

Safety & Security - Overconfidence is our Biggest DANGER

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There's a famous old saying: "You can be safe a hundred times, but you only die once." A group of miners enter a mine every work day for years, uneventfully. Suddenly one day, shortly after they enter there is an explosion and many of them are killed or injured. An owner/pilot of a small plane is interviewed on the radio and explains how safe flying is. Three days later he flies into a building and is killed. A skyscraper is filled with security devices of all kinds and is guarded on all sides. A huge airliner deliberately crashes into it, destroying the building and killing almost everyone inside the building. A space shuttle is sent on a mission and on its return to Earth, burns up in the atmosphere. The Federal Emergency Management Agency has been organized to be prepared to react quickly when and where necessary, but fails miserably during a severe hurricane. Are we really sure that we are really safe and secure?

As we perform our everyday procedures, we too often take for granted that everything will work smoothly. Because the system generally works, we do not always realize that the danger is real. And we do not feel the consequences of the danger until something does in fact go wrong and we are faced with the reality in front of us. Many accidents happen to people who are very confident of what they are doing. Many fatal accidents on recreational flights are caused by aggressive maneuvering such as sudden sharp turns. This by pilots who were always confident in their steering before, then suddenly faced a difficult situation for the first time. And then it is too late. Humpty Dumpty cannot be put back together again. When a person or persons are killed, their family is devastated emotionally. And from an economic standpoint, they may never recover. And what about the facility or organization where the accident occurred? The economic costs may never be recovered. The very fabric of the organization may have been destroyed with the deadly event. When dealing with matters of safety and security, we can take NOTHING for granted.

I believe that if everyone involved in working with machinery of working in a setting where an injury or accident is more likely to occur, were to be able to really "feel" what the Danger or the result of the Danger is apt to feel like, then there is likely to be an increased awareness to the Danger.

When one experiences a dangerous condition - and can live to tell about it, that person mental and physical state will be severely shaken. He or she will feel among other things fear and anxiety. This will be accompanied by sweating and severe intestinal problems. They will never forget the traumatic experience.

One way to get close to a dangerous experience without feeling its consequences is with training simulators. Three dimensional simulators at the Hazard Community and Technical College in eastern Kentucky are designed to give rookie miners and mining students a taste of underground dangers without risking their lives. Various scenarios are "played out" that simulate accidents. This new technology comes on the heels of the Sago mine in West Virginia and the Darby mine in southeastern Kentucky disasters. At West Virginia University Academy of Mine Training and Energy Technology, there are simulators for both underground and surface mining operations. The Schneider National Inc. Trucking Company, Green Bay Wisconsin has invested in simulators for training their new truck drivers on their 18 wheelers. MPRI and Lockheed Martin Corporation are two of the companies now producing simulators for the trucking industry.

We are all familiar with flight simulators. Their use goes back to both the first and second world wars. Today's flight simulators are so sophisticated that they can depict world airports and their surrounding terrain. The images the simulators project are very true to life and can project flight in all types of weather conditions. In fact up to 6 million possible combinations of events can be presented to pilots - without a single person getting injured. So the simulators in every case here can provide experience that is as real as it

gets. Still, when taking part in this "simulated" training, when things go "wrong" I wish an old fashioned boxing glove could appear and hit the operator over the head, providing just enough pain or "stun" to drive home my point that the Danger is real. In fact as terrific as simulators are and as helpful as they are, they can be dangerous. Just walk into your children's room and watch them as they play with the latest software games on their computers. They may play a simulated "war game" or a car racing game for example. They may "kill" or be "killed" in these games and just laugh it off and reset the game and start all over - without actually feeling any pain to themselves or worrying about pain they may have inflicted. We should be concerned that they will take this kind of thinking with them as they interact with others in everyday real-life situations, such as when they enter the workplace someday.

Simulators are just one of the ways to gain some valuable safety training. Still, no matter how much is learned, "accidents" continue to occur. A most effective way to "hurt" someone who doesn't follow the rules is to fine them significant amounts of money. Whether we like it or not, a significant fine can go a long way in insuring that the rules are followed to the letter. In 2005 OSHA issued its largest penalty ever. A 20 million dollar fine to an oil company. That same year they issued the most willful violations in one year than ever before in their history. Yet, the Bureau of Labor Statistics counted 5,702 deaths on their Census of Fatal Occupational Injuries report for 2005. (4 deaths per 100,000 workers. That followed 2,764 deaths in 2004. (4.1 deaths per 100,000 workers. The question is: Is that number acceptable to us?

