Chapter 1: The Three Inducing Factors

"If you had a magic wand and could use it to change one thing concerning safety in the workplace, what would it be?"

I like to ask this question when I chit-chat with safety practitioners and management, as it reveals frustrating or stubborn safety issues Some blurt out their answers in a wink, while others gaze up in deep thought, "Hmmm…"

By far, the most common answers I've received are:

- Complacency of workers.
- Poor mindset of employees.
- More ownership from middle management is needed.
- Greater commitment from top management is needed.
- Improve the safety culture.

In 2019, *EHS Today* magazine surveyed 1500 EHS professionals and asked, "What is the biggest challenge facing the industry today?"[1] Far and away, the most common answer was "employee engagement". The editor commented, "EHS professionals seem uncannily consistent in the way most of them believe that establishing and maintaining a culture of safety at their organizations is their top challenge."

In the same year, *EHS Daily Advisor* published their Annual Safety Progress Report 2019, which surveyed over 400 EHS professionals.[2] They asked, "What is the single greatest challenge you're currently facing in safety at your organization?" The top three answers were:

- Employee engagement – 54%

- Employees taking short-cuts or ignoring rules – 46%
- Supervisor participation in safety programs – 42%

For safety practitioners, their biggest challenge concerns people; not so much legal requirements, technical specifications or management systems—these aspects do pose problems, but they are less problematic than the people side of safety.

So, what can be done about it? How do you change mindsets? Are there new solutions?

Before going into that, suppose if I were to ask you, "Why don't employees follow procedures?" What's your answer?

Think for a moment, and then see if your response appears in the list below.

Attitude

- It won't happen to me.
- I know what I am doing.
- Resistance due to personality and/or age.
- That rule does not apply here.
- To get the job done faster.

System

- Procedure is confusing or cumbersome to follow.
- Too much paperwork and bureaucracy.
- Lack of training and equipment.
- Unaware of requirements.
- Some PPE are uncomfortable.
- Lack of enforcement.

Culture

- Poor safety culture
- Others don't follow procedure either.

- Leadership allows procedure to not be followed.
- We have always done it this way.
- Pressure from managers to finish work fast.

I compiled the above list from EHS professionals' workshops. While many reasons were given, they fall into three categories: *Attitude, System* and *Culture*.

Figure 1.1 Overview of Attitude, System and Culture

Attitude	System	Culture
Internal factors	External factors	External factors
Person-related	Abilities-related	Social environment-related
About mindsets of individual (heartware)	About procedures and equipment (software and hardware)	About group beliefs (heartware)

INTRODUCTION TO THE THREE INDUCING FACTORS

Attitude drives behaviour

In June 2017, Sunlight House in Manchester city centre was undergoing renovation. While scaffolding was being erected, a concerned member of the public saw one scaffolder standing on the top deck of a scaffold, looking into the windows of an office. Though the scaffolder was wearing a harness, it wasn't secured to anything. He had also failed to erect a safety railing. If he had moved one step backwards, he would have fallen 18 metres to the ground.

The scaffolder managed to get down safely, but he didn't realize the onlooker had already taken a photo of him… which was subsequently sent to the authorities. In court, judges found that the scaffolder had been given the correct safety equipment and was not under pressure to finish the work fast. In addition, he had eight years of scaffold experience. The judges sentenced him to 26 weeks in prison. During an interview, the scaffolder described his action as "a moment of stupidity".[3]

In 2019, at a safety conference in Melbourne, I listened to James Wood speak. When he maneuvered his wheelchair up the ramp onto the stage, I couldn't wait to know more about him. Woody, as he likes to be called, was the victim of a workplace accident in 1985. On that eventful day, he was driving a truck when it went out of control and went over the edge of a slope. The truck rolled downwards, like a piece of log, and threw him out of the cabin. He lost consciousness on the spot and was airlifted to the hospital, where he stayed for three months.

Woody broke his spinal cord. "The doctor told me that once I damage my spinal cord in any way, it will stay damaged for the rest of my life," he remarked. Woody confessed that he was driving too fast for the conditions, and because the distance was short, he chose not to put on his seat belt.

"I used to believe that accidents happen to other people in other workplaces; not to me," he said. "That few seconds of inaction changed my life. Had I put on that seat belt, it would have kept me

within the cabin. I suspect that I may still be able to walk." Woody expressed that the choices he made that day caused his injuries. Since then, he has been travelling around Australia to share his story about the impact of a workplace injury.[4]

The two incidents above were caused by personal attitudes: how individuals evaluate an action, event, object, or person.[5] A positive attitude towards safety leads to safe behaviours, and vice versa. Even with the same training and under the same circumstances, you will find people possess different attitudes. Some attitudes endanger lives (like in the two incidents above), while others save lives (like in the incident to follow).

