

# Mainstreaming Safety into Good Management Practice in the Workplace Environment

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## Abstract

Few authors would disagree that safety is in essence a managerial issue, and that when safety is mainstreamed and embedded into the management of a company, would be an indication of good management practice. Though this statement could be faulted, it is argued in this article that the existence of a large and often visible safety department in a company, could be misleading and does not necessarily imply that safety is really “embedded” nor “mainstreamed”. This article postulates that the mainstreaming of safety should involve more than just being a managerial issue, backed by a large department and strict safety rules and regulations. Rather, safety should be part of the “DNA” of a company. The departure of this paper is that safety in the workplace is essentially a human sciences issue and to embed safety in the “DNA” of a company, needs a paradigm shift from the popular current behaviourist paradigm of thinking about safety management, to the complexity paradigm of thinking in order to create the biggest possible overlap amongst both employer and employees' attitudes and behaviour towards managing safety in the workplace. In absence of the latter, safety in the workplace runs the risk of getting stuck in the typical behaviourist driven input-output model with its own limitations reflected in just a positive attitude, or just a form of tolerated behaviour, and considered to be just another issue among various others that management should pay attention to in the workplace.

## Keywords:

Safety management,  
Mainstreaming safety,  
Critical theory,  
Complexity theory

## Introduction

Has the demand for safety in the workplace spiralled into an occupational bubble? Like never before, the theme of safety in the workplace has attracted the attention of employers, employees, service providers and associated occupations alike. Clearly one of the reasons is the various job opportunities

that safety in the workplace offers. As often experienced in the mining and oil industries, shares on the stock markets can tumble because of poor safety performances (Gardner, 2014; GMA Network Online, 2010). The internet is flooded with popular and promotional articles which addresses some or other aspect of safety and each safety consultant tends to develop a unique slogan to

convince employers that his/her approach is the best proven way of how to create a culture of safety in the workplace. Needless to say that the latter often thrives on horror stories of reported accidents and financial losses that happens in the workplace. The International Labour Organization (ILO) determined that 2,3 million workers are killed annually due to work related accidents and illnesses (Niu, 2010). Poor safety in the workplace does not only contribute to human suffering, but it also places a financial burden on society. However, in spite of the growing popularity of the safety theme, there are some concerns that the renewed focus on safety in the workplace is just tolerated (a nice to have) and not really seen as a fundamental need, as work-related accidents and injuries are often overshadowed by the need for employment in under developed and developed countries.

### ***Safety and Health Worldwide: A Growing Demand***

Worldwide there seems to be a growing sensitivity for adequate safety legislation. The result is the continuous development and accumulation of more refined safety legislations. Add to this equation, the phenomenon of global trade and internationally accepted safety legislation further contributes to each country's corpus of safety legislation. This phenomenon is also known as to make exports from under developed and developing countries to developed (1<sup>st</sup> world) countries an uneven playing ground. The reason being that international safety and health legislation has become binding between trade partners and often makes it impossible for the underdeveloped and developing countries to trade with the first world countries and through this, receive the benefit of financial security and possible development through trade with first world countries. Occupational safety has become a lucrative business in the developed countries and the same is currently becoming more visible in developing and to some extent, in underdeveloped countries. Large industries sprung up that are devoted to preventing

injuries in the workplace that range from manufacturing safety equipment to safety consultancies, to avoid compensation pay-outs for injuries in the workplace. Companies and workers pay high insurance premiums for possible accidents that were highly unlikely to occur anyway, with the result that when an accident happens, the involved parties end up with expensive, highly technical and sophisticated law suits between employees and employers, public and shop owners or shopping centres, etc. that often take years to resolve and of which the cost could run into numbers far beyond the yearly income of the average worker.

It is against this background that the theme of this article, namely that safety should be mainstreamed and embedded into the concept of good management practice, was developed. Though this statement cannot be faulted, it contains a minefield of provisos and assumptions that need to be clarified to be of any value. For example, what is meant by mainstreaming? What does embedded actually mean and what does good management practice really constitute? There seems to be no clear definition on what mainstreaming really means. For the educationalist, it means mainstream education as opposed to alternative education practices. For the scientist it means mainstream science as opposed to alternative science practices. For the medical doctor it means modern science based medicine in contrast to alternative medicine.