The OSHA EEP program - The Enhanced Enforcement Program goes after employers who consistently ignore OSHA guidelines. In addition, OSHA is in the middle of a 5-year Strategic Management Plan (SMP) The Effort is designed to reduce work fatalities by 15% by 2008 as well as cut workplace illnesses and injuries by 20%, by emphasizing safety improvements in specific areas. Seven specific industries target

are: Landscaping and Horticultural Services; Oil and Gas Field Services; Fruit and Vegetable Processing; Blast Furnace and Basic Steel Products; Ship and Boat Building and Repair; Public Warehousing and Storage and Concrete and Concrete Products. In addition, year in and year out, the construction industry has more fatal incidents than any other industry with falls being the leading cause of the deaths. And OSHA has placed a strong emphasis on creating safety programs for that industry. But the point is, with rules and penalties in place, why is it that there is and has been so many accidents? An examination of total OSHA violations year in and year out from the year 2000 thru 2004 showed average rates of around 80,000 per year. And serious violations averaging around 55,000 per year - consistently. With repeat violations averaging around 2000 per year. Are the companies really willing to pay the fines related to these accidents. Were the dead or injured workers really willing to put themselves at such risk? Or is it that even taking their jobs and the risks seriously - they really don't take the risks seriously enough to believe something will in fact happen to them?

Late August, 2005. Hurricane Katrina forms along the gulf coast. Generally there are a number of hurricanes that pass near or through the Gulf of Mexico every year. If one should land in just the right area at just the right strength it can cause significant damage and the possibility of some deaths. The year of 2005 was different. Hurricane Katrina was the third major hurricane and the second category 5 storm of the season. And it would make a direct hit on the city of New Orleans. There were many Federal, State, Local and non-profit agencies that were involved in the response to the storm (as well as all other storms. Among them The Federal Emergency Management Agency (FEMA), The Center For Disease Control, Department of Health and Human Services, The National Weather Service, The National Hurricane Center, The Army Corps of Engineers, just to name a few. Yet there were at least 1,836 people killed due to the storm. There were so many well meaning people and groups, yet look at the results. Hurricanes had hit before, but the feeling was -surely nothing catastrophic can happen. Not to us. There was no sense of shall we say a "Real Danger" one that could kill so many people, de-

stroy so many lives and leave an entire area totally destroyed. And so these organizations did not take things to the most "Critical" level. There was a lack of preparedness, a lack of coordination a lack of training. No one even thought to even consider a coordinated plan, an aggressive pre-emptive strategy. Why would one be necessary?. These disasters strike other places, not here in the States. The lesson learned. Always be prepared for the worst. Always.

September 11, 2001. Four US commercial airlines are hijacked from 3 east coast airports within minutes of each other. One plane would crash into the North Tower of The World Trade Center. Another into the South Tower. One plane would crash into the Pentagon and a fourth, with the passengers on board already aware of the fate of the other planes, preventing yet another catastrophe and forcing the plane to crash into a field in southwestern Pennsylvania. This is the United States of America we are talking about. These things do not happen here. Maybe somewhere in the Middle East or Asia. Europe if we take an extreme case. But certainly not in the United States. So - there was (and is?) nothing to worry about. Right?. Wrong! We were caught completely off guard. Our air force, (regardless of whether or not they were taking part in war games at the time as has been reported) should have been ready on all fronts for an attack. Everyone, every organization from the President on down was caught by surprise - and with no apparent coordinated response training. And this is not a hurricane we are talking about. Interesting enough, the terrorist pilots trained on flight simulators. The lesson learned: Always be prepared for the worst. Always.

