



NOW YOU SEE IT NOW YOU DON'T

Studies have shown that even the most attentive, intelligent and vigilant people suffer from inattention blindness. **Andrew Sharman** reflects on what it could mean for safety at work.

The classic example demonstrating *inattention blindness* is that video clip with the gorilla. Did you see it? Psychologists Daniel Simons and Chris Chabris recreated the original study in 1975 by Ulric Neisser where two basketball teams pass the ball around. A person wearing a gorilla suit wanders onto the court, thumps his chest and wanders off. In trials conducted by the team at Harvard University typically around 60 per cent of viewers do not see the gorilla. How could this be possible? Before the clip is played, the viewers are asked to count how many times the ball is passed within a certain team. They expect to see the ball moving between players and focus on this task so intently that the gorilla is simply not noticed.

Inattention blindness is not a cognitive or visual defect. It's essentially an issue of awareness – principally the failure

to notice an entirely visible, though unexpected object because our brains are otherwise engaged. There's a limit to what our brains can cope with you see. In deciding where to focus, our brain scans around 30-40 pieces of data (sights, sounds, smells etc.) every second until something grabs its attention. It then filters out what it feels is important and the rest gets left behind.

How can it be that we continue to miss so many significant events? Well, when choosing where to focus its energy, the brain applies four filters:

- **Capacity** – Our capacity to pay attention is essentially down to our mental aptitude and influenced by a range of factors, including age, education, distraction, fatigue and drug or alcohol consumption.
- **Expectation** – Our past experiences

shape our future expectations. As an example, on a recent visit to one of our clients' factories, when I asked why employees did not respond to the warning alarms on a production line they told me that because the alarms go off with such regularity but are usually 'false alarms', they now didn't notice them at all.

- **Mental workload** – The perceptual loading of the brain increases the likelihood of *inattention blindness*. Chances increase when our attention is diverted to a secondary task, for example, filling in an online form while holding a conversation about an important subject.
- **Conspicuity** refers to the degree to which an object or information jumps out to command our attention. Our brains are drawn to sensory conspicuity – the contrast of an object against its background – like a bright red car on a sunny day on the road or cognitive conspicuity where we are more likely to notice something particularly relevant to us – for example the same car as the one we are driving on the motorway.

These filters can bring benefits, such as blocking out distractions to allow us to concentrate on a task in hand. But because most of us tend to be unaware of the limits of our attention we take on other activities while engaged in primary tasks and it's here that the real risk lies when it comes to safety.

Think about using a mobile telephone while driving. For many people, it is perceived to be an acceptable task, convinced that they would notice a sudden event occurring, but even with the bright red flash of brake lights, they don't. One-in-every-four road crashes involves a driver on the phone. Isn't it time to consider their impact on our attention?

Next time your accident investigation draws you to conclude that the individual involved was negligent, careless or 'not paying attention', take a step back. Studies have shown that even the most attentive, intelligent and vigilant people would suffer the same degree of *inattention blindness* in similar situations. So consider the four brain filters carefully and see whether you notice any gorillas. ■

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