



Bad Apple vs. the System

The Bad Apple theory blames human error as the cause of mishaps. This comes about because of a loss of situational awareness, procedural violations, regulatory shortcomings, or managerial deficiencies. From this point of view and the fact that accident data is presented as 70% - 90% of all accidents are caused by human error, it makes sense as part of an accident prevention system to focus on behaviors.

Sidney Dekker in his book, The Field Guide to Understanding Human Error calls this the old view of human error. He proposes that you can see human error as **the symptom of deeper trouble**. In this case, human error is the starting point for your efforts. Finding “errors” is only the beginning. You will probe how human error is systematically connected to features of people’s tools, tasks, and operational/organizational environment.

Two Views on Human Error

The old view of human error on what goes wrong

Human error is a cause of trouble

To explain failure, you must seek failures (errors, violations, incompetence, mistakes)

You must find people’s inaccurate assessments, wrong decisions, bad judgments

The old view of human error on how to make it right

Complex systems are basically safe

Unreliable, erratic humans undermine defenses, rules and regulations

To make systems safer, restrict the human contribution by tighter procedures, automation, and supervision

The new view of human error on what goes wrong

Human error is a symptom of trouble deeper inside a system

To explain failure, do not try to find where people went wrong

Instead, find how people’s assessments and actions made sense at the time, given the circumstances that surrounded them

The new view of human error on how to make it right

Complex systems are not basically safe

Complex systems are trade-offs between multiple irreconcilable goals (e.g. safety and efficiency)

People have to create safety through practice at all levels as an organization

Using BBS Data

The way that I've seen many companies use BBS data generates a negative environment. Based on the assumption that most incidents are caused by human error, once the management or safety department reviews the data, they make assumptions about the employees and then institute directions, change, or consequences to reduce the unwanted behavior. In the book by Aubrey Daniels, Bringing Out the Best in People, he depicts a diagram showing that in changing the behavior model, you can use punishment or penalty to reduce unwanted behavior and you can use coercion and threats or positive reinforcement to increase wanted behavior. (See attached Power Point, 1st slide.) If the workers see that their efforts constantly produce punishment or penalty and present themselves in a negative light, they are less likely to participate or give the truth in their feedback on the conversations. As workers see it, this portion of the Safety process should be a true partnership between management and worker. Management asks workers to assess performance of each other, to report unsafe conditions, report near misses, and have the authority to stop work. Workers are very observant of what management does with their efforts. If management does nothing or uses them to threaten the worker, when they see that, what do you think will be the result of their continued participation? In the Arbinger Institute book, Leadership and Self Deception, this is called "getting in the box". The behavior now becomes tit for tat. Who breaks the cycle and how? (See attached PowerPoint, slides 2 – 5.)

If you interject Sidney Dekker's idea that the data is the starting point of discovery where workers are in a state of constant choice between quality, efficiency, Safety, time, resources, people, equipment, etc. As they make their choices, what are they thinking at the moment they are judged to be making an unsafe act? Is it willful intent to break the rules or is it thinking that management truly wants them to be more efficient than safe? For example, let's say that a boat pulls up to be off-loaded on an offshore rig and we need the crane to be in motion, but at the same time, we have a helicopter due in where we will have to put the crane down. Prior to the execution, we need to do some housekeeping on the current job we have. What do we juggle? Leave housekeeping? Off-load the boat because the helicopter is due? Thus, if we see the data of 15 issues of at risk behaviors, is that due to 15 employees willfully intending to break the rules or is there something deeper? If we use the data as a starting point of discussion in an open environment where we can drive out fear, the workers will discuss what is going on and what they were thinking. Then we can truly move to a new level of accident prevention. As we are all familiar with the Swiss Cheese model and as things occur throughout the process and things line up, the last element is always the human behavior. That becomes the focus of BBS programs, but there are other influencers worth exploring.

