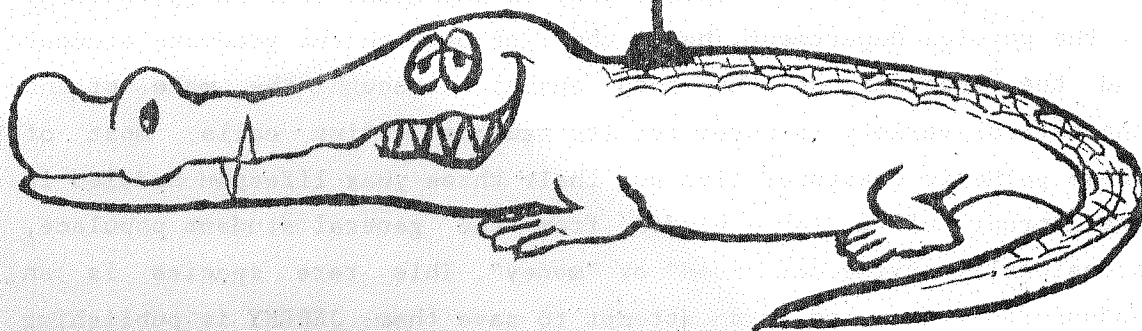


JEREMY



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EDITORIAL

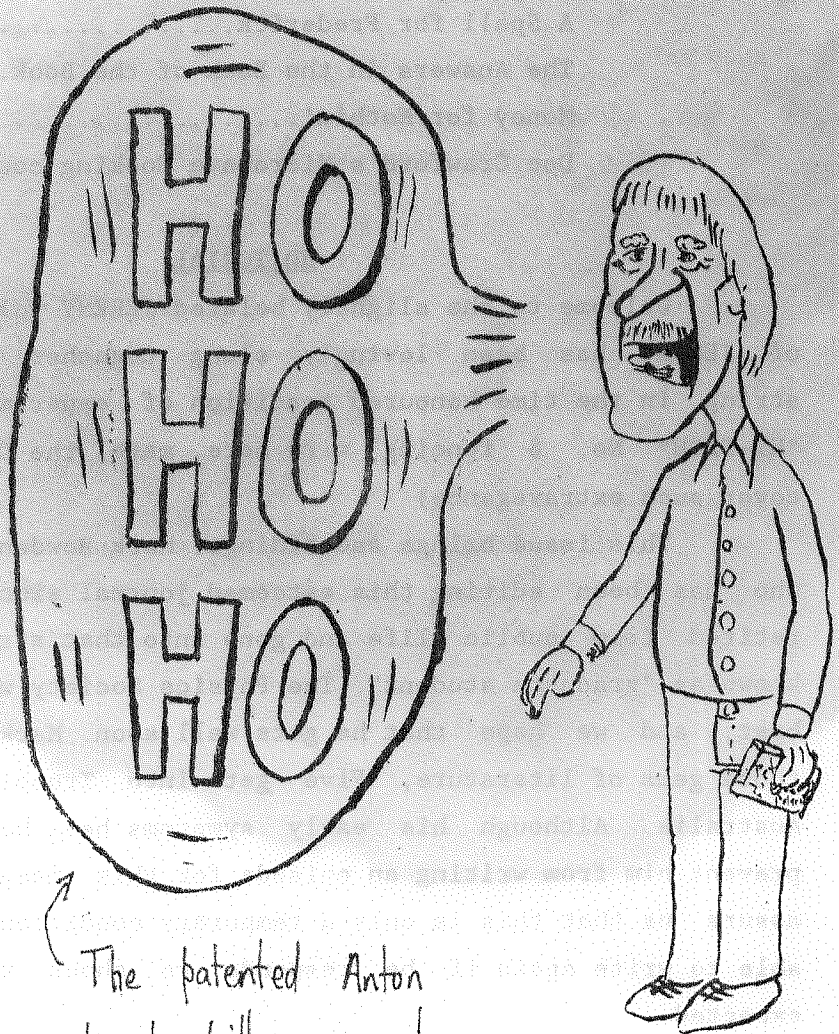
Welcome to the slightly belated JEREMY vol.2, no.3. This issue of JEREMY has been lovingly slung together with sticky tape and string, in the time honoured tradition of experimental physics. (No "HI-TECH" No. 8 fencing wire here, mate, the CTEC allowance cannot cover such extravagance)

This issue brings sad tidings. Mark Bowden, the man of steel who has been editing this esteemed journal since its inception, has retired from public life and gone into that strange state of being, known as "graduate student". The Physics Society wishes him all the best, and we hope that he gets well soon. Mark was responsible for those gems of literature, Five get into Trouble, and Biggles in Australia. Although his early symptoms have been serious enough to prevent him from writing an episode for this issue, his supervisors assure us that this is only a temporary condition and that he will be able to write again if he responds to shock therapy as well as expected.

