Behavioural Safety.

An Overview of Key Theory, Recent Controversies and the Findings of the Third Annual European Users Conference

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Background

As we have moved from a culture of guarding and legislative compliance to one of best practise and continuous improvement it has become apparent that even large investments in managing and designing safety often deliver diminishing returns because the vast majority of accidents are now "behavioural". (UK HSE and industry figures suggest between 70 to 95%).

Initially, much effort was spent on trying to change behaviour by changing attitudes. Unfortunately, attitude change is notoriously difficult to achieve. Even very high impact events such as Hillsborough and September the 11th have had limited long term impact on people's day-to-day attitudes. Further, even if attitude change is achieved behaviour may stay the same if the environment remains unchanged. (One of the most important "laws" of psychology is that the influence of the environment is greatly underestimated when understanding behaviour - particularly when there has been a negative consequence).

Consequently the majority of UK companies have adopted an approach that focuses directly on "behaviour/ conditions that are the direct consequence of behaviour". There are any number of variations in the theme - some rather better than others - but collectively they are considered "behavioural safety".

What is Behavioural Safety? - "Full" Programmes

Building on academic research and the quality focused work of Demming, the US company BST pioneered "full" behavioural safety commercially.

Essentially, "full" behavioural safety has 6 pillars. These are:-
- Root cause analysis
- Measurement (for continuous improvement)
- Feedback (& Goal-Setting)
- Awareness raising
- Workforce Ownership
- Front line supervision.

Summary of Basic Full Programme Methodology

Typically, awareness presentations are made to the whole workforce and volunteers are sought to receive training to form a Steering Committee (SC). The SC - if they decide they do want to run a "full" programme - then finalise the draft materials they have been provided with through consultation with their colleagues. When trained in the use of a measure base-lines will be taken, goals set, feedback provided and reasons for non-compliance investigated as outlined above.

Variations on the theme include:
- having one or two champions who may be full time on the process rather than a committee. The strength of this is that it ensures continuity of approach - so long as the individuals remain with the company. The weakness is that it minimises breadth of ownership and control - and cross-function discussion and understanding.

- having employees look around their own work-site and consider their own actions rather than scoring and observing colleagues. Minimal disruption/ time costs are the benefits. The downside? Lack of quality control and minimal cross-function contact.

- initially addressing just one or two key behaviours rather than as many as possible. The benefits are focus and the ability to refresh the process every six months or so (avoiding the staleness of "now what?" after a year or two's success). The downside is that the additional time costs of tackling all key behaviours is minimal once any sort of process is established.

Alternative Approaches - "Top Down" vs "Bottom Up"

Some companies have attempted to tackle this with supervisor led programmes which have a behavioural focus. "STOP" is perhaps the best known. The great strength of these is that they fit well with existing management systems and stress the importance of line management influencing safety on a day-to-day basis. Their weakness is that they can be seen as patronising if not done well, deliver little, if any, front-line "ownership" and do not provide accurate percentage data. (See under "3 Measurement" below). Cards given out can be counted but these "head count opportunity" samples may produce interesting looking pie charts but are not to be confused with scientific sampling techniques.

Finally, they do not set the best possible situation for root cause analysis as operatives approached often report themselves defensive and wary. As one conference delegate put it "management had a no blame policy - they just really liked to know who it was they weren't blaming!".

Regardless, such an approach may be an excellent first step if the company's culture is suitable and it feels that it isn't ready for a "full" approach just yet. My approach is to tell the SC / company about the options and the strengths and weaknesses of each, make a recommendation (that's what we're paid for) with reasons but then genuinely step back and let them decide.

Three alternatives to the standard "top-down" and "full" approaches are:-
- Develop as much workforce ownership as possible by having the process and standards designed by a workforce team that hands back control to management after a set time. (Avoiding an on-going time commitment).

- Set up a bench-marking team within the organisation that can use a behavioural measure to collect infrequent - but accurate and comparable - data. (Achieving both of the primary benefits of measurement).

- Run a top down programme - but ensure the amount of root cause analysis is maximised. Companies stated that this is an excellent preparation for a "fuller" process some years later.