In all of us is the instinct of both self-preservation and the welfare of the group. When given the choice of flight or fight, without our ability to control the situation (fight) the emotion of fear will take over and lead to flight. We have also been given our basic senses of touch (to feel heat and pressure), smell, hearing and seeing. We take these for granted and do not bother to fine tune them as our ancestors did to survive. In fact early man's ability to keenly distinguish different odors; his ability to hear and differentiate different sounds led to the evolution of speech; just a few of the many things that allowed us to be the masters of the planet. Over time we have become

masters in technology. And in order to live successfully in man's current environment, (Driving a car; working with heavy equipment; flying an airplane; we have learned to be manipulative. We perform complex movements to avoid danger. And as we continue to perform these functions, we improve our skills, we improve the equipment that we work with. We rely on the equipment and develop the confidence that provides relief of our anxiety of the matter at hand. Unfortunately we do not always realize that the very equipment that we trust so much can fail. No matter how much we continuously improve it. It's reliability factor is never zero. No matter how much we learn about techniques, memorize them, train with them. We are human beings. We may have evolved perhaps more successfully than other species, but we are far from perfect. We make mistakes. We forget things. We make errors in judgment. And as we manipulate our car, our plane, our equipment, we find - when it is too late; when an (fatal) error has occurred; when our instinct of flight can no longer help us, when our conscious mind hasn't even registered the danger, our adrenaline haven't even started pumping - that in an instant of time our life and perhaps the lives of many many others, will dramatically end. Frightening enough, the terrorist airplane hijackers may not have seen the danger, even as they crashed in the buildings. To them their actions were a means to another type of end. If they would have met with resistance to their goal (crashing the plane) that resistance would have been the DANGER they would have perceived. A very frightening thought to me indeed. That Danger is what you make of it. In this case not the pain or possible death, but the failure of their mission.

So what should our confidence level be when moving around and about in our daily lives? An examination of the NASA program shows at least 9 people involved with the program have been killed since 1964 in various plane and automobile crashes. Three astronauts were killed in a training exercise in 1967. And of course a total of 14 astronauts were killed in the two space shuttle disasters, Challenger (1986) and Columbia (2003). Astronauts are willing to risk Danger much much more than the average citizen or worker. Even so, the frequency of accidental death is quite high. For the rest of us, we would like a bit more certainty.

Actually, the NASA Aviation Safety Program was developed in 2002 to help provide the technology to the entire air transport industry to help reduce fatalities from both in-flight and post crash incidents. A five year Comparison of Risk, compiled by The Office of Hazardous Materials Safety shows that there are among many types of accidents: 1.3 deaths per 100 million miles for motor vehicles; 1.9 deaths per 100 million miles for commercial air carriers; 1.3 deaths per million miles for railroad transportation; 4.2 deaths per 100 million miles for hazmat shipments to go along with the 4 deaths per 100,000 workers stated earlier. These might seem like very good numbers and it might take a lot of extra work to improve them marginally. But we have to ask ourselves: Are those statistics satisfactory to us and when we kiss our spouse and our children good-bye as we head out of the door everyday, confident to the point of not thinking about it, that we will return later in the day to be greeted

by them. Risk is not the actual Danger (or peril) itself.

It is our calculation of chance we are willing to take. But if we can actually feel the Danger (or peril) then there would likely be more incentive to lower those odds. Now does this all mean that we should just stay home and practice total avoidance and be obsessive compulsive about avoiding danger? No, not exactly. We have to go about our daily business and go to work and to school and drive to the mall, etc. But many companies today reward their employees for their good safety behavior and zero accidents over a period of time. They utilize a program in which both management and employees work together in determining hazard analysis, detailing and of incidents. So to me, and to many companies, when it comes to safety, well, being obsessive/compulsive about it is OK. And I am. In its most basic form, my checklist for walking across the street is: Have your eyes, ears and nose checked, and all the tools you need to keep them at

100%, i.e. eye glasses, hearing aids-check; look both ways - check; look all ways - check; look up and down - check; look behind you - check. Repeat all steps - check; Repeat all steps again - check; Have someone competent go through the same steps - Check; Have that person repeat it again - check. Start walking across the street. Take nothing for granted while walking. Get to the other side of the street. Ask yourself: What went right? What went wrong? Incorporate your findings for the next street crossing. What I am really doing is treating things as if I (or we) are in a state of imminent Danger while doing specific tasks. Even when it "appears" we are not.

As the saying goes, you only live once. Be prepared. Always.

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