There is a strange species of physicist which may occasionally be observed lurking around the physics building, known as the post-doctoral fellow. Rarely observed by the undergraduate population, these strange and furtive beasts play an important role in the ecology of the physics department, being the link between the graduate student and the lecturer on the food chain. Although the male of the theoretical variety is noted for its raucous mating calls, most of these pathetic creatures live out their three year lifespan huddled in the corner of a lab, hidden from the general student populace, occasionally crying out "food" or "money". This rare species is an endangered race, and in an attempt to save them, JEREMY is publishing pictures of these poor creatures before they die out. If you observe one in the corridors, be nice to it, give it a crust to eat, and take it back to its natural habitat. Please help, or they may die out.

Anton Garrett:

This obscene little fellow is the only theoretical male in captivity. Its loud voice and even louder plumage have been known to frighten little children, but it is generally considered to be quite harmless unless provoked into song.



↖ The patented Anton
Laugh kills cows at
300 paces.

THE QUOTES COMPETITION

Shut the gate, the horse has bolted! Ian Johnston, after a quiet first term, has taken the quotes competition by the throat with a record breaking rush of quotes, the like of which may never be seen again. Back after a disappointing season last year, which saw his crown taken from him by the relatively obscure Graham Derrick, he is obviously hungry for revenge. Leaving the rest of the field floundering in his wake, he has quoted his way to an unassailable position at the top of the ladder with a quote rate of 235%!

Although Ian Johnston has streeted the field with the sheer pace of his quoting, other competitors, obviously cowed by the performance at the head of the pack, have decided to put all their efforts into the quote of the year section. Other performers, such as pre-season favourite, Laurie Peak, are quoting at a slower rate, feeling that quality is more important than quantity in this competition.

On with the quotes. The sheer volume of the Johnston quoting required that some be edited out, however, the sample here leads one to the conclusion that this seasoned campaigner has the class to take this years competition out in both divisions.

Ian Johnston:

"It may not be a metric textbook... It may be written in furlongs per fortnight squared"

"Let me reveal something. I am not God. Now this may come as a shock to some of you"

"If you're going to take something as an article of faith, you may as well make it something tedious to prove"

"We don't understand it, but it works. We'll be saying that a lot about quantum mechanics."

"These are Xerox photocopies, not tablets of stone"

"Of course universe means Hamiltonian"

"Go and check it all you smart-arses who think I'm wrong"

"If you find a dimensionless constant, keep it"

Laurie Peak:

"...if we had X-ray eyes like Superman or γ -ray eyes like ...
... God"

"with theory saying infinity and experiment saying zero, we
have a slight discrepancy"

"If you could get a one tonne truck through a gateway of width
 6.6×10^{-38} m, then you would expect to see truck interference."

" 10^{-23} s is not a very long time"

" Ω^- , $I=0$, that's a hermit state; no brothers, no sisters, it's
a very sad story this, no one to talk to"

Niel Cramer:

"This variable is ... where does this come from?"

"A true physicist's approach is to look it up in a book"

"The second derivative doesn't blow up"

"Forget about the nucleus, it exists"

Don Melrose:

"You're taught this nonsense, you know it's nonsense, and you start to learn"

"That's clearly zero as the whole thing was zero before we started fiddling with it."

"You can come up and see me, and I'll drop a copy of Robert Winglee's thesis in your lap. That'll keep you occupied for a while."

Brian McInnes:

"I could go into hyperspace if I wanted."

