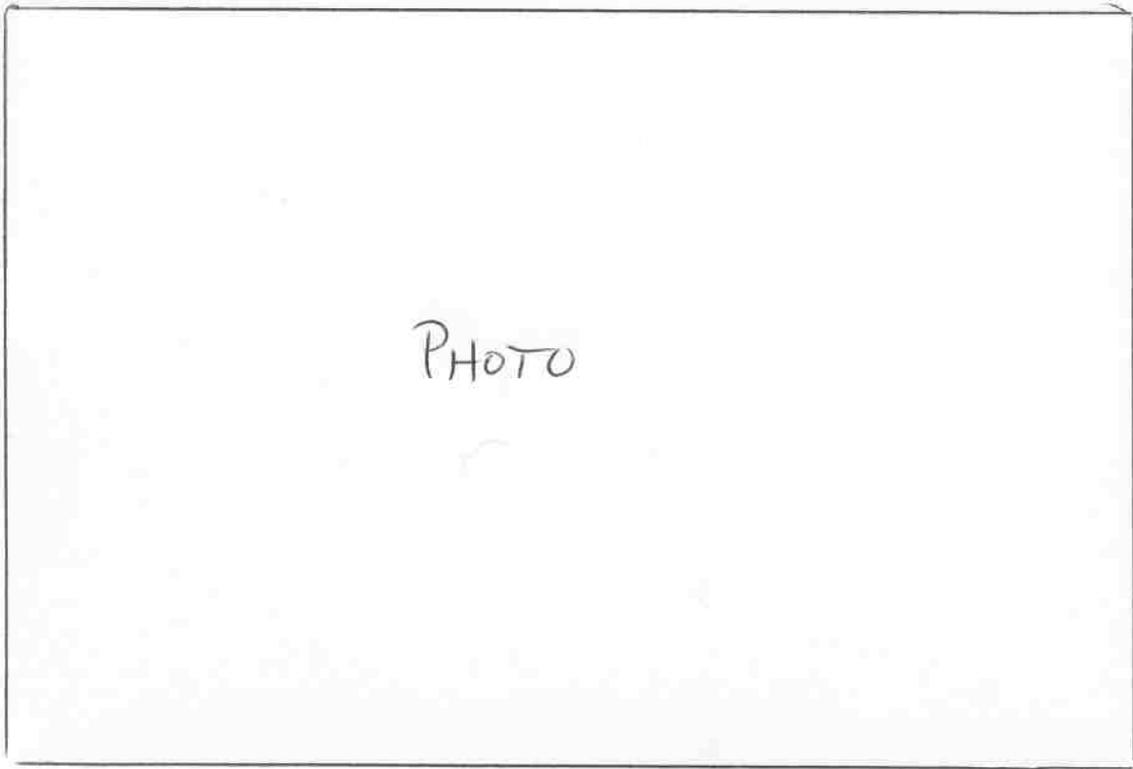


E-mail

Here, some good luck kicked in, although I found out later that by this time my sister's entire high school had started praying for me. I decided to call my son in law, and ask him to get in touch with my wife. In real life, he is an emergency room nurse at our local hospital, but more to the point, he is also an officer in our local volunteer fire department. When I reached him, he was watching CNN.

He was glad to hear that I was all right, he told me, but a passenger jet had flown into one of the buildings, and, by the way, was I in the one with the big antenna? I said, yes, but that the elevator lobby had a little smoke in it, and the stairwells were probably smoky as well, so I was going to stay put in the office area, which was clear. In a very few words, he asked me to reconsider, because it looked to him like the building was getting ready to come down. This sounded like good information, so I thanked him and told him I'd talk to him later. I found out later that he told friends that he could easily picture me wasting valuable time doing really silly things, which he listed, instead of leaving. I'd find this

hurtful, except that he was right on the money. [He said that, knowing me, I was probably hanging around taking pictures.]