In late November 2019, on a plane flying from China to the U.S., an elderly man with a bloated stomach began sweating profusely and groaning in pain. The cabin crew made an emergency announcement, asking if there was a doctor on board. Dr. Zhang and Dr. Xiao, both surgeons in their fifties, stepped forward.[6] After checking with the man's relatives, the duo diagnosed that his bladder was bloated with urine, to the point of rupturing. Because of issues with his prostate, the man couldn't urinate.

With six hours still to go before landing, something had to be done fast. The duo made a makeshift urine draining device using the medical items on board. One end of the device consisted of a needle to puncture the man's bladder to allow urine to drain out. However, this device failed because the needle was too narrow to direct the urine. Zhang resorted to a necessary but nasty plan B. He put the drainage tube into his mouth and sucked out the urine. For the next half an hour, Zhang kept extracting the urine and spitting it into a cup, even though he "felt like vomiting". It worked. The man's condition stabilized. When the plane arrived in New York, the man disembarked safely with his wife.

"We really did not have any other solutions at the time, and I did not think that much. I just wanted to help him release the urine stuck in his bladder," recalled Zhang after the incident.[7]

The system drives behaviour

In the 1980s, Domino's started the "30 minutes or it's free" campaign. It guaranteed customers their pizza within 30 minutes of placing an order, or they would receive the pizza for free. The marketing strategy helped the company become the largest of its kind globally, but it has been criticized for causing traffic accidents.

In the 1990s, South Korea Domino's promised customers a 2,000 Won (US$2) discount for each pizza delivered after the 30-minutes mark, and after 45 minutes the pizza would be free.[8] The discounted amount reportedly came from the salary of the delivery driver. To avoid the penalties, these drivers rode their motorbikes recklessly. Dubbed "the lawless of the road", they ran red lights, sped on pavements, and ignored many traffic rules, causing countless accidents.

In December 2010, a 24-year-old delivery rider collided head-on with a taxi and died. His family and colleagues claimed the tragedy was largely caused by the 30-minutes rule. This accident prompted several civic groups to protest and demand that Domino's put an end to the rule, or else they would launch a campaign to boycott it. In 2011, Domino's scrapped the 30-minutes delivery promise. The management commented in their statement, "We've done our best to prioritize safety while carrying out the 30-minutes delivery rule. But we've decided to end it amid growing concerns".[9]

This story shows how performance measurement drives unsafe behaviour. While management wants the best of both worlds, their riders find it impossible to achieve—between slow and safe delivery, or fast and on-time delivery, they can only choose one.

Culture drives behaviour

To understand how culture drives behaviour, you just have to look at the Volkswagen diesel gate scandal of 2015. To provide a background: Volkswagen aimed to be the world's largest automobile maker by 2018. To achieve its ambitious goal, its key strategy was to bet on diesel-powered cars—promising high mileage and low emissions.

Problems arose when its internally-developed diesel engine failed to meet the air emission standards in various countries. Instead of fixing the problem, the engineers did a cover-up by installing 'cheating' software in these cars. This software could detect whether the car was in the laboratory or on an actual road and adjust the amount of pollutants emitted. This allowed the car to pass emission tests, even though it emitted forty times more pollutants on the road. The software was installed in 11 million cars, indicating that the decisions were not made by a few engineers, but endorsed by people at multiple levels of the organization.

Several questions come to mind: What drove all these people to do such things? Are they unethical? Why didn't anyone highlight the wrongdoing at an early stage?

Various new reports put the spotlight on ex-CEO Martin Winterkorn, known to be a demanding and abrasive boss who hated failure.[10]

In 2011, Winterkorn attended a Frankfurt motor show where he inspected a new model from Hyundai, his Korean rival.[11] In the driver seat, Winterkorn adjusted the steering wheel and found that it moved silently, unlike models from Volkswagen.

"Bischoff, come over here!" he growled at his design chief, who hurried over. "This doesn't clank. BMW can't do it. We can't do it, but they can!"[12] The reaction of Winterkorn reflects a culture of "no mediocrity" —only top-notch performance is accepted.