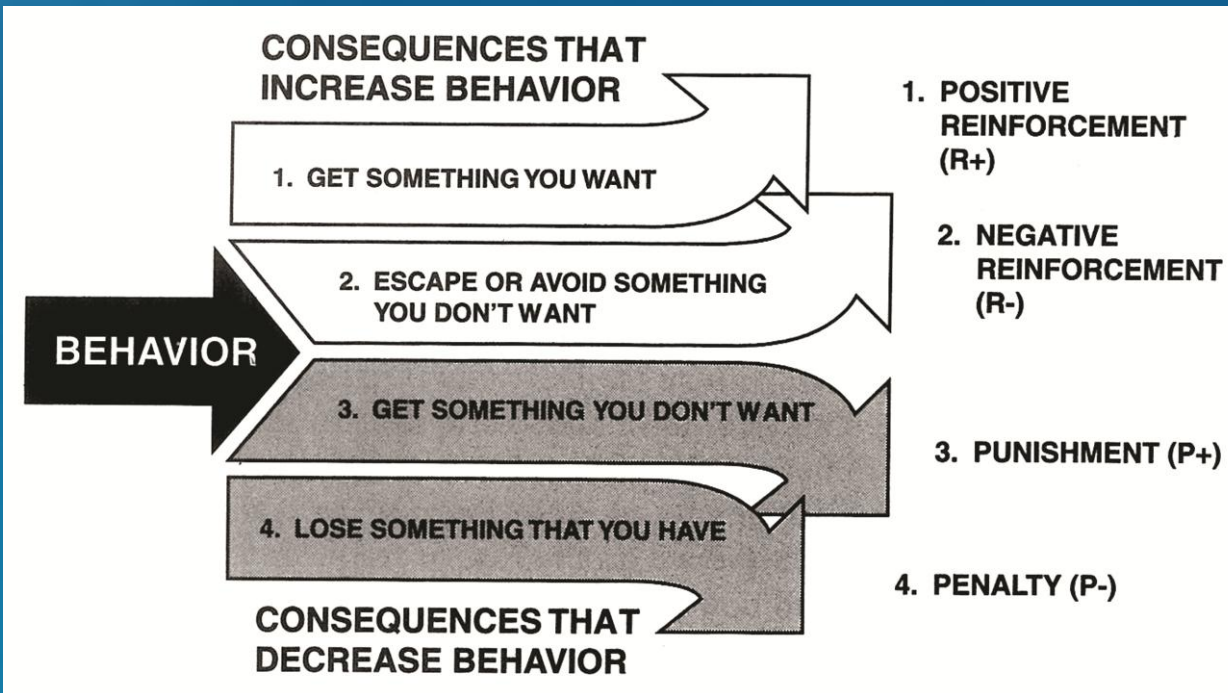
I believe the only true way to maximize safety results is to have management commitment at all levels. This needs to manifest itself into processes and systems that value the employee. It needs to energize the hearts and minds of every company employee, not create a demoralizing structure that reduces trust in a true management – worker partnership.

I hope you will find this information helpful as we continue to assist you with your accident reduction efforts.