It is clear from the literature that the concept of mainstream is always used in relation to an associated concept. Therefore, for the management practitioner, mainstream probably means that the theme should take in a central position or focus in the day-to-day management of a business, organisation or enterprise, which also carries in it the idea of embeddedness. However, it should also be noted from the outset that all of these elements do not constitute a right or wrong, but merely represent shades of what is probably better and what is not so good, given certain circumstances. It is against this complex background that the theoretical approach used

in this article is rooted in the *complexity theory* paradigm, popularly associated with the principles of *chaos theory* as a reaction to what will be argued, the seemingly unsuccessful use of the systems approach and the typical behaviourist instigated input-output model of thinking to successfully address the safety issues workers and society at large are confronted with in developed, and more specifically developing societies.

### ***Popularity of the Behaviourist Approach***

Most of today's occupational safety practices are based on the works of Skinner, a behavioural psychologist who postulated that all forms of behaviour are the result of antecedents and consequences, where antecedents serve as triggers to observable behaviours and consequences are used to enforce or discourage repetition of the related behaviours (Catania, 2003). Inherent to the behaviourist approach, is that there is a "domino line" of behaviours (effects) that, if traced back, could lead us to the origin of, i.e. an accident in the workplace. Therefore, using this behaviourist theoretical approach in the work environment will lead us to the antecedents (activators) that triggered the behaviour that lead to i.e. an accident or unwanted behaviour in the workplace (Kaiser & Raminsky, 2010). The contrary also holds true.

To strengthen safe behaviour, one should identify those antecedents that encourage safe behaviours and reward them, as the behaviourist theory argues that consequences (reinforcement) that hold positive, immediate and certain rewards will stimulate employees to work safely. On the other side, negative consequences that are immediate and certain (i.e. punishment) will discourage unsafe behaviour in favour of safe behaviour.

The management principle built on the behaviourist approach is clear, as the goal for management is simply to set up a management system that controls the antecedents and consequences that will increase workers' safe behaviour practices. In doing so, the unsafe behaviours of employees can be controlled

with the possible positive result that accidents and injuries are reduced (Reynolds, 1997).

### ***The notion developed that safety is a management issue***

An overview of the field of safety management indicates that organisational matters are paramount in the approach of managing safety in the workplace. The Health and Safety Executive (HSE), one of the leading institutions involved in promoting health and safety in Britain, is clear on this approach when they categorically stated in their directive for the establishment of a good safe and healthy work environment that the process "has to start at the top" and that health and safety "is a boardroom issue and a board member takes direct responsibility for the co-ordination of effort. The whole organisation shares the management perception and beliefs about the importance of health and safety and the need to achieve the policy objectives" (HSE, 1997). Very few authors on safety in the workplace disagree with the above-mentioned statement that safety in the workplace is in essence a managerial issue. In a sense Anderson (2007) confirms the reality of the current focus on safety as a managerial issue from a different perspective, when he asks the question why it is that accidents still occur in companies with good statistics on personal safety records. His argument is that the reason is associated with the existence of the mentioned dominant managerial focus, as he observes a general increase in management using behaviour modification as a theoretical approach in order to reduce the occurrence of accidents in the workplace.

The general point of departure behind the behavioural safety approaches is that safety is in essence a managerial issue and accidents are mainly caused by workers that do not adhere to rules and regulations and that this can only be corrected using the typical behaviourist point of departure, which argues that when accident preventative behaviour is strongly reinforced, it is likely to become the action of choice and it is more likely that such behaviour would be

sustained. Needless to say that such interventions are without exception directed at changing an individual's behaviour through managerial initiatives (Anderson, 2007). Another example of the behaviourist approach is clearly shown when the HSE makes the following statement:

“These control arrangements are only effective if health and safety objectives get the same importance as other business aims, and if good performance by supervisors and managers is seen as vital in career progression and personal development assessments. A combination of rewards and sanctions is required to motivate all employees. There needs to be emphasis on the reinforcement of the positive behaviour which contributes to risk control and the promotion of a positive health and safety culture. The general payment and reward systems should support the achievement of health and safety objectives and avoid conflict with output and other commercial objectives. If safety award schemes are used, they need to emphasize the attainment of specific standards of performance rather than arbitrary targets or ones based solely on avoiding accidents or ill health. The better schemes reward group rather than individual effort and support a collaborative approach to health and safety management” (HSE, 1997.).