WTC#8 (2) [I wasn't the only engineer who wasn't in any rush. Almost, but not quite. At this point there were still a few of us taking our time. I wasn't there when the World Trade Center was bombed in 1993, but lots of the Port Authority Staff were. Most of them went down the stairs this time as if the devil were after them, which is the right thing to do.]

I am pretty sure that I was still at my desk, probably shutting down my computer, and I know I was still in the office, when the second building was hit. I did not see the second plane come in, for which I am grateful, although I would have had a spectacular view. (When I get our next phone bill, I'll check the times when I was on the phone against the published sequence of events.) There was another "boom", and our building shook again. I passed along what I had just learned about our building to my colleague, who had been on the phone with his wife.

He decided that this seemed to be a good time to leave, but he first took the trouble to first walk the entire floor and make sure that no one else was behind, which is typical of his character. He ran across a third fellow who also was about to start down, so we decided to go together. Meanwhile, I took off my shirt and tee shirt, and soaked them in water. My colleague thought that was a good idea, and also soaked a shirt. We talked about hitting the mens' room one last time, but decided it wasn't necessary, so off we went. I felt absolutely no sense of danger. My only concern was that my legs might be sore the next day.

[I had heard stories of a couple of workers who had walked all the way down from the top floor, and then weren't able to make it to work the next day. Every now and then someone writes a letter to the editor, suggesting that each high rise building run a practice evacuation once a month, which doesn't seem to me to be very practical.]

When we first started down, the stairway had a little smoke in it, but it wasn't bad. More worrisome was the water running down from the floors above. The soles of my shoes were slippery on the wet floor, and I almost fell once, but was able to grab the railing. It didn't help that I was carrying a briefcase, which I did not intend to leave behind. The shoulder strap had broken a couple of months ago, so I had to lug it with one hand, while trying to hold on to the railing with the other. (My wife was involved in a situation a couple of years ago where some idiots had turned on the gas jets in the science lab, directly below her room, and then left, waiting for the place to blow up. By pure luck, enough people started feeling sick, and it was discovered before there was an explosion. Meanwhile my wife, and everyone else, ended up outside in the parking lot, in the middle of winter, without coats or car keys.)

[Based on my wife's experience, I had decided that in a fire, my briefcase and coat were going with me, no matter what, and had practiced our regular fire drills that way, which had gotten me some good natured ribbing. I've noticed in our recent fire drills, people now take their coats, keys, handbags, and briefcases with them.]

When the Trade Center was bombed in the early nineties, all the lights had gone off, and people had to evacuate down smoke filled, pitch-black stairs. After the bombing, emergency lights had been installed, and they worked pretty well. We ran into a few isolated areas in the upper floors without light, but not enough to cause problems. I had a small flashlight with me, but I wanted to use it only where absolutely necessary, to conserve the batteries. It came in handy, though, towards the bottom, where the smoke was thick. [Before the bombing, the stairwell lights were powered on an emergency power system, which theoretically would come on if the regular power were lost. Unfortunately, the bomb blast severed the emergency power feeds, so the lights went off and stayed off. The stairwell lights had since been provided with backup batteries, so with one or two isolated exceptions, they stayed on this time.]

Somewhere around the thirtieth floor, we started catching up to others going down, and we met the first firemen coming up. A young woman was having trouble trying to climb down the stairs in high heels, and it took a couple of minutes for people to talk her into taking them off. The air in the stairwell also cleared up somewhere around here, and the stairs were dry, so I was sure that I was home free. The clear air didn't last for long. It turned out to be sitting on top of more smoke, and it soon became difficult to see and to breathe. I had used my wet tee shirt occasionally, throughout the descent, to help filter out the smoke, but from here on down it really helped.

I have never been in a burning building before, and I don't know at what density smoke stops being a nuisance and becomes a threat. The firemen were not using breathing gear,

so I suspect that the smoke was pretty mild. With people starting to fill the stairwell, it was starting to get warm, so I took out my other wet shirt and wrapped it around my neck to keep myself from overheating. At this point I was getting a little concerned, but figured that with firemen around, nothing too bad could happen.