According to *Reuters*, one former sales executive at Volkswagen said the pressure soared if you failed to meet your performance targets.[13]

- "If you didn't like it, you moved of your own accord or you were performance-managed out of the business."
- "There was always a distance, a fear and a respect... If he would come and visit or you had to go to him, your pulse would go up."
- "If you presented bad news, those were the moments that it could become quite unpleasant and loud and

quite demeaning."

According to the *New York Times,* one management trainee commented that:

"VW had this special culture; it was like North Korea without labour camps. You have to obey." **14**

While there has been no suggestion that Winterkorn ordered the engineers to break the law, somewhere along the line an oppressive culture developed which discouraged open communication and encouraged workarounds. This type of culture drives the behaviour of staff in consistent and predictable ways. Though the engineers felt the need to highlight diesel engine problems and there were avenues to do so, the fear-based culture is so powerful that it overrides both attitude and system.

System, Culture, and Attitude as a whole

System, Culture and *Attitud*e are the three categories of reasons why employees don't follow rules. These factors will be called "inducing factors", while "employees failing to follow rules" will be called "unsafe behaviours"; i.e., "*System, Culture* and *Attitude* are the three inducing factors that drive unsafe behaviours."

To be precise, equating "not following procedures" with "unsafe behaviours" is technically incorrect. Deviating from safety procedures is not necessarily unsafe—there are procedures that are confusing, unworkable, or bureaucratic. By the same token, following procedures doesn't necessarily make one safe, as they could not possibly apply to every single situation one encounters in real life. But I will follow the words of James Reason, and "stay with the term for the sake of precedent and simplicity."**15**

INDUCING FACTORS MADE SIMPLE

Figure 1.2 Traffic junction metaphor
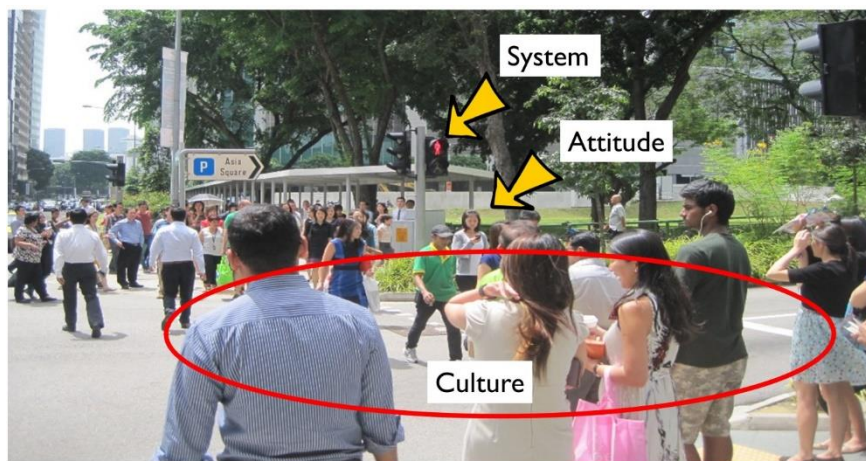
This photo was taken in downtown Singapore around lunch time, which explains the big crowds. As you can see, most pedestrians follow the traffic signals; but a few don't. Their behaviours can be explained by the inducing factors:

- *System* – Traffic lights are a type of system. Formal and prescriptive, they tell pedestrians what they should do.

- *Culture* – In the culture of Singapore, most follow traffic rules. When the culture is aligned to the system, the majority of people will behave as they should. However, if culture clashes with the system, culture will win every time. That's why you will find pedestrians in other countries behaving differently, even though the traffic systems are identical.

- *Attitude* – Despite the presence of a positive culture and effective system, there will be individuals who behave otherwise. The individual indicated by the *Attitude* arrow probably feels it is okay to cross the road while reading her phone.

When one or more of these factors are misaligned, they drive the wrong behaviours. Just as an unsafe behaviour can be caused by

poor attitude, it can also be caused by a defective system or a dysfunctional culture. To eliminate an unsafe behaviour, you must address the underlying inducing factor, or else it will keep coming back. (Diagnosis of inducing factors will be covered in Chapter 3.)

PSYCHOLOGICAL BASIS FOR INDUCING FACTORS

Imagine a meet-up with your best friend. Having last seen him half a year ago, you are surprised at how overweight he has become: he now has flabby arms, a double chin, and a big beer belly.

"What happened to you?" you blurt.

It turns out that he was assigned to a demanding project which put him under tremendous stress. For six full months, he indulged in junk food and sugared drinks. While the project has ended, its side effects have not.

"Would you help me get into shape? I tried jogging, but gave up after a few times. It's difficult."

