



## It's Elementary.

Anthony Element

### Modelling – It Ain't what it used to Be.

It was late afternoon when I strolled into Harvey's garage and reverently placed a freshly chilled slab in his fridge. Harvey's head appeared from the other side of his Harley, where he'd been squatting down removing what were probably imaginary bits of dust from his beloved bike, with a tiny artist's paintbrush.

"A beer!" he said, "What a bloody good idea," as though he'd never have thought of it by himself.

He carefully put the brush in its place on his enormous tool board. As I passed him the goods, he said, "I've been thinking..." He took a long slug. "About modelling."

"You're too fat, too old, you're the wrong sex and you don't walk funny," I replied.

"Nah, not that kind of modelling."

"Oh, you mean, like with little bits of plastic and tiny pots of paint, and you need to get a life."

Harvey belched and scratched his beard. "Computer modelling is what I'm talking about, mate."

I couldn't think of a smart arse reply to that, so I just said, "Really?" "Yep. Did you know that, unless it's a genuine, credible scientist talking, then the words, 'computer model' are usually code for 'Bullshit'?"

"At the risk of repeating myself... really?"

"Yeah, but before I get into that, I'm having second thoughts about this whole technology taking us forward thing. A couple a hundred years ago, we had pocket watches, which were all well and good, but you had to take them out of your pocket to tell the time. They were replaced by wrist watches. Very convenient. Then they got replaced by digital watches. Cool. But now





they're being replaced by smartphones... which we keep in our pockets. A bit bloody circular, ay?"

Harvey took another long drink, while I pondered the fact that I couldn't be bothered putting on my watch ever since I'd gotten my iphone.

"Anyhow, back to computer models. The idea is that you can design software that can predict the future based on available data." "Well, that sounds reasonable," I said. "It is. But you can never accurately know all the stuff that might affect whatever it is you're trying to predict. So the way they get around it is to make assumptions. Slippery little suckers, assumptions are."

I thought Harvey was going to make some comment along the lines of making an ass out of u and me, but I should've known better. Old Harv' can get pretty deep when he's got a beer in hand.

"Here's an example. Back in the Nineties, the ACCC, that's the Australian Competition and Consumer Commission, created a computer model that predicted Australia would be billions of dollars better off if the federal government quit subsidizing the car industry and just let it quietly disappear up its own rear end."



"That doesn't sound right," I said, looking out at my beloved Monaro parked in the driveway.

"Well it was music to the ears of a few politicians. Until someone let slip a few of the assumptions the ACCC had made in designing the modelling program. First, they just assumed that every person who lost their job in the car industry would immediately get another job. They didn't bother talking to the Department of Social Security in Adelaide – who would've told 'em that unemployment in SA was on the rise at that time - they just... assumed.



Second, because there was a colossal boom in the computer industry in the Nineties, they 'assumed' that everyone who lost a job in the car industry would immediately get a job in the computer industry.

And third, because average wages in the computer industry were higher than in the car industry, they 'assumed' that every one of these folks who'd lose their jobs on the GM and Ford production lines would earn a higher wage once they'd been laid off because they'd all now be computer professionals. And bugger me if the model didn't predict we'd all be better off."

I slowly digested that while I pitched my empty tinny into Harvey's bin and helped myself to another one. "Seems kinda stupid to think that a guy who'd spent twenty years installing windscreens would crack a gig as a programmer, right off the bat."

"No kidding," said Harvey.

"So why would they do that?"

"Well, the ACCC's job is to promote free markets. So they're ideologically opposed to any kind of government intervention. And because they're all about free markets, they only ever think about the economy. They couldn't care less about our society, 'cos that's not in their job description. So, lo and behold, they came up with a computer model that confirmed exactly the scenario they'd been having wet dreams about – stopping governments of any persuasion from putting any more money into supporting an industry."



"But all those people out of a job..."

"Not their problem. But luckily, wiser heads prevailed. And that, me old mate, is why computer modelling is usually code for bullshit; because most of the time the people doing the modelling make assumptions that guarantee the model will predict exactly what they want it to."

