Text and photos by Gareth Lock

In August 2012, I wrote an article which discussed *just culture* **and what this meant in the context of recreational and technical scuba diving, and using this concept, how we can improve diving safety. The main thrust behind the article was that everyone makes mistakes, irrespective of who we are in the diving community, what our experience levels are or what qualifications we hold. To improve learning, we need to stop throwing rocks at those who have the courage to discuss their incident in a public forum or report it to DAN, BSAC or DISMS. Sure, many people make silly mistakes or poor decisions, which ultimately cost them their lives. But those individuals didn't get up that morning thinking, "I know, today appears to be a good day to die."**

But just culture is only one part of a *safety culture*, a term which is being promoted by a number of organisations and individuals as something that needs to be developed by individual divers

Safety Culture
What Is It & Do I have it?

to improve their safety. The funny thing is that a culture is something that is at the core of a community or group; it is 'the way things are done around here'. (Williams et al, 1994).

Whilst a culture can be developed and influenced from the bottom up, the main influence comes from the leadership, top down. Ironically, developing a safety culture means that you are improving other divers' safety as much as your own.

What is a culture?
"Shared values (what is important) and beliefs (how things work) that interact with an organisation's structure and control systems to produce behavioural norms (the way we do things around here)." Bro Uttal (1983)

"Culture is not the product of communication, as culture is affected by more than the organisation's contribution including social background, history,

society and education." (SOURCE ?)

A culture, therefore, isn't just about communicating ways of improving things, it is about demonstrating, influencing, behaving in a manner which shows that the community has the 'right way of doing things' at its core, not just talking about it. Part of the problem we have within the diving community is that there are a number of 'right ways' of doing things, and we all believe we are right!

So what is a safety culture?
A safety culture is made up a number of component parts, and over the next three issues of *X-RAY MAG,* I am going to expand on these concepts in a manner that allows the global diving community to address each of them, to ultimately make diving safer, and as a result, more enjoyable. These component parts were developed by Professor James Reason (of 'Swiss Cheese Model'

fame) when examining High Reliability Organisations (HRO), such as civil aviation and air traffic management. Whilst these are heavily regulated environments and many would argue we don't need that in scuba diving, the premises are the same, culture is culture, how we do things around here.

As an aside, I would violently agree that we don't need any more regulation. Whilst they provide a framework, I believe they also introduce a reduction in personal responsibility for our own actions. An area that can be developed further is that of risk perception and acceptance, but more of that in another article looking at the psychology of incidents and safety.

All divers should take personal responsibility for their actions, and not rely on someone else; you do your checks, you get in the water, you dive, you check your gas,

you end the dive ascending as per your decompression plan, all with your buddy or team mate if that was the plan.

All the agencies provide guidelines for best practice, and provide standards for their instructors to follow, but unfortunately there is evidence to show that group behaviour tends towards more risky behaviour if there isn't a strong positive influence or culture; this is known as risky shift.

I am sure you have been on a trip where, at the start of the week, all the checks are done correctly. But as time ticks on, the checks get more lax, minimum gas limits are extended, and by the end of the week, it is almost 'grab the cylinder and get in the water, it will be okay'.

Therefore, if we can improve group behaviour towards a safer outcome, then safety will be improved. Furthermore, when positive peer pressure is intro-

duced, safety can be improved by challenging poor decision making such that we feel wronged when we don't conform—e.g. buddy checks are not the norm on some commercial dive operations and we feel odd doing them when no-one else is, yet we shouldn't feel this way.

Main components

The five main components of a safety culture are outlined below:

Just Culture – a culture of 'no blame' where an atmosphere of trust is present and people are encouraged or even rewarded for providing essential safety-related information—but where there is also a clear line between acceptable and unacceptable behaviour;

Reporting Culture – a culture in which people are willing to report errors and near misses;

SAFETY CULTURE

GENERATIVE
Safety behaviour is fully integrated into everything the organisation does.The value system associated with safety and safe working is fully internalised as beliefs,almost to the point of invisibility.

PROACTIVE
The organisation has systems in place to manage hazards and staff, and management have begun to acquire beliefs that safety is genuinely worthwhile.

CALCULATIVE
The organisation has systems in place to manage hazards, however the system is applied mechanically. Staff and management follow the procedures but do not necessarily believe those procedures are critically important to their jobs or the operation.

REACTIVE
The organisation looks for fixes to accidents and incidents after they happen.

PATHOLOGICAL
The organisation cares less about safety than about not being caught.