Further proof that this deeply engrained behaviourist approach in the safety environment is widely accepted, is implicit in statements such as that it is estimated that “human error” contributes to between 84% and 94% of all work related accidents (Wirth & Sigurdsson, 2008). The underlying assumption in the reason classified as being “human error”, is squarely rooted in the behaviourist paradigm and simply postulates that some or other safety rule and/or regulation in the workplace has been violated by the individual or individuals involved. Noting “human error” as the cause for an accident simply means that the antecedent behaviour (cause) did not lie with the system or the management thereof, but with the individual who violated the existing rules or regulations designed to avoid such an accident.

From this it is clear that behaviourism has been, and still is part of the safety vocabulary

and paradigm of thinking. However, it is exactly this statement that also points to the underlying flaw in the behaviourist approach to safety, namely that if the cause of an accident is recorded as a “human error”, it rules out the possible contribution of i.e. a design or structural flaw, as a possible contributor to the mentioned workplace related accident. This possibility seems to create an anomalous situation and is often conveniently and in search of simplicity, ignored. Though it might be recognised that incidents could have other causes “distant” from (not directly linked) the person who was directly involved, actions to prevent such incidents often ignores this possibility and usually targets front line staff with a typical behavioural approach in search of the “guilty culprit”.

The following real-life examples of recorded incidents shows that the behavioural approach simply does not give enough insight into human behaviour to create a safer work environment, and hints at a more holistic thinking approach to reduce accidents in the workplace. The fact that (i) a pipe nozzle fits on both the intake and the outlet ends of a water filtering system, suggests that there was a fundamental design flaw many years ago when the engineers designed the system. The fact that (ii) employees are encouraged to lower operational costs by picking up additional responsibilities and workload, suggests that human error was inevitable and the fact that (iii) employees do not follow the start-up procedures of a machine because the official procedures have not been updated to reflect a new system's latest design upgrade, suggests i.e. a breakdown in communication between engineering and operations departments as a possible cause for the accident. In all of the above examples, “human factor” related to frontline staff, was recorded as the main cause of the recorded catastrophic incidents.

It comes as no surprise when Kletz (2001), came to the conclusion that managers and designers are either not human, or they do not make errors and “human errors” are only made by frontline staff and workers. From the afore mentioned examples it is also clear that when the cause of an incident is reported as being the

result of a “human error” it has a direct impact on the quality of statistics that are published in this regard. But, how trustworthy are these statistics really? Behaviourist-infected statistics will by nature inevitably be inclined to generate figures with a simple cause and effect relationship. Another dynamic that impacts negatively on the quality of safety statistics is that managers often tend to avoid publishing negative safety statistics.

It is to be accepted that safety statistics are so diverse and usually reported in such a way that when made public, almost without exception, will show a positive improvement in safety conduct and/or standards in the workplace. In short, you will hardly find the media reporting negative statistics regarding work related injuries, and when it happens, it is usually when public fatalities were involved in economic sectors such as public transport enterprises in which airlines, railways and bus services are closely monitored and reported upon. Therefore, statistics on safety in the workplace simply seems not to be readily available, and if so, difficult to be verified scientifically. Various interviews with safety inspectors in big companies revealed that it is common practice for inspection officers to file reports with the same findings year after year, because the maintenance department do not have the manpower, did not plan in advance or does not have the available budget to address the issues reported upon.

### ***Is bigger and more really the answer in safety?***

Safety functions in emerging and big companies are often housed in a separate dedicated department with its own bureaucracy alongside other service departments. Also, the professionalization of safety in the workplace is also high on the agenda of the profession and visible notice boards with instructions and reminders are commonplace when one enters any office building or other workplace. However, there is another side to this seemingly plausible manifestation of sensitivity for a safe work environment. More management often only results in making safety in the workplace a sideshow, as a larger and more visible safety

department is often created to showcase that management is serious about safety issues. This thinking is mirrored in the way safety legislation in the workplace is developed.