Bernard Pailthorpe:

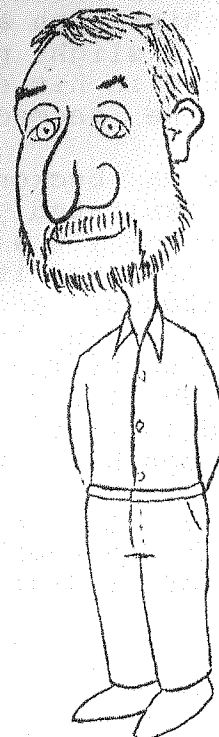
"It's an intuitively repugnant model, and working out the statistical mechanics of this is a pain."

"Like all things in thermodynamics, it's absolutely useless."

Peter Krug:

Of the Plasma species, this little fellow is often seen running about near the FILTH lab. Although generally a quiet little fellow, he has been known to get really very angry on occasion. Approach with caution.

I have a few papers you might be interested in reading.....



A SPELL FOR FREDERICK - PART TWO

The first thing Fred noticed as he woke was that his head was in a vice and someone was beating it with a mallet. He started to panic before he realised that he was just experiencing the worst hangover he'd ever had. He carefully sat up and had a look around.

There was something screwy going on here. Fred, what are you doing under a wood bench? Feeling miserable, yes, but why are you here? And what's the bloody racket?

He saw that he was looking at the underside of a table of rough hewn pine. What was more, it was being used. In fact, it was jam packed with the noisiest bunch of revelers he'd ever heard, and they weren't sober by a long shot.

He remembered leaving the lab. "Let's see...I caught a bus to Broadway. Stopped to have a, oh damn, that bloody Big Mac, that's it! What happened after I ate the wretched thing?"

Fred didn't know. He didn't have much to go on, just the underside of a table. He thought he was pretty safe where he was so long as he didn't bump any legs, so took inventory. He noted that his bag had gone the way of the Big Mac.

He thought he was capable of standing now, so he crawled out and tottered to his feet, feeling something of an idiot.

Everyone at the table seemed to think he was a bit of an idiot too. Fred thought he was going to be in his second brawl in a day, when he heard a voice louder than the rest boom out over the crowd: "That one....is MINE!!" Thunder boomed in emphasis, there was a flash of lightning, and a great wind sprang up and gradually died away. Fred's head throbbed with the subsonics.

There was silence.

A beefy man at the table broke the spell. "Well, I'll be damned!", he muttered. "It's Kevin Moordred!"

The man in the doorway made quite an impression on Fred. He should have been the star attraction at Taronga Park. He had muscles like an elephant, the hairiness of a gorilla, and a ferocious black beard. He wore sneakers, football shorts, and a filthy T-shirt with an emblem that might have once been a green crocodile. A slight paunch revealed an affinity for beer. Lightning flashed in his eyes and he crackled with static every time he moved. He seemed to Fred to be the very quintessence of supreme evil.

And he was beckoning for Fred to come with him.

Fred hesitated just long enough to get pushed from behind. "Follow 'im or y'r a pile 'o dead meat!", someone whispered to him. Fred believed it. He followed Moordred out the door, over the cobblestones, and onto the carpet. Cobblestones? A carpet? On Broadway? Fred thought he must be hallucinating - it happened to students sometimes after a particularly ghastly lab session.

Moordred yelled "Giddyap!" at the carpet; it lifted off the ground, did a U-turn and headed down the street.

Fred thought it was time to bring up an urgent subject. "Uh, Mr Moordred..."

"Yes...?" Moordred punctuated it with an evil grin remarkably like that of the Cheshire Cat.

"Um...Mr Moordred, what the bloody hell's going on? I was

eating this burger you see, and it makes me feel like I've just had a litre of Drano. I stumble, cut my arm, and black out. I wake up, and discover I'm somewhere else. The asphalt outside has turned into cobblestones, the cars are carpets. Moordred.."

"Call me Kevin. I only do the thunder and lightning when I want to get my way in a hurry." Fred had to admit to himself that there were no longer black clouds floating around Moordred's head. "And buggered if I know what's going on. I was sent down here because something was screwing up experiments at the university. Readings stuffed up. Accuracy shot to hell. One of the wizards noticed his experiment only failed when he pointed it this way. So here I am."

