

## **A Wise Captain Knows His Own Mind.**

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Human misjudgement, error and inadequate forethought often lies behind unnecessary risk-taking and almost always behind disastrous courses of events at sea. One cannot help wondering just of how often seafarers actually expose themselves, their crew, the environment and even passengers to risks without us ever hearing about it? Occasionally the public becomes aware of misjudgements when things have gone wrong, almost never when something results in a near accident or when just plain luck saves the day. Perhaps it is reasonable to believe that misjudgements are common and by no means extraordinary at sea. If this is so, then chance plays a principal part in the business.

This gruesome state of affairs is unfortunately not isolated to the shipping industry, but seems to play a major part in most accidents ashore as well. Misjudgements and complacency are probably the order of the day in every business with hazards. But most of us are fortunate enough to only gain insight into our own business and its shortcomings. If we had the same insight into everybody else's business as well, we would probably be constantly terrified.

We have no reason to believe that nuclear plant operators, aircraft pilots, political leaders (who, by the way, are a group with comparatively more psychopaths among them than the rest of us, statistically speaking) and military leaders in charge of red buttons are superior to ourselves. We are all living under and sharing the same basic human conditions and there are more similarities than differences in the way our minds operate.

### **Intellect and Emotion – the Port and Starboard of the Soul**

Logically speaking, there would be no misjudgement, wishful thinking, daydreaming or complacency if the human mind operated like a computer and if our perception, which supplies data, were exact. If constructed like that, we should become terribly boring – but very rational. Unfortunately (perhaps), it is not so and the capacity for misjudgements and complacency, among other potentially lethal capacities, are well established in our minds. To understand why unnecessary accidents happen and to be able to rationally adjust to the shortcomings of our minds, we have to gain some knowledge by letting the mind study itself to reveal how it operates.

Deep in our brains resides the emotional system, primitive and innate, an ancient system which governs us by means of feelings and emotions. At the outset of life it possesses only primitive aggression and libido (which is the strong urge to continue living despite all difficulties). During childhood we learn, or rather, others force us, to mould our basic set-up of primitive cruelty and selfishness to fit in with the demands of our parents and society. (Emotionally unmoulded, we would not mature but become psychopathic and highly dangerous.)

Although we as adults are emotionally inhibited and have learned to seek other things than the immediate satisfaction of our needs, the emotional system is still as powerful and constitutes an extremely strong force within ourselves.

Unfortunately the mind is governed by two often antagonistic systems, the other system being the intellectual. It is the youngest of the pair because it develops during our childhood. Furthermore, it operates by means of language which makes it the more modern system considering the development of our species.

The intellectual system handles knowledge, memory and experience by using intellectual laws such as rationality, reason and logic. We utilize this system when we analyze, read, think, plan, solve problems or argue with our contemporaries. The intellectual system evidently operates consciously, since we are aware of what we think. (Accurate Mr Descartes!)

### **You May Know What You Feel, But Do You Feel What You "Know"?**

This awareness by definition unfortunately does not apply to the emotional system, although we are aware of emotions when they get strong enough to reach consciousness. Emotions like love, anger, anxiety and boredom are mostly regarded as conscious but, as you may have experienced, these feelings can be of differing intensity. The span of emotional intensity is extremely wide and can, unlike the intellectual system, range from completely overwhelming intensity to hardly noticeable – and to the unconscious level. In fact, the better part of our feelings are not conscious.

Although often beyond conscious reach, our emotions still operate and rule us, some more than others. Now and then we may be reminded of their hidden existence as hints, associations, intuition, nameless worries and the like.

Mostly we prefer to regard ourselves as rational and realistic persons who make rational decisions based upon calculations and logical thinking. Unfortunately this is not the case. Our emotions are far more powerful than our intellect, partly because it is the older system and partly because it mainly operates unconsciously and, consequently, beyond our control.

As a result of this hidden operation, we often believe we are using the intellect, when in reality we are reined by emotions. Therefore hardly any major, life-changing decisions are made with the intellect. Most of us don't marry, nor do we want children or even a divorce as a result of intellectual analysis; and when we buy a house, we probably assess the standard of the building, the need for maintenance, the mortgage and compare it with the size of our economy intellectually, but in the end we buy, often against our better judgement, because we *just want that house*.

Why would some of us want a Porsche so badly that we would pay five times the price of, say, a Volvo to get one? A Porsche is not, rationally speaking, a better car than a Volvo. A Volvo is bigger, safer, more useful and takes four persons and luggage without problems, while even service and spare parts are cheaper. Furthermore, even a Volvo is fast enough to get you into problems with the police. The answer is: the unconscious emotional system.