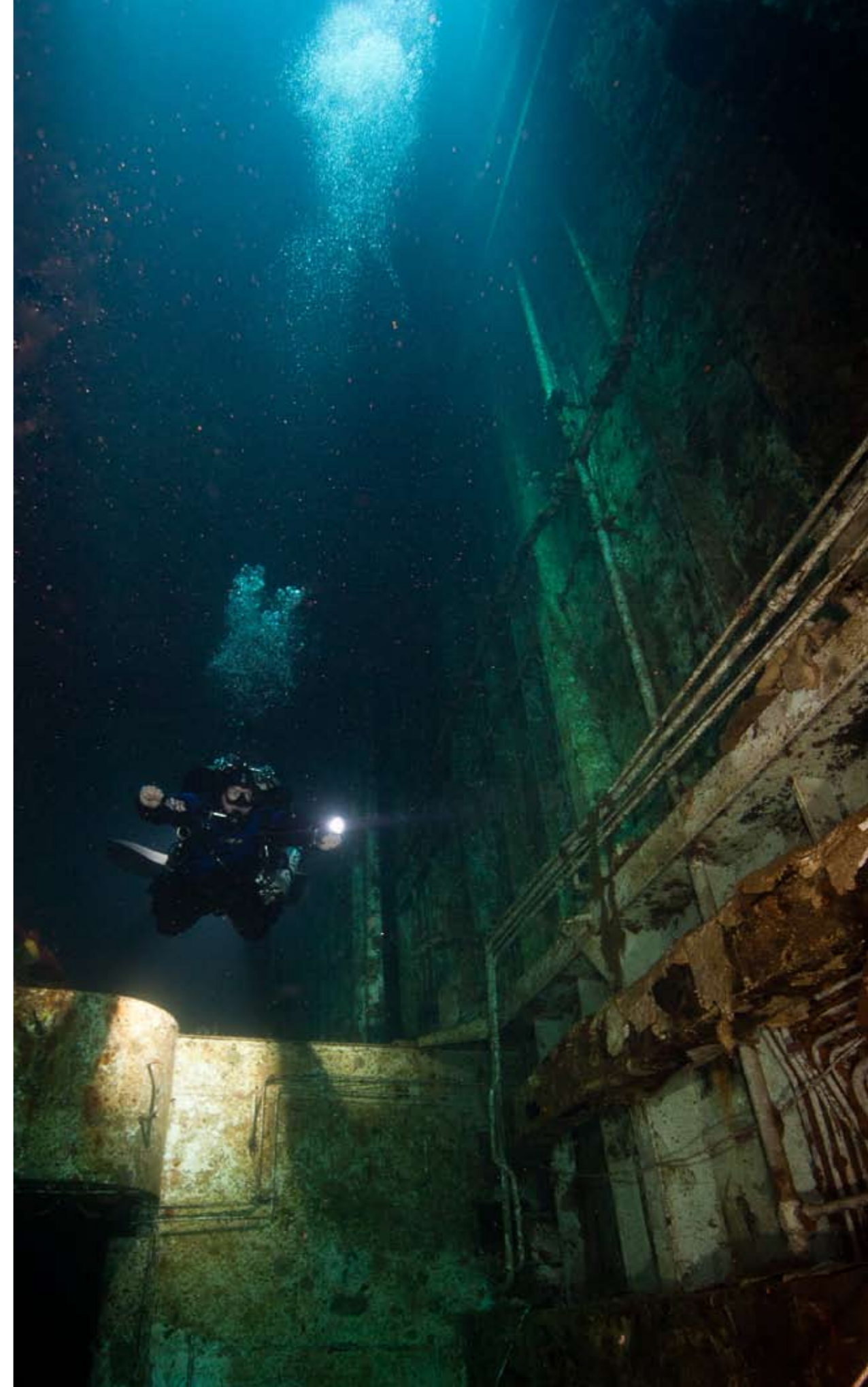Types of safety culture, based on Hudson's work

Learning Culture – the willingness and the competence to draw the right conclusions from its safety information system, and the will to implement major reforms when the need is indicated;

Informed Culture – one in which those who manage and operate the system have current knowledge about the human, technical, organisational and environmental factors that determine the safety of the system as a whole;

Flexible Culture – one which can take different forms but is characterised as shifting from the conventional hierarchical mode to a flatter professional structure.

This article will cover safety culture in general, the next will discuss just and reporting cultures as they are inextricably linked, and the final article will cover learning and informed cultures.

Safety Culture
Consider the diagram (right), which is based on Hudson's work on safety culture. Where do you think you are on this step-ladder? Where do you think your dive centre is? What about your favoured training organisation?

Just because there are quality management systems in place to ensure that instructors are teaching the correct skills, or even a safety policy at work which shows compliance with the local Health and Safety regulation, it doesn't necessarily mean we have a good safety culture as shown by the descriptors in the diagram. Whilst Hudson's work was focussed on formal organisations and their approach to safety, clubs, groups or groups of friends are all organisations, too, albeit loosely associated organisations.

Consider two groups, one a loose group of friends who dive together, the other a dive centre in a busy location. The group of divers knows the 'rules' of best practice: they always analyse their gas and mark the results on the cylinder; they decompress together using the same computers using the same decompression model and safety factors; they practice skills and drills on most dives; they debrief and learn from events on the dive; if they have an incident, they report it to their parent organisation, or another body, so that others can learn from the error/mistake/incident.

They have a culture amongst them, which is positive towards maintaining or improving safety. Importantly, they expect certain activities to be completed in a certain way, and when they are not, there is no shame in challenging that person; rules provides a baseline to operate from and make the normalisation of devi-

ance harder to accept.

A dive centre where: they are very worried about profit and foot-fall; they are trying to get people through the door and certified to generate revenue; students are passed at the absolutely minimum level of standards; they do not have equipment serviced regularly because there are no local regulations requiring it; they might have a number of divers who have been injured or suffered DCS but never reported them because it is 'bad for business'—this dive centre has never had a bad QA report because all of their students loved their experience, although they are not sure that diving is for them.

Rules

'Rules' can be developed within whatever construct or environment you are diving in. A dive centre, a training organisation, an expedition, a small team or regular group of divers all have their own cultures, and if you are part of that group, you are part of that culture. If you feel strongly enough about improving the safety culture, you need to help develop it.

If you see something which doesn't look right, stand up and be counted. If you are on a liveaboard and things aren't right, speak to the organiser or the tour operator. If enough people critique the situation, something will be done, because ultimately, clients won't come back if things don't improve. However, for safety culture to really flourish, it requires significant commitment from the senior players in the community, and organisational change is hard and takes time. That doesn't mean we shouldn't stop trying though!

In the next article, we will look at the role of a Just Culture and a Reporting Culture and show how it is so important to develop both of these in parallel. However, because these are subsets of the wider safety culture, there is need for commitment from the higher organisations for these sub-cultures to develop. ■

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