I thought about that for a bit. "But on the News, they just report what the models predict."

"Bingo," Harvey said. "Because the media believe we've all got the attention span of a goldfish, they don't ever go into the details of a story, unless of course, it's about the Kardashians, then they report in excruciating detail. Which means they never take a look at the assumptions in the models that produce the result they're reporting on."



Harvey's my best mate, but sometimes he can make me feel bloody uncomfortable. I suddenly remembered a doco I'd seen. "The Fracking Industry reckoned they had computer models showing that pumping thousands of chemicals and millions of gallons of water underground to force gas up through the soil wouldn't affect our water tables."

"Well," Harvey said, shaking his head. "Who could possibly have seen that coming?"

"And now," I continued, "there are people in the US, in places where fracking has been going on for years, who can set fire to the water coming out of their taps."



"Which," said Harvey, "is bloody handy if you want to bbq your sausages and boil them at the same time. Bit of a worry if you've got to drink it though. Oh, and better not smoke while having a bath."

"So," I said, "what do you reckon we should do about it?"

He stared down at his half empty can. "About the only thing we can do is, any time we hear the words 'Computer model' being spoken by a politician or a bureaucrat, just assume that every other word in the sentence is garbage."

Then Harvey raised his can. "And stick with beer, 'cos our water'll pretty soon be undrinkable."

## Suicide prevention app supports veterans anywhere, anytime.

The Minister for Veterans' Affairs, Senator the Hon. Michael Ronaldson, released a free mobile phone app to help serving and ex-serving Australian Defence Force (ADF) personnel deal with suicidal thoughts.

"*Operation Life* is an important initiative that has been developed in consultation with specialist veteran mental health specialists. This is specifically targeted towards assisting those with the unique challenges and circumstances that military service can present," Senator Ronaldson said.



"I would encourage all current and former ADF members to talk to your mates about this app, particularly those who may be experiencing difficulties".



“The app has been designed to support professional treatment and we recommend users work with a clinician to set the app up the first time and learn when and how to use it to stay safe between clinical sessions.”

The *Operation Life* app provides:

- easy access to emergency and professional support services and a Personal Support Network of trusted people to call when help is needed
- a grounding exercise to help users regain control of suicidal thoughts so that they can access support, once they are thinking clearly
- the ability to look through photos, listen to chosen music and record and review positive reminder messages about worthwhile life experiences and aspirations for the future – reminders of why life is worth living
- advice on staying safe and when to seek help.

This app is the Government’s latest initiative in a suite of suicide awareness and prevention resources, which includes the [Operation Life Online](#) website and face-to-face ASIST (Applied Suicide Intervention Skills Training) workshops delivered nationally through the Veterans and Veterans Families Counselling Service (VVCS).

“Any suicide is tragic. Suicide is the leading cause of death in Australia for men aged between 35 and 44 and women between 25 and 34 years old and serving and ex-serving personnel are not immune from this. It is vital anyone who experiences intense feelings of despair and hopelessness, or feels like they have lost control, seeks professional help,” Senator Ronaldson said.

“The Government is working hard to develop a comprehensive suicide prevention strategy that includes training to assist at-risk individuals, programmes to build resilience, self-help and educational materials, a 24-hour veteran support line and access to clinical services.”

The *Operation Life* app is available free via the iOS App Store and Android Google Play.

## **The US Military’s V-22 Osprey.**

The, which first flew in March 1989 and was introduced into service in June 2007, is a versatile aircraft that can fly like both a normal fixed wing aircraft and a helicopter thanks to its tilt-rotor design. This enables it to carry out a range of missions for the US Marines, Navy, and Air Force

# THE RAM

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Vol 51

Page 13

including disaster relief, personnel transport and recovery, medical evacuation, and logistics support.

The failure of the Iran hostage rescue mission in 1980 demonstrated to the United States military a need for a new type of aircraft, that could not only take off and land vertically but also could carry combat troops, and do so at speed. The U.S. Department of Defence began the Joint-service Vertical take-off/landing Experimental (JVX) aircraft program in 1981, under U.S. Army leadership.