By this time we had gotten back into smoke, and had also come across an injured man trying to get down the stairs. He had a few cuts, and one of his legs was giving him trouble. My colleague took the guy's arm, wrapped it around his shoulder and helped him down several more flights. The firemen had set up a temporary rest station on the twenty first floor, to give people who were having problems a chance to sit and rest, or take a little oxygen. The man with the bad leg stopped here, and when he went in, I saw a rather heavy-set woman sprawled out in a chair. She looked beat. I don't remember seeing any others. Stopping to rest might have cost them their lives.

We continued down, through increasing smoke, but guided by firemen with bright flashlights. I'm not sure which floor I was on when I almost fell down the stairs again. I couldn't see where the floor ended and the steps began. Maybe I could have caught myself, because I was moving slowly, but I let out a "oops" and two very strong hands grabbed me. I have a pair of bruises, one on each arm, to remind me of two men whom I hope got out in time.

When we reached the sixth floor, there was another big boom, and the building shook again. I heard someone say, "it's ok, we're in the strongest part of the building", which I knew was true. What I didn't know was that the boom was the other building collapsing. We stayed put for couple of minutes, and then started down again. Firemen were directing us to "go straight ahead, don't look to the right". I assumed they didn't want us to take a wrong turn, and I concentrated on trying to go straight ahead. Later, my colleague told me that he had looked. The firemen hadn't wanted us to see dismembered bodies.

I was surprised by the amount of smoke in the air, considering how low we were. Thinking about it now, what I then thought was smoke was probably mostly dust. At any rate, it was gray and dense and I couldn't see for more than a few feet. We came out of the stairway on the second floor, more or less at grade level. By this point, I knew where I was, but even so, could hardly see my hand in front of my face. I was able to find the exit, though, and on my way out a policeman, I think, asked if he could have my shirts to cover a dead body.

I think that I was in one of the last groups to leave the building. We had to walk single file over rubble, and ahead of us, a couple of workers were pulling a piece of sheet metal out of the way, so that we could stay under the protection of the overhang of an adjacent building. This delayed us another few minutes. The windows in this building were blown out. Police cars were covered with ash, some had their windows smashed in, and there were little fires burning on the ground. I wondered what could have happened here to cause such a mess. There was still enough dust in the air to keep me from seeing more

than fifty yards. I took my time getting out to the main street (parallel to Broadway, a block to the west), not wanting to trip and get hurt at the very end.

As I started walking north, towards a barrier set up by the police a few blocks away from the trade center, I noticed that there weren't many people in the street ahead of me, although there were a few policemen and firemen at the barrier. Suddenly they started to wave and shout "hurry up, run". I thought they were just trying to keep the street clear, until they turned and ran themselves. I looked back and saw that the building was collapsing, and that there was a wall of dust and debris heading my way. I saw one rescue worker grab a man who was limping, and in a split second drag him into a nearby ambulance. The last time I tried to run was to catch a train, and then I ended up tripping and falling face first into some briars. In spite of that experience, I ran again. I didn't think I could out-run the building, but thought it would be worth trying.

Now here's a strange thing. I looked back over my left shoulder and I saw the building falling northwards, the way a tree would fall, tipping over, pivoting at its base. The picture in my mind is as clear as a bell. I saw the top half of the building falling to the north, but off to the side of me, above the surrounding buildings. This is not what actually happened, and I had to watch the re-runs on TV to convince myself that what I had "seen" was completely wrong, and that the building had actually come straight down.