Safety is in essence managed by legislation, and new, more refined safety legislation is without exception, formulated in retrospect as a reaction to poor safety management practices observed as a result of new experiences of accidents in the workplace. If a spate of accidents in a specific work environment happens or a new type of accident appears on the horizon, new legislation is passed and this again has to be managed. The result of this process is that when safety is only considered to be a managerial issue, the more it is managed, the more it develops into an issue that people will attend to alongside the functions of the departments in the company such as the marketing and personnel departments among others. If this is the case, safety develops into a trade-off and the shorter-term issues receive priority over the longer-term issues, also a reflection of good management practice that cannot be faulted. The result is that that safety develops into just one of the service delivery departments with its own management, budget, vision and mission.

It is exactly this element that keeps safety issues in the workplace at a peripheral level, because safety is often only seen as a management issue and successful management means that more will result in less accidents. This way of thinking is not always true. The problem with this approach is that if safety only equates to management, it develops into a notion of “them not doing their work”, instead of “us not doing the right thing”. It is in this sense that Anderson (2007), rightly comments that the popularity of the behaviourist approach and that behaviour modification safety training programmes may in fact divert the focus and broad based funding in many organisations away from looking holistically at process safety across the whole system, which should include the technical processes, the physical systems as well as the human factors, to name but a few.

In all the discussed behaviourist examples, the quest is to identify efforts that can assist in

explaining accidents by reducing the causes to a simplified calculus, which then enables the process of making managerial decisions in a more straightforward fashion (Smith, 1999). This approach to safety in the workplace signifies the preference for simplicity for things to be definite and manageable in search of clear answers to our problems that in most cases do not exist.

### ***Critical theory paradigm***

It was Henry Ford that popularised the statement that anything is possible if you break it down into small enough steps. From a behaviourist point of view and the typical engineer's input-output model, this might sound logical. In a complex world such as the work environment, the tendency seems to make things tangible/measurable and in doing so, simplified safety conduct to the extent that explanations for accidents are also simplified as much as possible. From a complexity theoretical point of view this is an oversimplification of the reality. Often a simplified idea becomes so prevalent that it is accepted and methodically applied without question. This creates the situation where people becomes so conditioned to the correctness of it that we simply fail to go back to the drawing board to re-examine its basic points of departure. I believe we are at that point when it comes to the traditional behaviourist approach to safety in the workplace. In fact, I agree with Smith (1999) that currently, the behaviourist approach is an out-dated approach in safety management.

In the meantime the social sciences moved beyond the application of Skinner's principles developed on animals in laboratory situations and applying it on the 21<sup>st</sup> century human. This paradigm does not represent the latest theoretical developments in the human sciences. In fact, the behaviourist approach could in some circumstances end up proving to be the wrong solution to prevent accidents in the workplace (Smith, 1999).

A paradigm shift is needed to give more insight into why things go wrong that lead to

accidents in a work system. We have to revisit safety in the workplace with the latest scientific knowledge available in search of why accidents/incidents still do happen. This requires a major shift away from the typical simple accident-causation model. The simple explanation that the unsafe actions and unsafe conditions cause accidents is not sufficed for the postmodern theorem. The complexity theory provides a much more comprehensive understanding in search of causal elements for accidents in the workplace. The complexity theoretical approach is to focus on the work system and not only the misconduct of a worker. I do believe that it is time to raise the bar in our scientific conduct on safety in the workplace.

Arguing from a complexity theory paradigm, safety in the workplace developed into a morphed, seemingly unpredictable complex system of possible causes that do not necessarily respond to the simplified behaviouristic model that seems to be the current dominating approach in the industry. In the complexity theoretical paradigm nothing is static and the object under study, in this case "safety in the workplace", is a construct with a multitude of complex relationships that hosts various causes and effects that also changes as the various interactions within the construct takes place. In this sense, the typical behaviourist approach as a response to a problem is simply too one-dimensional and cannot give the full answer when describing the cause of an accident as i.e. being a "human error", and by developing more refined rules and regulations, less accidents will occur, or if we give incentives for safe behaviour, people will follow instructions. It is only in the typical behaviourist approach that such solutions to problems seem to be a logic consequence and possibility. From a complexity theoretical paradigm, such simplistic explanatory (domino-) lines of cause and effect is unthinkable. We simply have to accept that some accidents in the workplace are completely unavoidable, as they are completely unpredictable. But, within the seemingly chaos, there is also order, a sort of chaotic order.

