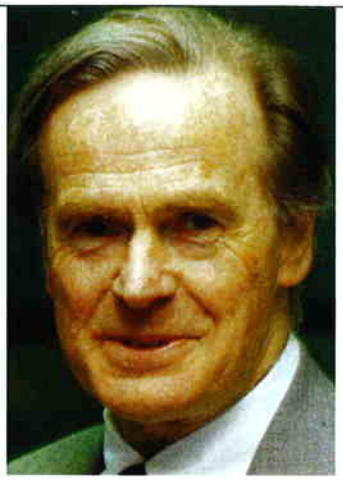
Nipples, frogs and auto supply chains

by Alistair Mant ©, Chairman of the Socio-technical Strategy Group, UK and author of Intelligent Leadership published by Allen & Unwin. A regular contributor to the annual FAPM Convention, Alistair Mant is an international consultant, who specialises in "dealing with blunders in big complex organisations".

What's the connection between automotive production and the essential pointlessness of the male nipple? It's not a question that is often asked, but it does have much significance for how we organise organisations to perform well. How come?



Regular attendees at FAPM conventions may be familiar with my metaphor concerning bicycles and frogs. The purpose of the bike/frog metaphor is to demonstrate how the organisation of work has to obey certain ground rules if it is going to be effective. In a sense, the ground rules have evolved over the years – you break the rules your peril. We will return to the nipple in a moment.

For those readers unfamiliar with the metaphor, the essential difference between a bicycle and a frog, viewed as complex systems, is that you can take a bicycle completely to pieces – separating out all the hundreds of components that make it a functioning bike – and then reassemble them, confident that it will function exactly the same as before. A bike without a cyclist is no more than the sum of its parts.

The frog is different. If you remove just one part of a frog you instantly affect every other part in small and unpredictable ways. But because the frog is essentially organic (rather more than the sum of its parts) is has adaptive properties. This means you can go on removing bits of a particular frog for a surprisingly long time without killing it. But eventually, when you remove one part too many, the beast will tip over into an irrecoverable state – and it won't help at that point to sew bits back on its body. You've lost your frog.

Why is this distinction important for organisations? The answer is that some parts of organisations are in fact quite "bikey" – not tightly interconnected with all the other parts. If that is the case, you may want to consider the business case for outsourcing or (in the case of the public sector) privatising them.

But other parts are very "froggy" indeed. These are the parts of the organisation which are tightly connected in a froggy way with other important parts – so if you outsource these you run the risk of killing the entire organism or enterprise. This happens more frequently than you might think, usually as the result of advice from young management consultants, who think all systems in nature are bicycle like. Stupid advice.

BECOME A "SYSTEMS THINKER"

What all this means is that business executives need to be pretty good "systems thinkers". That is, good at understanding the natural ground rules, which govern organisational success and failure. If it "feels" wrong (even if you can't explain why) it probably is wrong. Or, if you want to be more systematic, there are analytical tools, which will help you to discern which parts of your organisation are froggy and which are bikey. That understanding will allow you to organise things in a way that will work because it doesn't break any of the ground rules.

So, how does the male nipple fit into this view of natural systems? Well, anybody who has observed the motor car assembly process knows that it also obeys certain fundamental rules. Indeed, auto manufacture can be said to have evolved over the last 100 years. In the early 20th century, motor manufacturers (the best of them – like Peugeot – having graduated from bicycle manufacture) organised production according to familiar products and practices.

The so called "trafficator" is a good case in point – it was a fiddly little pretend hand, which swings out from the car in imitation of a hand signal. Then somebody worked out that a winking light made a lot more sense.

Since those early days, there has been a huge convergence in the way we make motor cars, and that is what evolution means – the gradual falling away of dysfunctional or wasteful practices and the convergence towards the "one best way".

So now we all know that the fuselage and the engine need to be united by the very end of the assembly process – at which point, somebody can get in, turn on the engine and drive the car off the assembly line. It has now become a complete system. Until the union of engine and body, it was like a big complicated bike. With a driver – with purpose and destination in his mind – it becomes much more like a frog.

Stephen Jay Gould, the distinguished science writer, discussed the function of the male nipple in similar terms. He was always dismissive of the rigid "functionalist" argument about apparently useless organs like the male nipple. The functionalist argument says – if the male has a nipple (and patently he has) then either God or nature (evolution) has put it there for a purpose.

