

REASONS FOR ACCIDENTS

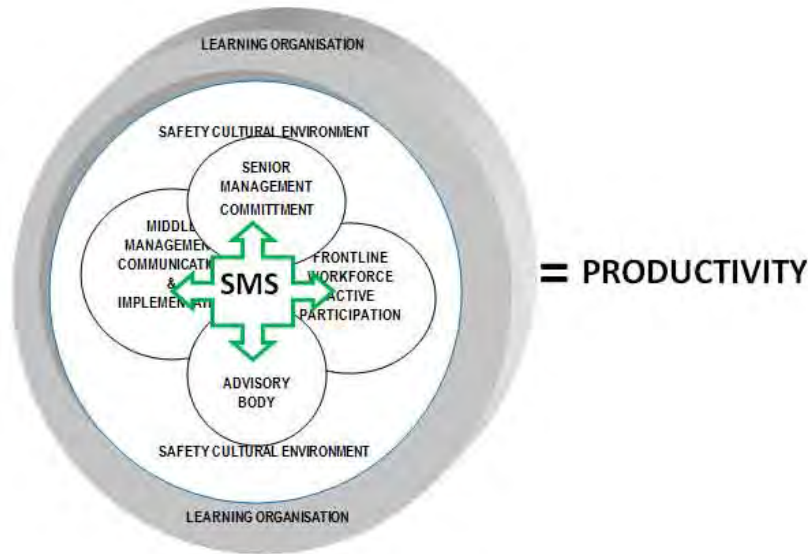
If we are to take the view of James Reason's interpretation that 80/90 % of ALL major accidents play a major part, then we run the risk believing that no matter what defence barriers are installed, they are bound to fail at least once during the "planned operational" lifetime of the enterprise. This would hardly engender confidence in management, workforce and associated stakeholders. It appears to me that he dwells more on the psychological of human interaction as against talking into account other models as potential causes of those accidents. Models such "Cause and effect, Uncertainty and Probability followed by Energy based models". Investigators therefore should seek to probe alternative models rather on the human element whether it is great or small.

From an investigators point of view, they found it fashionable in the past to lay the blame on the front line for not following procedures, without investigating any further the conditions that were present at the time. To further clarify this point, I would describe that, the interaction between human and new technologies, would lead humans to act or react to adverse to situations in the workplace based upon their knowledge of their environment.

Therefore, using James Reasons, Six kinds of rule-related behaviour of Correct Compliance, Correct Violation, Correct improvisation, Misvention, Misplice and Mistake; we may consider two examples provided to illustrate these rules. However, having said this, I believe that there is a flaw in these rules which do not take into account the conditions of a combination of factors of government advisory bodies, enforcement agencies and specific to the accident organisations thus creating a seventh rule of thumb.) If we apply the Six kinds of rule-related behaviour to the Chernobyl accident we are led to believe that it was the result of "Misvention", when in fact the accident was the result of unsafe acts and conditions prevailing at that time throughout all government spheres. This in turn created the unsafe conditions and dilution of safety procedures at the plant.

Another example is the Piper Alpha disaster where the Misplice and Successful Violation action of the Diving superintendant resulted in the saving his life. I prefer to believe that the diving superintendant made an appreciation of the accident and made the correct choice. (One assumes that when reaching the rank of superintendant you have an enormous amount of experience to make such judgments) Therefore in my opinion the superintendants outcome falls within the category of Successful improvisation.

Taking this further from an organisational point of view, it was not uncommon (possibly continues to this day) that management's immediate reaction was to look for human error whether they had an "active living SMS" in place. Although the Administrative controls of "organisational standards and objectives, human performance and process being controlled" were common to the James Reasons organisational examples, failed. Subsequent action as discussed by James reason is that organisations simply created another safety procedure after the accident thus creating an ungovernable SMS document.



LIVING SMS ORGANISM

Using the above model as a guide, I am of the belief that an organisational SMS can only truly be effective when the organisation adopts a learning cultural environment; embraces a safety culture based on best practices, involving preventive action through ongoing training (real live controlled scenarios), active commitment and monitoring at the highest level and communicating that commitment to the lower echelons. The above model demonstrates that it is a living organism and each concentric circle is dependent on each other for the survival of the organism as a whole. The internal advisory body is the facilitator driven by senior management and communicated via middle management protocols constantly monitors the Safety Management System. Although dependant on each other, the micro subs organisms can operate independently within the safety cultural environment. The advisory organism will have inbuilt safety mechanisms that alerts it to potential safety breaches or defence barriers being eroded will triggers alarms that are brought to the attention of the other micro sub organisms. This action and reaction will reduce and prevent accidents, reduce costs, retain confidence and continuity thus increasing productivity.