The Osprey's development process has been long and controversial, partly due to its large cost increases, some of which are caused by the requirement to fold wing and rotors to fit aboard ships. The development budget was first planned for \$2.5 billion in 1986, but this increased to a projected \$30 billion in 1988. By 2008, \$27 billion had been spent on the program and another \$27.2 billion was required to complete planned production numbers. Between 2008 and 2011, the estimated lifetime cost for maintaining the V-22 grew by 61 percent, mostly allocated to maintenance and support.

# THE RAM

THE MAGAZINE BY & FOR SERVING  
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Vol 51

Page 13

Its production costs are considerably greater than for helicopters with equivalent capability, specifically, about twice as great as for the Chinook which has a greater payload and an ability to carry heavy equipment the V-22 cannot. An Osprey costs about \$60 million to produce, whereas the Chinook cost about \$35 million. A good deal??

In spite of the enormous costs and the scandal that had dogged the aircraft (falsifying maintenance costs, reports condemning the aircraft as unsafe, overpriced and completely inadequate) in 2005 the Pentagon approved full rate production and placed an order for 408 of the aircraft for use by the US Marines and the USAF. As well, interest has been shown by countries such as India, Israel, Japan, South Korea and the UAE.



So how does this modern-day Transformer work?

The Osprey has two large, three-bladed rotors that spin in opposite directions, creating lift and eliminating the need for a tail rotor to provide additional stability. Each 11.5 metre diameter propeller is driven by an engine that produces over 6,000 horsepower and both the wings and propellers are foldable, so the 16-tonne craft can be easily stored on the decks of aircraft carriers. The V-22's two Rolls-Royce AE 1107C engines are connected by drive shafts to a common central gearbox so that one engine can power both proprotors if an engine failure occurs, however, the V-22 is generally not capable of hovering on one engine (Click the pic below to see it unfold.)

# THE RAM

THE MAGAZINE BY & FOR SERVING  
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Vol 51

Page 13

When the craft is ready to take off, its rotors are positioned vertically—like any traditional, two-bladed helicopter. While in flight, however, the rotors shift to a horizontal position (in a matter of 12 seconds!) so that the craft now resembles and operates like a fixed wing aircraft, utilizing its wings for lift. To land, the Osprey reverses the process by raising its rotors back to the vertical position.

Because it can take off, land, and hover like a helicopter, the Osprey can be used in missions that involve transporting troops to remote areas or conducting long-range, maritime rescue operations. It has a longer range than its copter cousin (270 to 580 miles), can fly at greater speeds (315 mph), and can carry up to 20,000 pounds (or 24 troops) in its cargo bay.

(Click the pic below to see it get airborne.)



The Osprey is equipped with 16 fuel tanks (ten integrated into the wings and six in the fuselage), giving it a range of just under 900 nautical miles (1,700 klms) however, the aircraft is capable of being refuelled while airborne. Boeing is also developing a roll-on/roll-off aerial refuelling kit, which would give the V-22 the ability to refuel other aircraft.



In 2007, 10 Ospreys were assigned for work in Iraq where they were praised for their speed and range over conventional helicopters.

# THE RAM

THE MAGAZINE BY & FOR SERVING  
& EX-RAAF PEOPLE & OTHERS



Vol 51

Page 13

In 2009 they were deployed to Afghanistan and by 2011 they had surpassed over 100,000 flight hours and were praised by the Marine Commandant as being the “safest airplane, or close to being the safest airplane” in the Marine Corps inventory.

It can be armed with one M240 machine gun or a M2 Browning machine gun on the loading ramp that can be fired rearward when the ramp is lowered and/or a retractable, belly mounted 7.62 mm [GAU-17 minigun](#).



After eating an entire bull, a mountain lion felt so good he started roaring. He kept it up until a hunter came along and shot him.  
The moral : When you're full of bull, keep your mouth shut.

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Vol 51

Page 13

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