"Of course!" you assure him. He's your best friend, after all.

At night, you sit at your desk, thinking about how you can help him. For sure, a goal of slimming down takes more than words of encouragement. To increase the chances of success, he needs a plan.

Taking out a piece of paper, you jot down the important items:

1. Send him articles about health problems associated with obesity.
2. Share videos about how a certain exercise regime has been proven successful.
3. Commit to exercise with him regularly.
4. Ask him to take a photo of every meal and send it to you.
5. Ask his brother to throw away all the junk food at home.
6. Plan to jog with him three times a week. The duration will be only 20 minutes, and the venue will be the park beside his home.

The items above seem common-sensical, but they are rooted in psychology.

Items 1 and 2 influence attitudes. You want your friend to understand that being fit is a beneficial and worthwhile goal to pursue. When a person has a positive attitude towards behaviour, he or she is more likely to engage in it.

Items 3 and 4 utilize social norms. We are influenced by people around us, especially those whom we value. By offering to exercise with him and requesting photos of his meals, you are fostering an encouraging social environment.

Items 5 and 6 are about making the desirable behaviour easy while making the undesirable ones difficult. The more we perceive a behaviour as being within our control, the more likely we are to adopt it.

Attitude, *Social norms* and *Perceived Behaviour Control* form the three constructs of the *Theory of Planned Behaviour*. Developed in 1997 by Icek Ajzen, a social psychologist, this model has been widely used in health-related fields to understand and predict behaviours (e.g. exercise, diet, smoking, and condom use).

Figure 1.3 Theory of Planned Behaviour
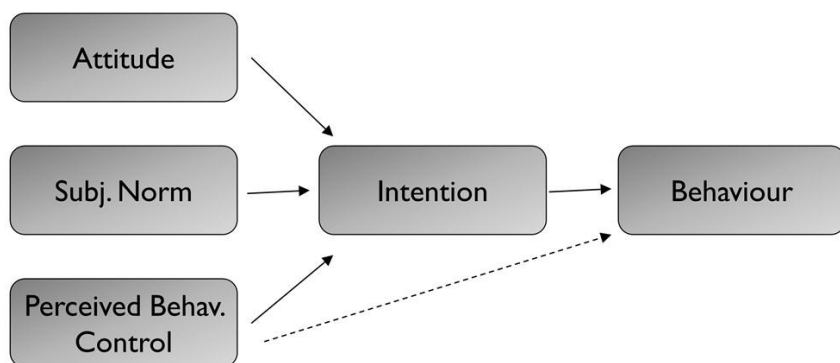
(Instead of the term *Social norm,* Ajzen used *Subjective Norm,* which is a similar concept.)

Here's a brief description of the three constructs:

- Attitude – "What do I think about the behaviour?" If a person believes that a behaviour is beneficial, he has a positive attitude towards the behaviour.

- Subjective Norm – "What would others think about the behaviour?" If a person believes others in his family, workplace, or social circle want him to perform the behaviour, the subjective norm is strong.

- Perceived Behavioural Control (PBC) – "Do I have the skills and resources?" If a person believes he has the ability and means to perform the behaviour, he has a high level of PBC.

The *Theory of Planned Behaviour* postulates that, when a person has a positive attitude towards a behaviour, when his family and friends encourage him, and when he feels capable, he will have a strong intention to perform that behaviour. This model recognizes that behaviours are driven by both individual and external factors. Hence, if you want to change a behaviour, you need to address these factors.

The constructs in TPB should look familiar to you, as they mirror the three inducing factors:

- *Attitude* (in inducing factors) is the same as Attitude (in TPB)
- *Culture* is similar to Subjective Norms
- *System* is similar to Perceived Behavioural Control

Behaviours are driven by personal, social, and technical factors. You may relate to this from anecdotal observations, and also find a basis in psychology. In the next chapter, you will find out how the inducing factors combine with other components to form the *Flower Model of Excellence.*

Summary

- The greatest challenges for safety practitioners are often not technical issues, but people issues, such as building engagement and changing mindsets.

- Unsafe behaviours are symptoms of problems. They are driven by the inducing factors of *Attitude, System,* and *Culture.*

- Attitude is how someone evaluates an activity or item; Culture is the shared beliefs of people around him; and System refers to procedures, equipment, and training.

- The *Theory of Planned Behaviours* is a psychology model for predicting and understanding behaviours. It postulates that behaviours are driven by both individual and environmental factors. It forms a basis for understanding inducing factors.