Of course a Porsche is a nice car to own, it supports your ego, you feel you get more admiration, more envy, probably more sex (and better) and your self-esteem may grow. Vanity in this case seems to be worth an awful lot of money!

When faced with this conscious incongruity, the intellectual system, easily influenced as it is, may rush to defend the owner by urging him/her to claim something like this: "A Porsche is a good investment". This is, of course, not true and an indication that the emotions have clashed with intellect. In such cases, the mind produces rubbish. There are obviously much better investments than Porsches! (For the comfort of those who are in possession of Porsches, I might add that envy perhaps plays a part in my analysis.)

Let's leave envy of Porsches and turn to the concept of risk. Consider the following example.

### **Trouble over Bridged Waters**

In the studies for a proposed bridge over the Sound between Denmark and Sweden, the question was raised of how the bridge would influence the safety of seafarers who would have to pass beneath. The plans are for the bridge to cross the dredged channel at an angle somewhat diagonally (27 degrees), the channel being 200 meters wide and about 8 meters deep and the space between pylons 330 meters. In order to find out, the bridge as well as the Sound were computerized in a simulator, with a widening of the channel between the pylons so as to provide lots of space for the safe passage of ships.

During the simulations, the bridge was hit several times and the self-esteem of the participating masters was lowered accordingly. During the approach to the enormous bridge, the ships were manoeuvred as if in a harbour, with lots of corrections of both speed and rudder.

This seemed mysterious because the channel was made as wide as possible and no one understood why those experienced captains should behave more insecurely with *more* space at their disposal than they did while going in the ordinary, narrow channel.

A hypothesis was raised that some hidden psychological explanation might be lurking in the shadows. I was commissioned to find out whether this was so and to give recommendations on how to handle the problem.

It was quite clear that passing the bridge caused stress within the masters. Partly this was due to the size of the bridge, which slowly grew and gradually became an ominous sight from the viewpoint of a ship's bridge. But they were also stressed by the possibility of colliding with the pylons.

The passage seemed risky, which caused the stress that caused the insecurity, which caused all the manoeuvring and the lack of precision while passing.

It was all very well for the bridge designers to claim that the bridge was calculated to withstand collisions with ships. But what happens to the ships? The seafarers were hardly comforted by the prospect of twisted steel, leaking oil and the barbecuing of Danes and Swedes on the bridge.

It is economically feasible to widen the passage without totally reconstructing the bridge and to dredge the channel even more so as to make the passage more secure. The contradiction was, however, that everybody involved agreed that the passage was wide enough to ensure safety under normal conditions.

My recommendation after interviews and due consideration was to widen the bridge passage if possible but keep the channel as it was, i. e. not to dredge but to keep it narrow beneath the bridge.

I'll explain this seemingly odd recommendation.

Stress is intimately linked with the experience of what is commonly called "risk", but in order to understand stress reactions we have to realize that this term actually consists of two interrelated concepts: "risk" and "consequence".

"Risk" refers to the possibility of an undesired incident, a more statistical term. Hence we are able to calculate risk by using mathematics and probability. "Consequence" refers to the outcome or result of an event, the physical effects of an incident upon things, humans and the environment.

"Risk" is thus a purely intellectual concept, while "consequence" is a concept with strong emotional connotations. We are able to cope intellectually with risks but we react emotionally to consequences.

When forced by the intellect to act contrary to our emotions, such as fear, we react with stress. When the captains were stressed they became influenced by their hidden emotional system: fear of the consequences of a ship – bridge collision. Intellectually, however, they regarded the risk as a minor one and were thus unable to understand their own reactions.

Recalling what we said before concerning the powerful emotional and weak intellectual systems, we are able to explain why the captains reacted the way they did.

Let us first look at another example.

### **Walking the Plank**

Imagine that we are to walk and balance on a 12" plank placed on the ground. Everyone in possession of normal balance can walk without difficulty on such a plank. Imagine also that we raise the plank to a level of one metre above the ground and try balancing and walking the plank again. It is more difficult but no problem for most of us. Then we raise the plank to a level of 20 metres above the ground for a new balance exercise. Now most people will probably refuse to walk the plank. Those who dare to do so will probably be stressed, walk very slowly, make lots of corrections and possibly fall.

How can we explain this? The plank has the same physical conditions despite the change in height. It should be equally easy to walk on the plank at any height. The risk of losing balance is same whether the plank is on the ground, one, or twenty metres up. The explanation is that it is the consequences, not the risk, that have changed! Falling from the ground level or from one metre is not regarded as a major consequence, but from the height of 20 metres the consequence may well be fatal, and this effects us emotionally.