***Where does the complexity approach take us?***

This discussion postulates that the mainstreaming of safety in the workplace implies more than just the proper management of safety. It is to make safety part of the “DNA” of a company. That means if the causes of accidents in the workplace are so diverse and complex, that the issue of safety should be engrained/internalised into this complex system. It should form part of the core in the core business of every department. The result of this thinking is that safety in the workplace has many faces. For two workers working next to one another, working in a safe environment might have different foci. For the one it means to use the latest protective wear, for the other, to use functional protective wear, but also to make use of safe transport to and from the work. For the other safety also means to be less concerned/stressed about his sick wife at home whilst doing his/her duties at work.

From a complexity approach, the question is not what your main function in the department is, but rather what is your main function in a safe environment in the department. This statement implicates that the main function could be negotiable and could change from time-to-time, but the issue of a safe environments is ever present in whatever your work entails – part of the “DNA” of the company. The question remains, how can safety become part of the “DNA” of a company? The following explanation of the complexity theory might shed some light in this regard.

From a complexity perspective, human behaviour is influenced by a magnitude of complex relationships and influences that can, for the purposes of this discussion be illustrated in three levels of influential spheres surrounding the individual. These spheres can be described as the (i) primary influential sphere, (ii) secondary influential sphere and (iii) tertiary influential sphere.

1. The primary sphere refers to influences where the individual would have direct contact with the source of the influence that impacts on the life of the

individual/worker's behaviour in the workplace. Here we refer i.e. to a supervisor, instructions, machines he/she works on, colleagues he/she works with, etc.

2. The secondary sphere refers to indirect influences where there is no direct contact with the source of the influence that impacts the life of the individual/worker's behaviour in the workplace.
3. The tertiary sphere refers to what Hoffman termed the “umwelt” (Giddens, 2006). The tertiary “umwelt” sphere refers to everything beyond, but also includes the direct and indirect spheres that impact on the individual's life. It includes more than the immediate physical surroundings and extends to indefinite spans of time and space, and corresponds to the system of relevancies to the individual's life. The “umwelt” is a “moving” world of normality which the individual carries with from situation to situation, whilst accepting that this feat depends on others who conform, or take part in reproducing this perceptual reality. In the globalised circumstances of today, the “umwelt” includes an awareness of high-consequence risks, which represents dangers from which no one can get completely out of range (Giddens, 2006).

Using the above complexity theory model, it is clear that from a behaviourist paradigm, safety in the workplace mainly focuses on the management of the primary influence sphere. In the complexity paradigm, the focus for behavioural change is on the tertiary sphere and the challenge is how to ingest safety in the tertiary sphere where the concept is internalized to the extent that it forms part of the “umwelt” sphere of influence on the individual's actions whilst it filters through to the secondary and primary spheres of influence. This is when safety has become part of the “DNA” of a company and ingrained into the values systems of individual workers.

**Conclusion**

Arguing from a complexity theory paradigm,

the current commonly used behaviourist approach to deal with safety in the workplace is an over-simplification of human behaviour. To embed safety into the “DNA” of a company needs a paradigm shift from the current behaviourist paradigm of thinking about safety, to the complexity paradigm of thinking in order to create the biggest possible overlap amongst both employer and employees' attitudes and behaviour towards safety in the workplace. Therefore, the focus of safety training should shift to, or at least also include, the tertiary “umwelt” sphere of the workers in order to create the biggest possible overlap between the worker's attitudes and behaviour towards safety. In the absence of the latter, the work of safety officers in the workplace run the risk of getting stuck in the typical input-output model with its own limitations often reflected in just a positive attitude, or just a form of tolerated behaviour, and considered to be just another issue among various others to pay attention to in the workplace.

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