## TREVOR'S CORNER No. 17 PROCESS SAFETY RESEARCH AGENDA FOR THE 21<sup>ST</sup> CENTURY SOME SUGGESTIONS BY TREVOR KLETZ

My first thoughts were to list techniques such as inherently safer design and Hazop but then I realised that it is more important to consider the reasons for changes in the culture of many chemical and oil companies in recent years. These changes have resulted in many accidents. There has, of course, been no deliberate decision to spend less on safety but many senior managers have taken their eyes off the ball. I think there are two reasons for this:

First, good managers know the importance of talking to employees at all levels and checking details from time to time. But the pressure of other work is so great that many leave details to their subordinates and take a helicopter approach. But from a helicopter all we see are forests. If we want to see if the forest is healthy, we have to land the helicopter and look at the leaves and twigs.

Secondly, even if we want to talk to employees at all levels and check the details from time to time, it is impracticable to do so on rigs and platforms. They become autonomous organisations. Many of the workers don't see the need to follow all the rules. For example, they don't see the need to follow permit-to-work procedures. Our job, they say, is to get stuck in and get the job done, not fill in forms. In time this macho approach becomes the local custom and practice. This was the underlying cause of the destruction of the UK Occidental Piper Alpha oil platform in 1988 which killed 167 men. It was also, I think, the underlying cause of the recent BP incidents.

I am not suggesting that the Occidental or BP directors made a deliberate change in their attitude to safety. But in recent years acquiring oil fields and getting the oil out has become a large part of the work of the oil companies and the macho attitude of the offshore workers has gradually become the culture of the companies, on shore as well as offshore, from the bottom up rather than the top down.

When changes occur gradually no one realizes that they are happening. If a frog is put in hot water it jumps out. If it is put in cold water, which is then gradually heated, it stays there until it dies. A similar phenomenon has occurred in Occidental, BP and many other companies, including Buncefield and Shell in the UK. Minor changes were made and in time became custom and practice. For a long time nothing happened, and then incidents occurred. Once something becomes custom and practice, it is hard to change it. People are not putty in the hands of professional staff. They are more like rubber. Custom and practice restrain and push back.

It is easy to point the finger at the management and assume that a culture of cutting corners started at the top, and was motivated by money. It is worth remembering that the same culture can also originate at the bottom, driven by the desire to get the job done. The task of management is to know this and make sure it is done properly.

According to Lawrence Stager (2010), professor of archaeology at Harvard, the culture and actions of societies are often those of the people at the bottom of the ladder rather than those at the top. He writes:

"What I detect is that that tribalism is never excluded or extinguished by state formation ... Even after kingship is established, these bonds of kinship, clans, lineages, tribes persist. They don't always make it into the court literature because that's not what they are writing about. They're interested in the kings and the courts, but the persistent tribalism is there nevertheless. ... The people of the land decide who the next king is going to be.

I have described problems rather than suggested answers, but the first step in solving a problem is recognising that there is one.

A final thought: "We realised that, in a strange way, our previously exceptional safety record and all our awards could be working against us.

The issues boiled down to one word – complacency". (Turney, 2011)

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Stager, L., 2010, Biblical Archaeology Review, July/August 2010

Turney, K., 2011, Safety & Health Practitioner, Sept. 2011 (The writer is the managing director of an engineering company.)

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