Anyway, I ran as fast as my legs would take me, and managed to get into a cross street to the east. I saw a couple of cops dart inside a doorway ahead, and I made for that. The wall of dust and debris was right behind me when I reached the door. I managed to get into the vestibule and close the door just as it went by. The air outside was dark brown. We all went inside the main building, which was apparently abandoned, to get some good air. Even inside, the air was slightly dusty, probably from the first collapse. After about fifteen minutes, the air outside had cleared enough for me to be on my way. I went over to Broadway, and started hiking uptown, looking for a phone to call my wife. By now I was recalling my last words, that I was going to stay in the building, and I wanted to find a phone as quickly as possible. The few pay phones that were still working had long lines. I had a cell phone, but it didn't work until later in the day.

I found a phone after an hour or so, and when I called home my daughter answered. She was relieved to hear from me. She and her husband had left work to be with my wife, who, it turned out, didn't know that my building had fallen. My daughter had found this out herself, minutes earlier, and now she had to break the news to her mother. When they heard my voice, the three of them were so relieved, they wanted to jump in the car and come to Manhattan to rescue me. With great difficulty I persuaded them not to do so.

To make a long story short, I made it up to Thirty Second Street, where there is a PATH station. There I found that no busses or subways were running, and that all the bridges were closed. By early afternoon, my cell phone had come back on, and I was able to let my wife know how things were going. Around two thirty, I decided to walk over to Penn Station, which I could see a block away, to find out if any trains were running, and to see if it might be a good place to wait for the city to come back to life. As luck would have

it, there was a train getting ready to leave for Washington, via Newark, and I managed to get on. When we arrived on the Jersey side, we had a clear view of Manhattan. It was awful. There was a huge column of smoke over the entire southern end of the island. I got off in Newark, and with a little shuttling, arrived back in Hoboken in time to catch my regular train home. There weren't many people on the train, which is normally filled. New Jersey Transit deliberately didn't collect any fares, which was a nice gesture. So ended my day.

To anyone working in a large building, I'd offer the following advice:

1. Get going and don't stop. Don't stop to catch your breath. Don't stop to rest a sore leg. Don't stop for anything.
2. Have a comfortable pair of walking shoes, with soles strong enough to let you walk on scrap metal. If they don't have corrugated rubber soles, get a pair of new rubbers with lots of bumps on the soles for traction in water, and make sure they fit your shoes. Keep them in your desk.
3. Keep a towel and a tee shirt in your desk, along with a couple of bottles of water. A wet tee shirt helps you breathe. A wet towel around your neck helps keep your body temperature down.
4. Always have a flashlight, but only use it when you absolutely have to.
5. Don't call from inside to say that you are all right, and above all, don't say that you are staying in the building. Call from the outside.
6. Hold onto the railings with a death grip.
7. Bring your keys and your coat.

A. Survivor

P.S. a couple of personal thoughts.

Regarding the collapse of the building, I heard a structural engineer describe on a talk show, that night, exactly what happens to a steel building in a fire. I know this stuff, and yet the possibility of collapse never entered my mind until I was told that it was going to happen. Even then, I was visualizing a falling over rather than a vertical collapse. There have been some recent disasters which happened the same way, within the last year or so, and I knew about them, and about the mechanism, yet it never even entered my mind that it would happen in this building. I've seen and marveled at the mammoth size of the beams and girders in the building, and knew that they were fireproofed with a thick

protective layer of this reddish brown stuff (the asbestos had been removed). These prior impressions might be responsible for my mental block.

There was a warehouse fire in Worcester which killed nine firemen, some of whom had gone back in to rescue others who had gotten lost. The structural steel heated up, softened, and down came the roof. The same thing happened in the city, several months ago, at a car dealership. Talk about mental blocks. I was horrified the next morning when I saw the video of the conflagration just above me, and then watched the building collapse.

By the way, our local fire department almost lost a man in a simple wood frame house a few years ago when a floor collapsed he dropped into the burning room below. He was very lucky to get out.

So, take care.

P.P.S. Found out today that our daughter is going in on Friday, Saturday to help with the rescue and recovery efforts. The city is asking for help from small squads throughout the state, because of problems they have had with “freelancers” – I’m not sure what that means, but I’ll let you know when I find out. Hope she stays out of trouble.

