Challenges for Occupational Health & Safety in Australia- 2005-George Robotham

Abstract

This paper explores the author's beliefs about the Occupational Health & Safety (OHS) challenges facing Australia in 2005. Through a process of critical reflection on the theory he has been exposed to and his practical experiences, the author explains what he considers are the major obstacles to safety progress in Australia. His major conclusion is that there is an urgent need for a National, personal damage occurrence ("accident") data base to provide a factual base for OHS decision-making.

Introduction

In a private communication a senior executive of a multi-national company said "Your paper is an endorsement of what X company is trying to do. Fatalities and permanently disabling injuries must be the primary focus of our safety efforts. System development/enhancement and behaviour modification must have the elimination of your Class 1 accidents as the primary focus"

Quotable Quote

"A health & safety problem can be described by statistics but cannot be understood by statistics. It can only be understood by knowing and feeling the pain, anguish, and depression and shattered hopes of the victim and of wives, husbands, parents, children, grandparents and friends, and the hope, struggle and triumph of recovery and rehabilitation in a world often unsympathetic, ignorant, unfriendly and unsupportive, only those with close experience of life altering personal damage have this understanding"

There are far too many people who have their life permanently altered (terminated or impaired) in Australia every year, sadly we do not really know how many. There is some evidence to suggest that the incidence of some life altering personal damage is getting worse not better (Geoff McDonald & Associates, Brisbane).

Georg Christoph Licthenstein (1742-1799) is reported to have said "I cannot say whether things will get better if we change, what I can say is that they must change to get better" If we do not change the things we are currently doing in safety in Australia things will not improve.

Author's background

This presentation is based on over thirty years experience in varied safety roles in a variety of industries, exposure to Australian and overseas commercial Safety Management Systems, exposure to an international safety benchmarking study, tertiary and non-tertiary training in OHS and other disciplines, networking with many safety professionals, working with hard-nosed ,productivity driven managers, being strongly influenced in the author's safety career by Geoff McDonald and wide reading of Australian and overseas safety publications.

Despite this experience the author is not confident he has a good handle on how to develop an effective Safety Management System.

The following is what the author believes are the challenges for OHS in Australia in 2005.He has reached these conclusions through a process of critical reflection applied to his experiences and the theory he has been exposed to (experiential learning).

Major Challenge 1 –Absence of a scientific discipline

Several areas indicate the lack of a scientific discipline in safety

Concepts

Models

Terminology

Probably the best example of a lack of scientific discipline lies in the terminology “accident”

The term “accident” implies carelessness (whatever that means), lack of ability to control its causation, an inability to foresee and prevent and a personal failure. How can we make meaningful progress on a major cost to Australian industry if we persist with such, sloppy, unscientific terminology? The term “accident” affects how the general population perceives damaging occurrences and the people who suffer the personal damage, inferring the event is “an act of god” or similar event beyond the control and understanding of mere mortals.

The term “accident” is best replaced by the term “personal damage occurrence”. Instead of talking about “permanent disability” we should be talking about “life-altering personal damage”

There is a poor understanding in the community of the reasons why personal damage occurs. We are quick to make the assumption that the worker was careless, when one examines personal damage carefully one will also identify a range of work system factors that contributed to the personal damage as well. Most of these work system factors are the responsibility of the employer at both common and statute law. Blaming workers for their careless behavior is an emotionally appealing approach that is usually not all that productive in the bigger picture of preventing personal damage at work

Major Challenge 2- Focus on the Personal Damage Phenomenon

The single biggest problem in safety in Australia today is that we do not have a consistent, National approach to reporting, recording and analysing life altering personal damage. Wigglesworth says “Simply put, the existing data collections are neither comprehensive nor compatible. They contain serious deficiencies in definition, scope, coverage and source that impedes any form of extended analysis.”

1. Damage to people at work has a number of adverse outcomes:-
    - Financial loss to employer, worker and community
    - Pain and suffering
    - Dislocation of lives
    - Permanence of death

If you look at the personal damage from the perspective of the damaged individual you will see all of the above. If you look from the perspective of the employer you see 30 % of the financial cost but virtually nil of the other. Some realization of the permanence of death may occur but this is rare.

