MONASH ADVANCED SCIENCE & SCIENCE SCHOLARS SOCIETY

MASS 3 Newsletter

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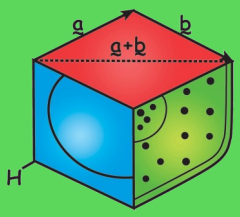

INSIDE THIS ISSUE:

Note from the editor:

There have been some excellent contributions to this newsletter from undergraduates, postgraduates and professionals alike, so thankyou to you all. In particular, thankyou to Yuji Nakano for all his input and for being such a darn good president. Also, check out page 10 where, for the first time, we break free of the blue and green! Hope you all enjoyed your break and good luck with the coming semester!

- Annie

Finances and job cuts within the Faculty of Science

Less than two months ago, the Dean of Science (Professor Scott O'Neill) announced that the Faculty of Science was under significant financial pressure. To resolve this issue a proposal for organisational change was released, outlining plans to reduce staffing expenditure by approximately $2.2 million per year. In other words, because staff salaries use nearly 70% of the Science Faculty's income, it was decided that some staff members would need to be lost to meet the University's budgetary requirements.

As a consequence of this decision, a total of 16 positions within the Faculty of Science will no longer exist: those of 7 academic and 9 technical staff members. The 7 academic positions being lost include those of 2 staff that have accepted enhanced voluntary separation packages (EVSPs). The remaining positions will be cleared by selecting 5 under-performing academic staff for compulsory redundancy. The approach to reducing the number of technical staff has been similar: relevant staff are being offered EVSPs, pre-retirement contracts and other transfer options, while positions for casual staff are being discontinued. Earlier this month, Professor Edwina Cornish (Senior Deputy Vice-Chancellor and Deputy Vice-Chancellor [Research]) stated that due to these measures, no more than two compulsory redundancies were expected to be required for technical staff.

Despite assurances that such methods of staff reduction would have minimal impact on other staff and students, many have argued that this is not the case. For example, there are concerns regarding the timing of these actions, and many hold the belief that they could have been timed to have less impact on students. According to one postgraduate (who wishes to remain anonymous), there are PhD students who have lost supervisors, while others are expected to experience delays due to understaffing in the mechanical and electrical workshops. "Before the staff cuts, it took the electrical workshop four months to put some power supplies in rack mount boxes." He said. "I can't even fathom how long it will take now that 2/3 of qualified staff have now left."

On top of this, there have been incessant accusations that the current "financial pressure" is not as bad as those in upper management are making out. A summary of the financial situation of the Faculty of Science, released by the Dean of Science a few days ago, shows that the faculty is actually forecast to make a profit of $2.7 million this year. The issue, however, lies in the fact that this surplus falls short of the contribution that the faculty is required to make to the university. This is not the first time this has occurred; in 2009 the Faculty of Science apparently made no financial contribution to the university whatsoever, despite a budgeted contribution of $5.3 million. Likewise, the faculty failed to meet its expected contribution in 2010, falling short by $4.1 million.

So where do financial contributions to the university actually go? Rather than being an independent business, it should be noted that the Faculty of Science is a small section of Monash University, which has operating costs outside the individual faculties. Because of this, each faculty is required to make a contribution to a kind of 'central fund', some of which is redistributed to faculties for research costs. Last year, the Science Faculty received 11 times its contribution back in funding –

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Reflection and affection: Yuji's final report

"As the IT teacher at my high school once said, 'procrastinating is like masturbating—you feel good doing it at the time, but afterwards you realized you've fucked yourself.' "

Yuji Nakano completed his final semester as an undergraduate in June 2011. Due to CNS rules, this means that he can no longer act as the president of a student club and he will be well missed. This is his final rant as president of MASS^3.

Second semester already? Say what? Feels like summer holidays was just last week? Missing the summer so much due to this abysmal winter weather? I'm using rhetorical questions too much (like that's possible – challenge accepted!?)?

So looking back on the semester that's just been, there were some highs and some lows, but eventually all dissipated to equilibrium – as it always does – just like in a damped periodic oscillation (what's that? I just used some of my very limited physics knowledge? Say what?).

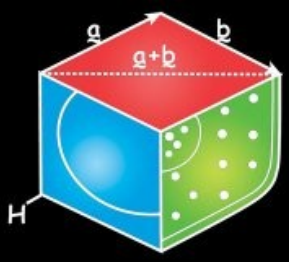
Definitely the highlights of last semester were the fundraising week (cake! OM NOM NOM NOM), and the MASS^3 INAUGURAL Trivia Night (oh how painful waxing my legs were). Thanks again to those of you who generously donated some loose change for fundraising week, and to those of you who got absolutely trashed at Trivia Night (especially from the PhD table – setting a good example for us undergrads). The lowlights of last semester? Can't say there were many. SWOTVAC was crap due to the fact that many of us still had lectures to attend to for revision and such and such. Also writing up third year research project theses at the last minute. 'Cause I was a lazy bastard. And stupid. And fat and ugly. And stupid. Very stupid. Did I mention I was stupid? Lesson learned – procrastinating doesn't get you anywhere. As the IT teacher at my high school once said, "procrastinating is like masturbating – you feel good doing it at the time, but afterwards you realise that you've fucked yourself."

To my fellow 3rd year peers; good luck for your last semester as an undergrad! To the rest of you – haha you've got a lot longer to go 'til you finish! SUCKERS! MWAHAHAHAHAHAHAHAHA

PEACE!