Two Current Controversies

"No name, no blame"
NNNB is a much misunderstood expression. It should obviously never be applied to safety per se - but I'd argue always to a behavioural safety programme. Although they often try to find out management must not be allowed to "know who it is they're not blaming". It helps with measurement (and feedback) as employees will act more naturally, it helps with root-cause analysis as employees will respond more frankly and honestly and it helps with ownership and involvement as volunteers from the shop floor are more likely to volunteer if there can never be any comeback because a "crap list has generated some crap" and are less likely to incur the ire of their colleagues if their safety discussions are entirely geared to root-cause analysis and not towards any sort of confrontation.

Organisational Maturity
There is an argument that organisations should not attempt a behavioural approach until all traditional approaches have been utilised and maturity models have been produced to measure "readiness". However, others point out that since root-cause analysis is the core of a good programme it aids more traditional approaches by highlighting systems weaknesses from another angle. Management resolve to respond effectively to this flood of information and data will be severely tested - but why not use a behavioural programme as part of an improvement approach? Certainly many "immature" organisations have done so successfully. They simply needed (even) higher levels of management commitment - and often a change of style - than "mature" organisations

Mini Case Study 1 - Organisational Maturity

At a recent break out session at a conference two of our clients led a session on "maturity". A major north-sea oil producer suggested that their award winning behavioural safety programme might not have been possible without the generic empowerment process they had been through the year before. Behind them representatives of a major pallet manufacturer began giggling as they waited to talk. Although they had reduced accidents to less than a fifth of previous levels over a period of six years - they started by suggesting they were "err ... frankly quite a long way from organisationally mature when we started". From first hand knowledge I can confirm that what they did have was a very high level of management commitment.

European Behavioural Safety User-Conference

Every 18 months Ryder-Marsh host and facilitate a "warts and all" user-conference in Manchester, England. Sponsored by Link Associates International the third conference was held in April of this year. All told more than 130 major organisations have attended these conferences. The events comprise 10 short presentations from a carefully selected cross-section of users of all the major UK providers of behavioural safety. All speakers addressed just one topic - "problems we've had and lessons we've learnt". In the afternoon a series of audience selected workshops allowed more focused exchange of experiences and learning. (The author has also chaired several smaller user conferences as well as, this year, the "annual" behavioural safety conferences of Dubai and South Africa and will chair the Indian Behavioural Safety conference in February. Ryder-Marsh speciality is reviewing existing prescriptive and in-house systems and suggesting ways to strengthen them).

Topics covered at the European conference included "keeping it fresh after years of success", "peripatetic workers" and "how to include sub-contractors". As in previous years a remarkable number of details were exchanged and site visits arranged. For example, after a podium appeal, Dr Andrew Weyman of the UK HSE generated 20 volunteer organisations for a piece of stress related research.

Findings from the user-conferences - a more detailed consideration of how programmes work (or don't) - Based on "the 6 Pillars"

1. Root-Cause Analysis
"Recent Criticisms of Behavioural Safety".
A recent paper in the Safety and Health Bulletin criticised "behavioural safety" for focusing "on the victim and not the hazards". Frankly, many "awareness" or "personal values" based approaches with a "behavioural safety" tag are guilty as charged! There are an ever increasing number of programmes with a "behavioural safety" tag on the market that's only link with behavioural safety is adding the expression to their glossy brochure - then running exactly the same "personal values/ team building/ empowerment" course as always - except throwing in the word "safety" now and then. Frankly a good process follows the "first law" of safety - "design it out". With the addendum "and design out any temptations too" this should also be the first rule of behavioural safety!

Volunteers are trained to assume that in the vast majority of cases unsafe acts are for a reason that makes sense to the individual at the time.

A fundamental principle of most safety management is that we are long term, rational and logical in our thinking - but just like with smoking, speeding and poor diet etc we respond frequently to rewards that are soon, certain and (at the time) positive. Consequently, companies confirmed that designing out temptations has proved far more effective than increasing punitive action - especially because design solutions are permanent. (Therefore the comment "I can't be bothered" or "it's too time consuming" should be read as "some people admit they are tempted not to do X because it is inconvenient. We can make it more convenient by ... "). Often, making the safe way as quick, comfortable and convenient as the unsafe way is a very cost effective and adult way of improving safety behaviour.