2. Damage to people from work falls naturally into one of three Classes.

    - **Class I damage** permanently alters the person’s life and subdivides into
        - fatal
        - non fatal
    - **Class II damage** temporarily alters the person’s life
    - **Class III damage** temporarily inconveniences the person’s life

3. In 1995 the Industry Commission (part of federal treasury) estimated the financial loss in 1992-93 from work damage to people at $20 billion. They did not cost pain and suffering, dislocation of lives or permanence of death.

The Industry Commission figures can be translated as follows.

Class I	Fatal	1.5%)	82%
	Non-fatal	**80.5%**)	
Class II		18%	
Class III		not costed	

Class I non-fatal costs were made up of 58% permanently incapacitated people who did not work again (53 damaged per day) and 22.5% who returned to work and worked for a lesser income, fewer hours or lower skilled work (84 per day).

The major significance of work damage to people is the extent to which it damages lives. 137 people per day (50,000 per year) had their lives permanently altered by damage from work in 1992-93. This group accounts for 80.5% of the financial loss, the major amount of pain and suffering and of dislocation of lives. It accounts for the largest quantity of damage from work and along with Class I Fatal should be the major target for control activity.(Geoff McDonald & Associates)

Focus on Class 1 Damage

The report of the Industry Commission 1995 indicates that safety in Australia is fundamentally a Class 1 problem (87% of occurrences were Class 2 with18% of cost, 13% of occurrences were Class 1 with 82% of cost) This report further strengthens the argument that instead of concentrating on reducing the number of Lost Time Injuries we should be focusing on Class 1 damage reduction. (Geoff McDonald & Associates, Brisbane)

Quote from Geoff McDonald "On each day of 1992-93, 7 days a week, 52 weeks of the year, 137 workers had their lives permanently altered (non-fatally) by damage from work.

Class I Damage - permanently alters a life - fatally or
- non-fatally

Class II Damage - temporarily alters a life

Class III Damage - inconveniences a life

Percent of Total Costs

	Class I fatal	**Class I non-fatal**	**Class II**
1981-82 (G L McDonald 1984)	70 - 85		15 - 30
1992-93 (Industry Commission 1995)	1.5	80.5	18
2000-01 (NOHSC 2004)	3.5	88.5	8
Add cost of pain, suffering and early death	**6.5**	**90.0**	**3.5**

NSW Change in Incidence (number per 1000 workers)

	91-92 to 00-01	**10 Year Change Rate**	**Costs**
Class I fatal	↘	**-31%**	**6.5%**
Class I non-fatal	↗	**+140%**	**90.0%**

Class II -35% 3.5%

2000-01 Total $82.8 billion

As a boy I remember my Grandfather Alexander Nixon explaining, "It's a poor man who cannot use his own money and someone else's too." He borrowed money and founded what would become, in the next generation, "Devon Court" – one of the top Hereford studs in the country.

It is an ill-informed man who cannot use his own experience and someone else's too.

Grandfather could go to a bank which had collected and stored money and made it available to enable progress. In Work Health and Safety, there is no bank. No one has collected and made available adequate data on Class I non-fatal damaging occurrences.

By government decree and inaction, we struggle in information darkness and feel our way by "risk assessment" which splatters attention and effort rather than brings the directed focus that comes with an adequate knowledge of Class I damage.

Without a veridical information bank on Class I damaging occurrences, very very few, if any of us, can become a "Smart Alex"."

What is done in safety must be based on a thorough knowledge of what happens in a damaging occurrence .Because the National Experience has not been collected we do not know what to do. . (Geoff McDonald & Associates, Brisbane)

We must put a major focus on the personal damage phenomena if we are going to improve.
Far too much of what we do in safety and are taught to do is based on gut-feeling, mythology and folk-lore instead of scientific facts gained from actual damaging occurrences.