A lot of functionalist scholars have wasted a lot of time speculating about a variety of "purposes" the male nipple might serve. Gould, who would have made a good production manager, suggested (not everybody agrees with his suggestion) that the male nipple is best explained as a function of "lean" production applied to manufacture of the human being.

Just as the colour of a motor car is determined after the panels are moulded, so the basic template of the human being (in embryo) is laid down before the endocrinal juices kick in to determine the sex of the infant. As Gore Vidal memorably put it: "the male nipple has a certain perky charm, but it is unconnected to a dairy!"

Trafficators – the fiddly little pretend hand, which swings out from the car in imitation of a hand signal – followed familiar products and practices.

In other words, the newly installed nipple has no function whatsoever once the production supervisor (or the schedule) determines that this particular product is destined for life as a male. If it is to be female, the production process connects the nipple subsystem to the dairy subsystem. Anybody who understands auto production can understand that.

So anybody who works anywhere in the auto and auto parts business has to be a good systems thinker – has to understand how things fit together, how all the supply chains flow, where the hand over disconnects occur, what is the correct order of things and so on. That is, so far as the technical components are concerned.

But, it's surprising how often "systems thinking" deserts the auto executive when it comes to the organisation and motivation of people. The ground rules that determine how you should organise people for productive work are just as important as the ground rules that govern production of the motor car.

When you think about it, those behavioural ground rules have been evolving for millions of years. How we relate to one another, especially when we are working together towards a common purpose, is part of our human nature. The trick lies in getting our structures and processes aligned with that underlying natural reality.

NHTSA proposes mandatory ESP

The US National Highway Traffic Safety Authority (NHTSA) has announced a proposed rule requiring the mandatory fitment of Electronic Stability Program (ESP) to all vehicles by September 2011. In the US market currently, almost 29% of all 2006 vehicles are equipped with ESP and SUV's have a fitment rate of 57%.

The proposed regulation would require all manufacturers to equip passenger vehicles under 10,000 pounds with ESP from September 2008, and to be standard on all vehicles by September 2011. The NHTSA has urged manufacturers to voluntarily add ESP as standard equipment on vehicles in the meantime.

NHTSA Administrator, Nicole Nason called ESP for cars: "The greatest life saving improvement since the safety belt". The agency estimates that ESP will save between 5,300 and 10,300 lives annually and prevent between 168,000 and 252,000 injuries in the USA. The agency also estimates that ESP will prevent between 4,200 and 5,400 of the more than 10,000 deaths that occur each year as a result of rollover crashes.

ESP technology developed by Bosch was pioneered in passenger vehicles by Mercedes Benz in 1998.

The "large car, niche market, export" strategy

When world oil prices dropped in recent weeks, an Australian consumer poll quickly identified an increase in consumer confidence. The apparent link between the cost of our freedom to transport ourselves and our goods and our view of the future may be closer than we thought.

In reflection of international trends, Australian car sales data have shown a strong trend to vehicle "downsizing" – fuel misers are not only considered "practical", they are becoming "cool". Even diesel engines are now discussed in polite society and sporting circles.

So strong has been the up shift in concern about fuel prices and fuel efficient vehicles, that some commentators have lamented the Australian vehicle manufacturing industry's heavy reliance on large vehicles with large engines. Only Toyota makes a four cylinder car in Australia – all other small engine vehicles are imported.

The advice of some is that Australian manufacturers should move into the manufacture of smaller, more fuel efficient vehicles – if it wants to remain in the automotive business.

But in this global market of "niche" products, is that the right advice? There are arguments for and against. To make the change to small car production, all Australian manufacturers would have to make significant investments in production equipment to make small car platforms - platforms that are already made cheaply in countless countries.

If Australian manufacturers make such a move, they sacrifice a niche market advantage for the questionable benefit of competing head on with some of the most efficient, high volume producers in the world. How level will that playing field be?

About 30% of Australia's production of its large cars is now exported. Some commentators say exports are the life line for Australian automotive manufacturing. Addressing the recent Federation of Automotive Products Manufacturers conference, Autopolis Director Graeme Maxton said large cars are now a much smaller, but still important part of the global market. He said Australia's four local manufacturers made high quality products that can be delivered all over the world with relative ease and economy.

Graeme Maxton said well designed and well built large cars enjoy considerable demand in some automotive markets. While many "mum and dad" buyers want to save on running costs, others want a large car as a status symbol. This particularly so among professional classes in the Middle East, China and South Korea, where choice is limited to locally made small vehicles.

He said the high volume small car brands provide lower margins for manufacturers. Australian car makers should gain a much higher premium for their quality large cars on international markets.