Yours truly,

John W. Troups

Summary Of The Four Behaviors Consequences And Their Effects



TRUST

A Key Factor in a Successful Behavior Based Process

Build trust in the management / worker
partnership

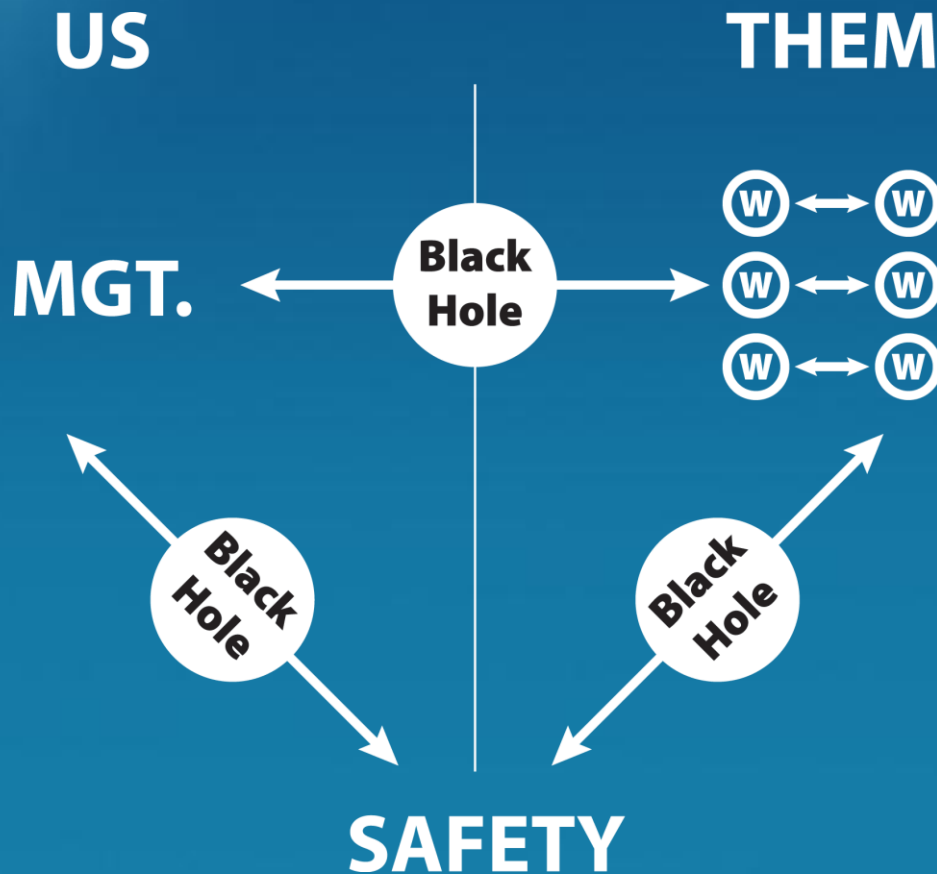
Commitment

Competence

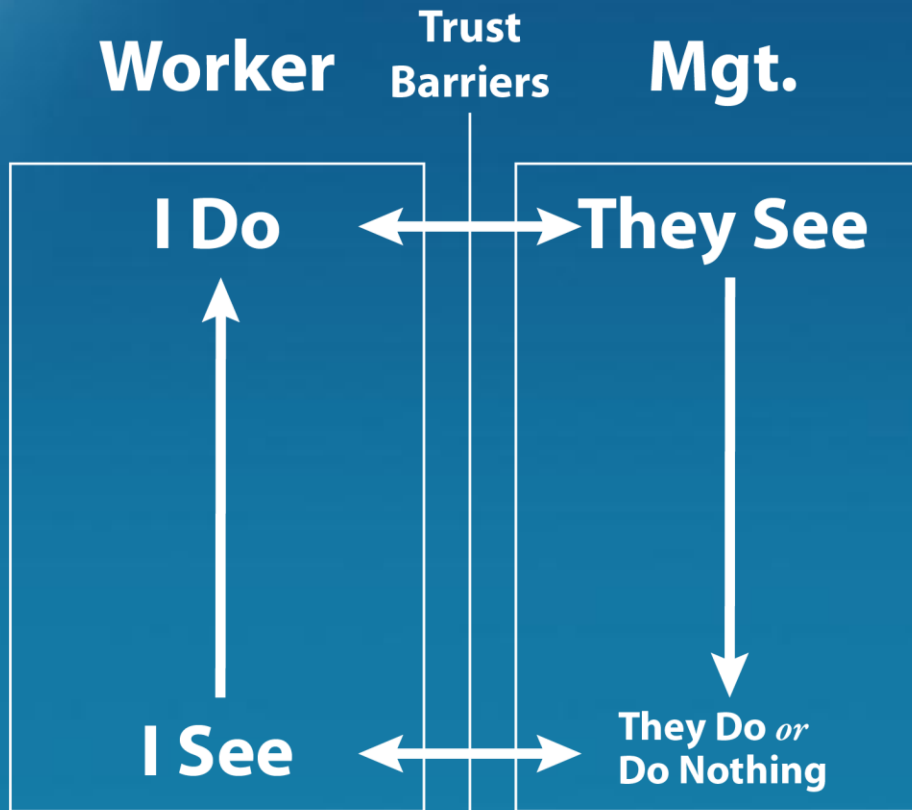
Reliable

= Trust

Breakdown in Trust



Ending the cycle of collusion and deception



learned helplessness - apathy - malicious obedience

Cheese Model of Accident Causation