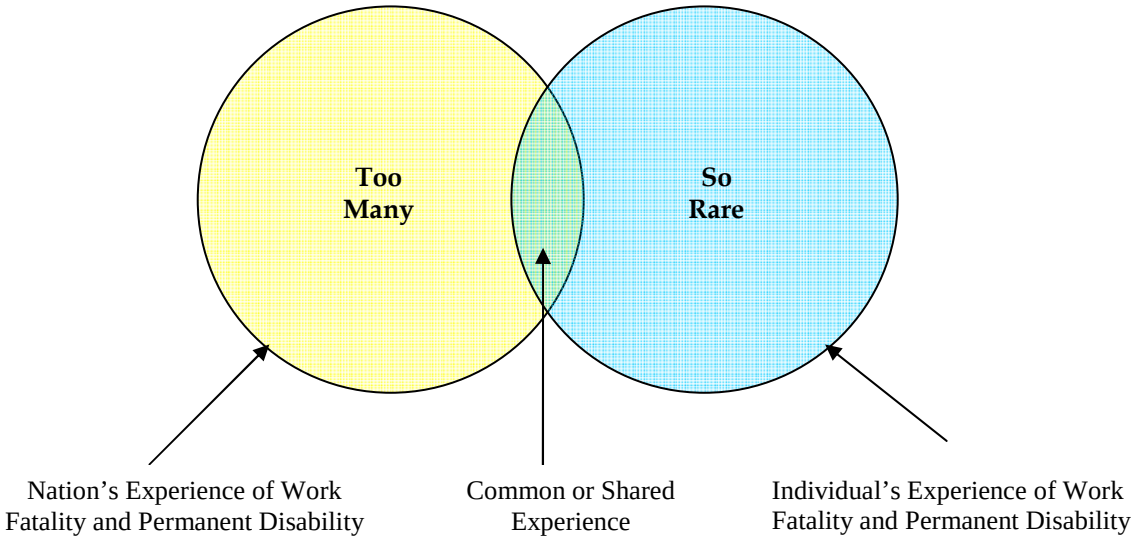
Major Challenge 3- Process vs. Content

Managing many issues in life requires use of both process and content. Many of the safety processes used in Australia today are well developed, where many fall down involves the content. Because content is not guided by solid data from damaging occurrences we use what **feels** right.

Major Challenge 4-The Two Mandorlas

Mandorla it the Italian word for almonds, in common usage it describes the overlapping area of two circles.In safety there are two important Mandorlas. One, the Paradox Mandorla, represents the situation that there are far too many fatalities and permanent disabilities but these occurrences are so rare in an individual's experience that individuals lack both the motivation to make changes and the knowledge of what changes to make.

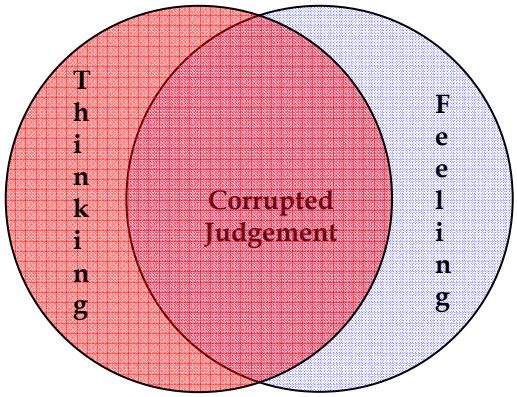
Figure 1 – Paradox Mandorla



The second, the Judgement Mandorla, represents the thinking and the feeling function, both of which are used to make judgements which lead to action. The thinking function involves the linking up of ideas by means of a concept and/or the use of concepts to integrate new ideas into an already linked up set (constellated, organised group) of ideas. Thinking is concerned with "truth" which is necessary if the physical energies of the world are to be controlled to avoid damaging people. The feeling function uses sub-emotional feelings via values to make judgements of the form "like or dislike", "acceptable or not acceptable", and is essentially concerned with "goodness".

Feeling corrupts Thinking (eg. by using value laden terms) and Thinking corrupts Feeling (eg. by attempting to rationalise how you feel). Inappropriate judgements come from corrupting one function with the other, or by using the wrong function, (eg. lack of factual information with which to think will lead to a feeling judgement).

Figure 2 – Judgement Mandorla



At present the Paradox Mandorla is very thin and the Judgement Mandorla is very fat. For effective and efficient safety at work The Paradox Mandorla needs to be fat and the Judgement Mandorla needs to be thin.

Thinking Judgements (truth) and Feeling Judgements (goodness) are both necessary, each in their own domain.