Fred was about to reply when a traffic light ahead turned amber (he wondered why there were traffic lights when everyone flew around in Pure New Wool convertibles), the carpet tilted its front end down and Moordred accelerated to a frightening pace. Fred could hardly see as the wind rushed passed him, but he could tell that they were passing up what looked disturbingly like Parramatta Road. Moordred took an impossibly sharp corner (banking almost vertically as he did so) and slowed down to walking pace in one smooth motion. Fred was sure he had pulled more gravities on that bend than a fighter pilot and was feeling airsick.

Moordred nudged the carpet through a gate and was confronted by a man in a blue uniform who signalled for him to stop. "Where's your yellow sticker?", the man said.

Little black anvil-shaped clouds started to form above Moordred, but he started searching pockets. "Look", he said eventually after a fruitless search, "do you know who I am?" His beard crackled a little and Fred could smell ozone.

The uniformed man was unimpressed. "I don't care if you're the great Harry Messiah himself, nobody gets through without a yellow card!"

Moordred muttered something to himself, made a last-ditch search, and finally discovered a grimy yellow card in his wallet. The gatekeeper grudgingly let them through. Moordred resumed his suicidal maneuvers and in moments had deposited Fred in front of a familiar site: the Physics building. He tried to ignore the cobblestones under his feet and the names like "Merlin" and "Gandalf" inscribed on the walls where "Einstein" and "Newton" should have been.

Fred was shown to a door labelled "Fungus Bran : FILTH". Moordred knocked and followed Fred inside. Fred was confronted by an enormous plant growing by the window which rustled its leaves angrily at him. Something from it whizzed by and was instantly retracted. It looked unpleasantly like a sting. A man who had been sitting in a chair leaped onto a table and started cracking a whip at the plant and shouting "Down boy! Down boy!". Fred watched in amazement as the man threw it a piece of meat and it started contentedly munching away.

"Sorry about that", the man said, a little breathless. "My triffid's feeling a bit frisky today. My name's Fungus, Fungus Bran. What can I do for you?"

Fred was stuck for an answer to that one. "Er...Fred Carruthers, how do you do?" was as far as he got, because Moor-

dred appeared from where he'd been hiding behind Fred and said "Fungus, I found this guy where your FILTH gadget was pointing. He says that where he comes from, people travel in 'cars' and there's no such thing as a magic carpet. Do you know anywhere like that?"

"Actually, yes", Fungus replied, although he looked surprised. "That particular world has two interesting distinctions. The first is that it is the largest garbage producer in all known space, so it's well documented in my FILTH archives, and the second is that magic is completely unknown there. A sorry place to live", he concluded sadly.

"Now hang on," Fred protested, "I agree that these carpet things are more efficient than cars, but what's this about magic? Do you go 'round with a wizard's cap and zap people?"

It was obviously the wrong thing to say. Fungus' eyes took on the same dreamy look that Fred had seen on postgraduates who'd been asked "How is your thesis going?" Moordred pulled a beer out of a draw, put his feet up on Fungus's desk and settled back to listen, belching occasionally.

"Well, you see, it's like this", Fungus began, slipping happily into the style beloved by lecturers everywhere. "In this analogue of Earth (you know, parallel universes and all that sort of thing) there is a fifth fundamental force. We have learned how to focus it and to use it in many interesting ways, such as flying carpets, crystal balls and the like."

"Could I see one of these crystal balls?", Fred said.

"Sure", Fungus said. He pulled something out of his pocket. It looked like a flat screen television.

"Why isn't it a large glass sphere with smoke inside?", Fred asked.

"Oh, we don't use tubes any more." Fungus smiled enthusiastically. "These days everything's solid state. You turn it on with that switch there."

Fred looked at the screen. By twiddling knobs he managed to get a crazily slanting view of the outside of the building, although something was wrong with the vertical hold. He reluctantly handed the device back; it was a fun gadget.

"Some people have a knack for a given sort of magic, although they can perform other sorts with a little difficulty", Fungus went on. "For instance, Kevin here can do the thunder and lightning theatricals, but he's not much good at actual blood and guts, even though he works with the plasma department."

Moordred pulled out a knife, grinning wickedly. "I just have to use one of these like anyone else. It's very frustrating."

"As to how you got here, I don't know that. But you're upsetting a lot of the wizards - they didn't like it when their experiments were ruined by your arrival. Let's head for the tea room and talk it over with some of them. Everyone will be there, regardless of whether they have apprentices to teach or not."