September 29 (I think), 2001

Hi Clayt – here’s a follow up on one of my adventures. It was in the NY Times, and it refers to the woman who had stopped on the 21st floor, the one whom I thought looked exhausted.

Incidentally, my daughter was there last weekend as part of the Tioga County volunteer group. The City had been having all sorts of problems with local EMS “freelancers”, so they went to a state-wide effort to use official companies of volunteers (like Campville), to maintain some sort of discipline. The locals were wandering off, doing their own thing, and in some cases, looting.

She said the NYC cops and firemen were wonderful, and did everything they could to make them comfortable. She and a couple of others even got a private guided tour from one of NYC’s finest, who took them along the police line (the feds had half, and the NYPD had half) until he found a buddy who let them go through.

Switching gears, I’m going back to work on Monday, the first, in a trailer at Newark Airport. What a comedown. The Port is splitting us up into New Jersey and New York groups, pretty much determined by how we get to work. After six or eight weeks, the plan is to move us into permanent offices in Newark, which won’t be bad because PATH goes there from Hoboken. In the long run, we’ll end up back in the City.

I’d expected to be laid off, but instead they paid all of us to stay home for the last couple of weeks, while new office space was being prepared. I couldn’t move for the first few

days, from a combination of really sore muscles and a vicious cold which set in around Thursday. my daughter told me that was typical of a smoke event.

I made good use of my time, or at least I think so, doing a lot of writing. Rosemary hasn't been happy, but some day she, too, will be famous. At least that's what I've been telling her. Actually, I feel like Mozart, trying to finish his Requiem, but don't let that get around. I've heard a lot of talk lately about obsession.

I've made a fascinating discovery in the Goldberg Variations. They have been called Bach's greatest secular work, but I'm convinced that the old fox hid a complete Latin Mass in them. You've probably never counted them, but the set includes the theme (Aria) and thirty variations. After the final variation, the theme repeats.

My very strong suspicion is that he noticed that the Aria, which he had written some years before for his wife, was perfectly suited to the words Kyrie Eleison, Lord have mercy, which is in Greek, and was the starting point of the Mass itself and of all its musical settings.

At any rate, I bought a CD by Glen Gould a few years ago, to see if the Goldbergs would put me to sleep. That is why they were written, according to my favorite legend. Anyway, I eventually bought the score and tried working some of them out on the piano. I found them charming, and have since spent a lot of time trying to learn the ones within my capabilities. I could tell, right off the bat, that some of them were definitely not written as harpsichord pieces, but were much more suited for the organ, with its ability to carry a sustained melodic line. At first I assumed that he was recycling some little preludes and postludes which he had ad-libbed over the years, but then I noticed that some of the pieces had a distinctly vocal style.

I found, more or less by accident, that one of them (19) made a perfect "Allelulia", which pleased me to no end. Of course, you can't have an Allelulia without an Amen, and guess what. Number 18 makes a perfect Amen. Things started to get interesting.

The minimum number of parts of the Mass which are traditionally set to music are the Kyrie (the only part in Greek), the Gloria (Glory to God in the highest), the Credo (I believe in one God), the Sanctus (Holy, Holy, Holy) which is usually set with a separate Hosanah, and the Agnus Dei (Lamb of God), in that order. The old mass had many more prayers, some of which are set in the larger musical pieces.

Once I suspected a pattern, I quickly identified the Sanctus. It's Number 9, and it fits like a hand in a glove. Number 10, a little fugue, goes great as a Hosanah, and comes right where it should, just after the Sanctus. To make a long story short, I have identified at least nineteen pieces which line up with parts of the old Mass. A few of the melodies are elaborate chants, which have a looser form than a conventional song. Listen to Variation 12, with the strange sounding melody set against a pattern of three repeated bass notes. This one bothered me right from the start.