The use of the wrong function or the simultaneous use of both corrupts judgement and renders it counter productive. The large Mandorla represents the large amount of corrupted judgement which exists at present.(Geoff McDonald & Associates)

It would be instructive to examine the progress of other disciplines such as medicine in the context of this model, eg. With real progress based on understanding disease being based on environmental and constitutional conditions rather than "goodness" or "badness"

The discussion above once again emphasises the importance on basing actions on solid damaging occurrence information. At the moment many decisions on safety are based on the feeling function because we do not have solid factual data to guide the thinking function.

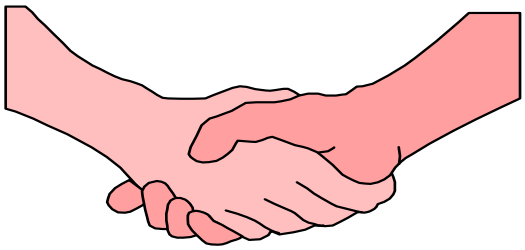
Lesser Challenge 1- Will it Work in the Real World?

As a young, keen corporate Safety Adviser the author used to arrive at a certain mine-site with the latest corporate safety approach and was greeted by the mine Safety Adviser with the question "Will this work in the real world?"

The following is a very important message to those leading OHS Change.

INITIATING CHANGE

- When initiating change remember "People support what they create"



Far too often what happens in safety is the result of management deliberations on the problem without input from the workforce. Ignore worker input at your peril.

The author has had a number of occasions when he has spoken to managers about how safety is managed in their facility and left the top office with a warm inner-glow after the managers telling him what a great job they do on safety. He has then examined the implementation of the safety programme in the real world and gained a vastly different perspective. Fancy professionally printed

safety policies and procedures, incorporated in the Quality Assurance system and found in the supervisor and managers office do not impress the author, what happens where the action happens is the real test of the safety programme

Far too many safety changes are a theoretical exercise that bears very little relationship to what is actually required to make a difference in the workplace. Too much of safety is also buried in political-correctness, paper-work, bureaucracy and arrogance of those leading the changes. Managing safety is not something you do from a desk.

Lesser Challenge 2 - De-emphasise the Lost Time Injury Frequency Rate

The author's personal experience in safety roles in Australian industry tells him it is difficult to make meaningful progress in safety when one has a focus principally on Lost Time Injuries.

This statement may upset those with a traditional approach to safety, given the enormous cost of occupational personal damage in Australia it would be difficult for the traditionalists to point to a solid record of success with their approach .The traditional approach to safety management in Australia often has a poor record of basing actions on solid **facts**.

On 7 August 1994, there was an underground explosion at Moura underground mine and eleven men subsequently lost their lives. In *Managing Major Hazards,* Andrew Hopkins comments that one of the facts prior to the explosion was that the mine operators were aggressively driving down the Lost Time Injury Frequency Rate (LTIFR) and not placing enough attention on the more serious types of risk. He goes on to say,

> "The Moura experiences cast doubt on the often repeated claim that a good LTIFR indicates that safety is being well managed." Further comment is "On the contrary, the danger is that a single-minded focus on reducing the LTIFR leads systematically to the neglect of catastrophic risk"

Somewhere in the push to reduce L.T.I's, reduce the L.T.I.F.R. and consequently achieve good ratings in safety programme audits, the focus on Class 1 personal damage tends to be lost.

Reducing the L.T.I.F.R. is as much about introducing rehabilitation programmes and making the place an enjoyable place to work as it is about reduction of personal damage. (Geoff McDonald &Associates, Brisbane)

Lesser Challenge 4- Risk Assessment

The author has trained many people in basic risk assessment over the last 15 years and one thing he has noticed is that if you set a number of people or teams the task of carrying out a risk assessment on the same risk you often end up with differing risk scores. This has to say something about the reliability and validity of the risk assessment process. Some people say you can remove this variation with better training, but the author does not agree. The basic problem is that we all bring different training and experience to the risk management process and our perceptions of risk will naturally vary.

The author has been impressed by methods such as hazop, F.M.E.A., fault-tree analysis and so on but methods using a simple matrix and / or nomogram make the author wonder about the reliance that seems to be placed upon them.