Fred looked at his watch. It was indeed about four o'clock. How long had he been lying under that table? He said goodbye to the triffid, which was slowly salivating into its pot, and followed the others to the tea room. It was just where he remembered it.

THE ANSWERS IN THE BACK OF YOUR TEXTBOOK

A commonly observed phenomenon in undergraduate physics is that the answers found in the back of textbooks, even those which have been in existence since the Babylonian civilisation, and have been through several editions, are frequently wrong. The reason for this lies in the very nature of the textbook publishing business. Textbooks are written by academics. Academics have long forgotten how to solve the types of problems set in textbooks, and therefore ask someone who has recently been an undergraduate to do the problems for them. This is usually a graduate student.

Graduate students are a strange bunch, and have a warped sense of humour. They also have better things to do. (gather ye rosebuds while ye may and all that...) So what usually occurs is that the author, who is the supervisor of the student, rings him the day before the manuscript is due, only to find that the answers are not done. Not only that, but the student is suffering from the morning after the night before, when he got disgustingly drunk, was sick on someone's little dog, and broke up with his girlfriend. Bent upon revenge, he attacks the first problems ...

Given the editorial process described, is it really surprising if there are dubious answers to the problems set? Of course, when a book is being chosen for an undergraduate course, this is an advantage, in that it eliminates effective cheating on assignments and makes marking easier.

Peter Gerhardy:

This fellow is very rarely seen in the School of Physics. Being of the cosmic ray variety, his natural habitat is three miles down a disused mineshaft. This is generally considered the safest place to keep him, and he is only ever allowed out when on a leash.

When I was a
lad, you had t'work
24 hours a day in
t' pit...



Money For Nothin'

Now look at them yo-yos that's the way you do it
You teach the students for the BSc
That ain't workin' that's the way you do it
Money for nothin' and your trips for free
Now that ain't workin' that's the way you do it
Lemme tell you them guys ain't dumb
Maybe get some chalkdust on your finger
Maybe get some chalkdust on your thumb

We gotta cram our thermodynamics
Wave theory, quantum misery
We gotta cram for semiconductors
We gotta cram this relativity

See the big professor with the bald patch and the big chin
Yeah buddy that's his own hair
The big professor got his own lab setup
The big professor he's a thousandaire

We gotta cram electromagnetics
Plasma physics, astronomy
We gotta cram Newtonian mechanics
We gotta cram this electricity

I shoulda learned to do the theory
I shoulda learned to do them sums
Look at that Davis, he gets to appear on camera
Man, I bet that's fun!
And who's up there, what's that? Brian McInnes?
He's bangin' on the blackboard like a chimpanzee
Oh, that ain't workin' that's the way you do it
Get your money for nothin' get your trips for free

We gotta cram these microwave waveguides
Instrumentation, optic theory
We gotta cram statistical mechanics
We gotta cram conserved energy

Now that ain't workin' that's the way you do it
You teach the students for the BSc
That ain't workin' that's the way you do it
Money for nothin' and your trips for free
Money for nothin' and your trips for free

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TO ALL OTHERS THE FOLLOWING:

As soon as they are in the hands of the

REMARKS ON THE CASE

Have you ever noticed the fact that when
you are in a boat, the water seems to
move faster when you are moving than when
you are at rest?

You can easily see this when you are
rowing a boat. The water seems to move
faster when you are rowing than when you
are at rest. This is because the water
is moving with you when you are rowing.
In other words, the water is moving
with the boat.

Now let us consider the case of a
boat moving in a river.

Suppose the boat is moving downstream.

THE CASE OF A BOAT MOVING IN A RIVER

- 1. The boat is moving downstream.
- 2. The water is moving downstream.
- 3. The boat is moving faster than the water.
- 4. The boat is moving in the same direction as the water.
- 5. The boat is moving in the same direction as the current.
- 6. The boat is moving in the same direction as the flow of the river.
- 7. The boat is moving in the same direction as the direction of the river.
- 8. The boat is moving in the same direction as the direction of the water.
- 9. The boat is moving in the same direction as the direction of the current.
- 10. The boat is moving in the same direction as the direction of the flow of the river.

END OF CASE

THE CASE OF A BOAT MOVING IN A RIVER