Companies at the conference agreed that at the very least safety audits should contain neutral questions such as "what's uncomfortable about doing this job safely?" or "if you really had to get this job done quickly...?". Hypothetical discussions are much more frank - but the quality of the information is the same.

Cost effective suggestions should be implemented - and knowledge of this action disseminated to all employees to encourage further contributions. Those that aren't cost effective should at least receive a "thank you anyway" and an explanation (if politically possible). Further, the active supervision of safety is enhanced by transparently being seen striving hard to design out environmental factors even where they just encourage temptation and reducing the number of transgressors so they stand out more.

Mini Case Study 2 - A chemical plant

A chemical company featured in the video "Developing a positive safety culture" found that only half their employees were wearing rubber gloves when handling caustic soda drums. They were losing more than 120 days a year to dermatological illness. It transpired that only one size of glove was provided - and had been for more than 30 years (so anyone with small or large hands couldn't find a glove that fitted). Providing three sizes increased scores from 50% to 90% plus - and in the following year the 120 figure was reduced to 18. A manufacturer of tiles found that workers were taking chairs onto a gantry/ walkway where they were required to stand and monitor production. This was causing a housekeeping problem for one of only two major access routes to and from the site. Workers were extremely reluctant to stand all day - and discipline was difficult in an area with an employment shortfall. The cost effective solution was to install cinema seats. A computer disk company found that employees frequently overloaded "stack trollies" to move heavy grinding disks around the site - minimising the number of trips required. However, these were both heavy to move and unstable. Stacking the high and low shelves required poor handling position. The solution was to remove the top and bottom shelves - designing temptation out.

2. Ownership

Nothing energised the conference audience as much as a presentation from front-line employees showing real ownership of a process. There is a good reason for this as nothing gives a programme more fire than genuine shop floor ownership - and it shows.

This is achieved in a number of ways. For example, volunteer committees genuinely consulting their colleagues about the items on measures. This genuine consultation helps achieve "buy in" to standards. Here it is vitally important to distinguish between some form of consultation and genuine ownership. Some delegates claimed their workforce had "ownership" of a process when they really meant limited consultation. (It was very notable these were always management delegates!). With genuine ownership the work-force will set their own behavioural standards, have completely free reign regarding items on the measure, can design their own programme and can even choose not to run a programme at all.

The problem with such ownership is that it requires a lot of in-house time (to attend meetings, collect data and make presentations etc.) as well as a good deal of trust. This ongoing time commitment is something that even highly profitable companies can find difficult if commitment at senior management levels is at all weak. (Trust is an element of maturity models - see above)

Mini Case Study 3 - An oil platform

An oil platform manager praised the high levels of process ownership shown by the volunteers on his platform. Explaining that they ran the process with great enthusiasm, had written their own mission statement that they'd had him countersign and undertook all the presentations to visitors to the platform he told me two stories that illustrate ownership in action. First, that the drillers were leaving soon and that a chef and a production employee on the same behavioural safety committee had commented "I'll miss those guys". He told me "I know they've been through team building and the like but never in 22 years off-shore have I heard anything like that!" He felt that their team spirit came largely from their passion for the process - but mostly from the effectiveness with which they got things done. Second, that following a Step Change workshop where their presentation had gone very well indeed they were to be found drunkenly signing in the bar "Step change 0, 'our process' 1 la la la la". Somewhat OTT perhaps - but certainly showing high levels of ownership!

3. Measurement
By collecting accurate data as to the frequency of unsafe acts - particularly when management are not around and the workplace is busy. The availability of accurate data on a daily basis allows safety to "compete" for management's attention along with other Key Performance Indicators. Data can be used at goal-setting sessions where the workforce set their own hard but realistic goals and displayed on highly visible and user-friendly feedback charts. Feedback of this data can also be built in to existing safety and management meetings. Goals once reached should be reset in an ongoing process of continuous improvement - always seeking to halve the number of unsafe behaviours and therefore the risk. (EG from a Housekeeping score of 60 to 80% then from 80 to 90...).