The basic risk assessment process requires one to make an estimate of Probability, Consequence and in some cases Exposure. This process could best be described in practice as a S.W.A.G. (Scientific Wild-Arsed Guess).Just think how powerful the risk assessment process could be if there was solid data to use in the calculations. The author has seen complex risk management processes that have impressed him but the simple risk assessment process that is practiced in many organisations strikes the author as being very unreliable.

Hopkins (2004,115) says “Subjective estimates are not just imperfect estimates of an objective reality. They exist independently of measured risk and may indeed influence it”

There is a great reliance on risk assessment in the safety profession, is this confidence justified without solid personal damage data?

Lesser Challenge 5 -Behaviour vs. Engineering

The Report of the Industry Commission into Work Health & Safety (1995, xx) says

> "The key to controlling injury and disease at work is to be found in the design and control of the workplace and the activities conducted within it. Only very limited control, if any, control is possible by focusing on the behaviour of those who may be injured."

In the Industry Commission report (1995, 121) McDonald & Associates state

> "Historically too much reliance has been placed on behaviour control and too little on organising the work methods, environment and equipment to allow for the realities of human behaviour"

In the Industry Commission Report (1995, 5, sub 132) Dr. Wigglesworth supported a preventative approach based on workplace systems rather than human behavior.

> "One of the basic principles of the management of other public health problems is that passive countermeasures, which apply equally to all persons at risk without their active involvement are more effective than those that are active, that is which requires some component of human behavior."

Bearing the above discussion in mind the author is of the opinion that a necessary part of safety management is that all levels of employees have detailed safety responsibilities and that they act according to those responsibilities. The author has been told by safety professionals whose thoughts he values that Dupont safe behaviour programmes are of considerable benefit. The author is not in a position to comment.

Both the engineering and behavioural approaches have their strengths and weaknesses; the wise manager uses the strengths of each without being led astray by the weaknesses. Keep in your mind the aim of our safety efforts is positive change for the future.

Lesser Challenge 6- Tertiary OHS Training

In the early 1980’s the author attended tertiary OHS training at a Victorian University and felt this helped him in his role as a mine-site Safety Adviser. In 1997 his wife completed an OHS qualification at a Queensland university. In reviewing her assignments, answering her questions and reading her text- books the author formed the impression that the course had not really moved on from his days at the Victorian University and in some areas was weaker than the Victorian course.

The author has some doubts post-graduate Occupational Health and Safety education at universities really equips the graduate to perform well in what can be an extremely demanding role. Detailed training on how to establish a safety management system seems to be a difficult area for training organisations to come to grips with. An effective safety professional needs many skills over and above the technical skills found in most OHS courses.

There are many excellent people working hard to develop tertiary OHS training courses. The author’s studies in Adult & Workplace Education has emphasised the necessity of carrying out a detailed training needs analysis to guide course development, the author is unaware of whether this thorough training needs analysis has been carried out.

Tertiary OHS training suffers badly from the lack of detailed incident data; currently people are being taught what we think they need to know because we do not have hard scientific data to guide our thinking in an accurate manner.

When the author studied Adult & Workplace Education he noted the significant body of research knowledge that was available. A similar depth of knowledge does not appear to be available in the Safety side of Occupational Health & Safety.

Conclusions

There are far too many people who have their life permanently altered (terminated or impaired) in Australia every year, sadly we do not really know how many. There is some evidence to suggest that the incidence of some Class 1 damage is getting worse not better.

There are many dedicated people working hard to address OHS in Australia. Much of what is being done has no factual basis and is thus ineffective. Many are urging us to carry out basic risk assessments, the risk assessment process is potentially flawed, because in many cases, it uses estimates rather than solid personal damage data. We urgently need to change our focus from Lost Time accidents to Class 1 damage. The author suggests the content of much safety tertiary training courses suffers from lack of a solid, factual personal damage data base.

We need a two tiered approach, one at the collective level for governments to change the way they report and educate on safety and one at the individual level where we, as safety professionals, should seek facts to support our strategies.

We must start to base what we do in safety on solid damaging occurrence data if we are to improve- a National Class 1 damage data base should be a Government priority.

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