This exercise illustrates what I am aiming at: *we are influenced emotionally and react with stress to consequences, not risks.*

By widening the bridge passage and keeping the size of the channel, we influence consequences. If a ship gets off course, it will run aground and never reach the pylons. We maintain the same level of risk when passing the bridge as in the entire channel and we have also maintained the same consequences. If we instead dredged and widened the channel, we would reduce the risk somewhat but aggravate the consequences from running aground to collision with the bridge.

We try to minimize risks by issuing safety rules and regulations, i. e. by regulating behaviour. Rules at sea supply a framework for behaviour, aiming at separating good from bad

and leaving as little as possible to the judgement of seafarers. (Unfortunately we are not always able to issue rules on when those rules should be in effect, which means that seafarers still have to rely upon their judgement to decide when to follow any given rule.) Rules and regulations, being intellectual, unfortunately aim at the system which influences our judgement and behaviour less.

### **My Mind is Made up – Don't Confuse Me with Facts.**

We are unable to influence consequences and the emotional system by using rules, although rules may give us the false impression that we are safe as long as we follow them. This depends on another ominous capacity of our minds: the emotional system is influenced by psychological defence mechanisms. This constitutes another system which serves like a fender between us and the environment, obstructing thoughts, emotions and even perceptions if they are emotionally disturbing. Thanks to defence mechanisms, we are able to feel at ease despite outer hazards and inner disturbing feelings. The other side of the coin though, is that they also are responsible for distortions of experience, denying of risks and turning a blind eye to consequences. They operate to maintain our inner harmony, even to the degree of making us fool ourselves or fail to perceive correctly.

The cooperation of various such mechanisms may give us the false impression that we are conducting a safe operation. This is done by active misinterpretation of our experiences, the fact that nothing has hitherto happened to us and hence the conclusion that there is no hazard around. Unconsciously, we rule out disturbing thoughts, perceptions or emotions. In other words, we get lulled into a false sense of security.

Rules are of course necessary, but we must be aware of their double edge: they diminish risk and heighten the feeling of security. For example, ship officers who go along with no major incidents may, as time goes by, grow intellectually and emotionally complacent, as psychological defence mechanisms gain the upper hand.

Besides issuing rules, we must begin to analyze and describe consequences so that they can be told, seen and read about, even in their ugly details. It is of course *only by facing reality that we are able to become realistic* and to develop the means to react properly and with reason. It is by closing our eyes to consequences that we are able to continue growing complacent, thus saving each other from emotionally disrupting knowledge.

The world-wide lack of interest for revealing ugly consequences (other than "look what our enemies have done to us") can only be understood in terms of collective psychological defences. We all work hard to preserve the false harmony within ourselves and with each other. At sea, such behaviour is inevitably perilous. Instead we must make consequences clear and increase safety at sea by feeding seafarers' emotional systems with correct and realistic information. We are all in possession of a well-developed behavioural repertoire when our minds operate with realistic emotional data. We have avoidance behaviour, the

capacity to refrain from or abandon actions (which would save us from many accidents) and the capacity for alertness, caution and vigilance. These are only some examples of inherited psychological strategies triggered by emotional processes.

### **Finding the Right Stuff**

Besides starting to benefit from a realistic approach to consequences and calamities, we should also become more careful when recruiting and promoting officers. The psychological know-how is already available and so are the methods which will help us make the assessments. We should in the future search for officers with receptive personalities who also possess the necessary basic capacities for making healthy decisions.

Preferably they should be emotionally accessible and thus easily affected by consequences. They should also be in possession of an emotional system with a capacity to govern themselves safely in life and possess a set of defence mechanisms which do not interfere with clear perception of consequences.

Such a basic psychological make-up constitutes the prerequisite for people's capacity to be worried and sometimes even afraid. This will make them react in order to diminish their unpleasant feelings. They must, however, not be overruled by emotions. If this is the case they would not be able to cope with stressful situations when needed. Hence, on the one hand they should possess the capacity to be emotionally influenced and on the other not lose their intellectual capacity for analyzing, planning and coping.

In other words, we should consider that it is just as important to assess ships officers as it is to assess air pilots. The assessment should aim at selecting persons with a suitable personal disposition for hazardous operations, to find those who are able to take advantage of training and experience *and to utilize it intelligently*, guided by their emotional system as well as their intellect.

Proper training and experience are evidently not sufficient. The capacities that make the difference are found in the roots of the personality.