Companies reported a wide variation in the quality of data collected. Some is rigorously collected and comparable with product quality data - other data is very weak. (One safety measure had the very vague quality item "look for strong smelling after-shave or perfume"). It is important to note that the benefits of "what gets measured gets done" can certainly accrue from weak data but the benefits of "if we can measure it we can manage it" require good data.

All delegates agreed that good data requires clear and precise definitions and illustrations - as well as the application of good sampling methodology. (Observations must be taken when the site is busy. A classic Catch 22 as it is hardest to do). Further, it is agreed that the most accurate data is collected by shop-floor employees (see "No name no blame" above).

Mini Case Study 4 - Effective behavioural measures - chemical site

During a two week closedown behavioural scores which had been climbing steadily plummeted - although no-one was hurt and no incidents reported. The behavioural team undertook some root-cause analysis and made several suggestions which were implemented during the next closedown. Again no-one was hurt but this time behavioural scores dropped hardly at all. Quite correctly they boasted that they had learnt from the last time and that they were "pro-actively managing the risk upstream of any incidents". This mix of pro-active data, analysis and informed planning is behavioural safety at its very best.

4. Feedback (& Goal-Setting)
See use of data above. Specific feedback can also be given at team briefs and safety meetings.

Two other important uses of feedback worth mentioning: First, increasing the incidence of praising the individuals - especially those who have started to act more safely and those who are collecting the data and ideas. Perhaps even more important, however, is promptly acting on any cost effective and feasible suggestions put forward. At the user conference what was striking was that companies boasting about their success talked mostly about the "things they'd got changed" - even more so than their impact on accident figures and behavioural scores.

Mini Case Study 5 - Beckham and Cantona the power of positive feedback

Some years ago David Beckham was once asked how Eric Cantona could be a good captain when he appeared to talk so little on the pitch. Beckham replied that if he did something good Cantona would wink at him. "If he does that I'm charged up for the rest of the half - regardless of what the opposition fans are chanting about my (then) girlfriend..."

5. Awareness Raising
This is most effective if used at the start of a process - or as an "item of the month". For example, reminding people that even though the chance of injury may be only 1 in 100,000 that particular behaviour could happen millions of times a year (for example, climbing a flight of stairs). This "initiative" element of the programme will have more impact than typical "safety initiatives" if it is at least designed by the workforce themselves and is launched in the context of the above. (See ownership).

Mini Case Study 6 - Awareness Raising

Companies provided many imaginative initiatives. One company described how they would play "stairway to heaven" over the tannoy to encourage holding handrails! - and "dedicated follower of fashion" to encourage PPE... Others hold quiz nights where every third question is safety related - or staged "spot the hazards" competitions. Others focus on home safety, child safety and driving safety to get the principles across. The work of people like Ken Woodward and Ian Whittingham was also widely praised. (See several Outtakes videos and the HSE video "Turning Concern into Action").

6. Supervisors

All attendees agreed that supervisors are key to any process or initiative. They need to receive a full briefing that will focus in particular on what is required of them to support the process - and precisely what we want them to do when they are inconvenienced by the process on a day-to-day basis (i.e. manage the situation or - if that is genuinely too difficult at the time - take their problems up to more senior management rather than passing them down to the volunteers through body language or voice tone).

Experience shows clearly that what is perceived by front line management as "highly desirable" to senior management will not compete with what is perceived as "essential" without concerted follow-up, clearly budgeted resources and appropriately targeted negative feedback when process goals are not achieved. (When holding meetings, consulting colleagues, taking measures etc).

Mini Case Study 7 - Supervision (how not to do it)

A utility company launched a behavioural programme but much to the consultant's despair simply asked the front-line supervision to "support the process as best they could" after some safety awareness raising workshops. Production and quality continued to be rather more formally addressed of-course. Not at all surprisingly the already hard pressed supervisors effectively ensured the process was dead in the water within months.

Summary

Even at this warts and all event the overwhelming consensus was that the behavioural approach to safety is one that all companies should be utilising in some form or another.

Further, it was generally agreed that companies which have been able to utilise more of the 6 principles are achieving the best long-term results. This was particularly true of companies that had achieved high levels of ownership and measurement. Ownership in particular was seen as the key element of many programmes. However, there are alternative approaches that can also yield excellent performance improvements.

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