In conclusion, I do not believe that the application of control measures and administrative controls are sufficient to avert an accident and that the human element at the lowest level of the workforce needs to be empowered with the appropriate knowledge and authority to create an environment that has confidence in its "living" SMS protocols.

My understanding of reason James Reason's article is that he clearly establishes two potent considerations that assist organisations and investigators to determine the causes that lead to the accidents and incidents on an INDIVIDUAL and ORGANISATIONAL level. That is to say that ACTIVE FAILURES and LATENT CONDITIONS prevalent at the time of such accidents or incidents may have been as a result of new technologies which assisted the growth of these two factors.

It is of interest to note that in each case there appears to be a combination of both being involved and that there were ample examples provided indicated such a phenomenon. What this means to me is that accidents and incidents will over time occur despite extensive planning at the start and/or during the monitoring of defences throughout the life time of an organisation or employer.

Therefore the advantages proposed by James Reason marks out the boundaries for post accident/incident investigations. However, despite the advantages of using James Reason's model, accidents will continue to occur despite stringent "In Depth Defences". Accidents and Incidents will therefore depend upon the strength of the defences and fail safe mechanisms being in place to provide adequate protection. This may well lead to finding the parity that all organisations attempt to find and reconcile during production times.

In making a critical evaluation between James Reason's article and that of Part 5 of the Occupational Health and Safety Act, one is drawn to finding similarities' and differences between and attempting to find the gaps and to explain their compatibility and/or to reconcile their differences. At first glance a reader would think that is one an advisory body while the other is demonstrating models based on examples and speculating on the theories that drove them to their final outcome.

Let us take for example DUTIES RELATING TO INCIDENTS and James Reason's model on the INDIVIDUAL and that of the ORGANISATION. Section 37 of part 5 of the OH&S Act 2004, indicates the results of an accident and incident, while on the other hand James Reason considers the breakdown of the in depth defences that were in place that lead to the incidents and accidents. What we have here is that the Advisory Body creates the laws and regulations in which Employers and Self employed are governed by, but at no stage are they directed to report any such incidents and/or accidents should it occur to themselves. To take this further, it is crystal clear that James Reason models and theories demonstrate that finding "parity" within any organisation is not the prime aim of employers an, self employed and senior management if it is to be in conflict with production. Therefore, I am wondering at what cost to an individual and to that of an organisation is it worth to dilute the Defence Barriers in favour of production.

Section 38 of part 5 of the OH&S Act 2004 places the emphasis on the Employer, Self employed to notify the relevant authority of accidents and/or incidents; including record keeping amongst other administrative matters that deal with them. As mentioned above, there is nowhere in the Act at this point in time where the Employer and Self employed must notify the relevant authority of any accidents and incidents especially when it is not in their interests to do so. One would want to assume that these bodies have sufficient and adequate health and death insurance to cover them in such crisis. James Reason indicates that in earlier technologies, activities were aimed producing items that lead them to "commercial profit". This mode of transactions was brought to a halt almost entirely at the implementation of mass produced IT and electronic computer related technologies that relied less on human activity and thus increased the profits. Can one conclude from this that the Advisory Body has in fact taken into consideration the great surge of new technologies and that the regulations and Laws in place are reconciled? Does this mean that the onus is on the Employer, self Employed and the senior management to find "parity" within the organisation? I say yes, but I also believe that the onus in part is on the employee and that they too have are part in reconciling the Defence Barriers with those of production.

Section 39 of part 5 of the OH&S Act 2004 considers the impact of preserving incident sites to enable investigators and senior management to investigate the incident. It is imperative that all incident sites are retained in the same condition as at the time of the incident. Documents, Maintenance records, History of plant safety and other associated matters pertaining to the incident should be retained and produced to the appropriate investigative authorities. Obviously in the event of a serious accident and machinery is involved, the machinery required to be made safe and turned off. James Reason indicates that investigators work backwards in trying to determine what lead up to the incident. In most cases, James Reason indicates that Individuals (human error) is at fault until further in depth investigations of records indicates a breakdown and dilution of the defence mechanisms that lead to the incidents. James Reason gave a fine example of an incident that occurred within an organisation; that although they were investigated and corrective action taken, they were NOT AT THE EXPENSE of production. The end results lead to a catastrophe. This was consistent with his identification of the erosion over time of the Defence barriers and the organisations management failing to find parity and reconciliation of defence barriers as against production. Peter Adamis