It's actually a setting of the Pater Noster (the Lords Prayer), in a chant form. If your recording doesn't go too fast, which most do, listen for the pattern – Pater Noster qui es in coelis (Our Father who art in Heaven), followed by Sanctificetur nomen Tuum (Hallowed be thy name), Adveniat regnum tuum (Thy kingdom come), Sicut in coelo, et in terra (On earth as it is in heaven, and so on. Lets face it, there aren't all that many melodies that can accommodate Panem nostrum quotidianum da nobis hodie (Give us this day our daily bread).

Each new identification made it easier to find other candidates, because I still have my old St. Joseph's Daily Missal, which I was given in eighth grade for my Confirmation, and which has the complete Latin Mass with a translation. Latin was eliminated by the Catholic Church about forty years ago, and the old structure is gone, so anyone today would have a tough time making the connection. On the other hand, I grew up with it. In addition, I'm familiar with choral styles from my choir director days, and have heard a lot of sung masses, including the old chants. Although I have forgotten most of the vocabulary, I feel perfectly comfortable listening to something sung in Latin, which wouldn't sound at all alien to me, as would, for example, something sung in Bulgarian.

Mike and Jody came up to visit us last night, and I was explaining why the kitchen table is taken up by my other computer. (Rosemary has been very tolerant about this whole thing, although I wouldn't use the word "supportive". I've been making copies of the pieces, note by note, and superimposing the words, and it's occupied me day and night since I've been home. I've been waking up in the middle of the night to come down and work. I'm trying to get enough put together in a printable form to submit it for copyright, not so much for publication, as to establish precedence. I want my name etched, however tiny (the spell checker isn't any help here - I'm trying to say "however really, really, small", like "in the style of Tiny Tim", but that might be a bad analogy), in the history of musicology, and I'm running out of time.

Returning to Mike, I was explaining my theory to him, and was showing him the old "Last Gospel", which used to be the final prayer of the Mass (In the beginning was the Word), when I noticed something that I had missed earlier.

The very last variation is the Quodlibet, which nobody would know about, except that Bach wrote it at the top of the sheet. This is an old music form in which two completely different songs are blended together, so that what you hear is a perfectly good song, but in which, the two melodies both stand out. The classical story about this particular variation is that one of the songs has a son telling his mother that he's leaving home because she never feeds him properly by putting meat on the table, and the other is a song about cabbage. This is considered by all musical scholars to be a fine example of Bach's sense of humor. Needless to say, the piece itself is a musical gem.

I've found that the words of the Last Gospel fit perfectly to the first melody, and that the second melody could easily be sung with "Deum de Deo, Lumen de Lumine", from the Creed, and which mean God from God, Light from Light. This would be a fitting climax to the Variations. Closure doesn't get any better than this.

But, actually it does. Here is what I noticed, last night, when I showed Mike my old missal. You have to remember that Bach was a devout Christian, with very strong beliefs. I had forgotten all about the way the old Mass ended, but it all came back when I happened to look at the page just above the beginning of the Last Gospel.

The priest used to stand at the alter with his back to the congregation, and after making sure the alter and chalices were properly cleaned and arranged, he would shift over to the left hand side of the alter, and give a blessing. Then he would say the following: “Initium sancti Evangelii secundum Joannem” which means The beginning of the Holy Gospel according to John – Johann, to you and me.

The Last Gospel starts with “In the beginning was the Word”, and continues with a brief but comprehensive listing of the fundamentals of Christian belief. I woke up at 5am this morning, remembering that just a few sentences into it comes the point – et lux in tenebris lucet, et tenebrae eam non comprehenderunt – And the light shines in the darkness, and the darkness grasped it not.

I don't know if I ever showed you an old Currier and Ives print that I used up here while teaching chess to kids. It shows a fox looking into a forest, with lots of details. I used it to make the point that a chess position contains much more than what we see at first glance. Hidden in the picture were a great big horse staring out at you, a wild boar, a sheep, and lots of human faces.

Well, I hear some movement upstairs. Rosemary must be getting ready to come down for breakfast. Talk to you later.

Ed

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