Yuji Nakano

Former President of MASS^3



MASS^3 website and Facebook page

Don't forget that MASS^3 has both a website and a Facebook group, keeping you update about news, events, discussions and giving you a chance to have your own rants. If you haven't had a look at the website yet, be sure to check it out sometime—there are committee member profiles, forums and even the option of purchasing MASS^3 merchandise! And most of you seem to be up with the Facebook group, but in case you haven't joined it yet, this is the place to access photos from events and here all the latest updates (it was even where we first heard about Ruby's malaria incident). So make sure you check it out!

Website: http://www.masscubed.com/

Facebook: Search for MASS^3 (Group)

UPCOMING EVENTS

Science Industry Night (Wednesday August 17, 5.30pm)

The Science Industry night is highly recommended for all undergraduate students studying science, particularly those in their second and third years. Even though nearly all of you will be going into some form of postgraduate study, the Science Industry Night is still a great opportunity to learn about some of the options that await you after university. This year's science industry night will feature:

- Keynote presentation by Professor John Thwaites (Chair of ClimateWorks Australia and the Monash Sustainability Institute)
- Presentations from representatives from the CSIRO, Bayside Group, Australian Institute of Physics, Department of Sustainability and Environment Victoria (DSE), Victoria Police—Forensics Department, and many more organisations from a diverse range of scientific fields.

For more information, visit http://careers.monash.edu.au/students-grads/events/science-night.html

Club events (Various times next semester)

Event plans are still in their infancy for the coming semester, but we WILL be holding a BBQ for Science Industry Night.

Otherwise, stay tuned—all will be revealed soon! Event updates will be via Facebook, posters/notes in the common room, and possibly email, so keep an eye out!

Internships and Leadership Workshops

Remember to check your emails and the Science Leadership 'unit' on Blackboard for upcoming opportunities, including internships and leadership workshops. The dates for the next leadership workshops are as follows:

⇒ Working in Teams (15th September, full day)

⇒ Creative & Critical Thinking (27th September, 9am-1pm)

⇒ Developing Mental Toughness (29th September, full day)

These workshops are not only free, but they are also run by experts, so be sure to take full advantage of them while you can! The sign up sheets are available on Blackboard.

For the Record

- James Kwiecinski

I may have been wrong. *It's not usually the first thing you'd expect someone to write in their "cameo" writing piece, but it sums up my initial stand on the whole issue of the Australian Synchrotron's Funding.*

For those of you who do not know about the issue, let me bring you up to speed: when the Synchrotron first started up, it was guaranteed funding up until 2012, in which case funding would be reviewed and cleared for the Synchrotron to further operate.

These funding reviews led Melissa Fyfe from "The Age" to write two articles, one entitled, "Synchrotron sinking as Baillieu pulls plug", published on the 8th of May this year and its follow-up "Baillieu urged to save hub of science" published on the 22nd of the same month, which stoked the interest of myself as well as several other academics.

Both of these articles were DAMNING; they painted a picture of an evil Liberal State Government who wanted to sacrifice the innocent Australian Synchrotron, all for the purpose of balancing the State Budget that had been left in disarray by the previous government. The future of the Australian Synchrotron did not look promising, to say the least.

As you might imagine, this article made me MAD! "How dare they take away our beloved Synchrotron!?", I cried, startling everyone around me. "We have to do something!"

And so I did. I started raising awareness amongst my fellow colleagues; the Synchrotron was a facility that was important to every Science student on the Clayton Campus and was an integral part of our education and future as Australia's new generation of scientists.

Then, when I was asked to write my opinion on the matter for this newsletter, I decided to research it more thoroughly. There were a scarce number of articles on the actual issue, so I decided to go straight to the source itself: the Australian Synchrotron.

Initially, I sent off several emails and met with no response, but eventually, I established a connection with Nick Green, a Senior Communications Officer working at the Australian Synchrotron who was more than happy to have a chat with me and answer all my questions. His description of the funding issue was very different to the grim, almost sensationalist view point of Fyfe's articles.

He told me that the Synchrotron's future was promising; there had been a number of meetings between State and Federal governments together with the management staff, and the funding process had been moving and progressing in a positive manner. Both the State and Federal Governments had stressed the importance of keeping the Synchrotron in business,

"I was shocked, to say the least. Surely this wasn't the same funding issue I had read in the "The Age"! Everything looked so hopeful!"

Synchrotron sinking as Baillieu pulls plug

Melissa Fyfe
May 8, 2011

JOHN Brumby's pet project, the $200 million Australian Synchrotron, could be shut down next year after the Baillieu government failed to commit to ongoing funding of the research facility at the centre of Melbourne's thriving scientific community.

The Sunday Age understands the synchrotron's board has made contingency plans for its closure, with funds due to run out in June next year - just five years after it opened.

Last week's state budget gave no extra funds to the facility, which supports the work of 2500 scientists, has 120 highly skilled staff and is producing scientific discoveries of world importance.

An excerpt from Melissa Fyfe's "damning" article regarding funding for the Australian Synchrotron (8 May 2011, *taken from http://www.theage.com.au/*)

particularly the Federal Innovation Minister, Senator Kim Carr, and the State Innovation Minister, Louise Asher, both of whom had gone on public radio to discuss the whole matter of funding and even possible expansions to the Synchrotron.

I was shocked, to say the least. Surely this wasn't the same funding issue I had read in the "The Age"! Everything looked so hopeful! Mr. Green was very familiar with these articles when I asked him about them. He warned me, "It's important for people to have an informed and balanced view on the current funding process". I felt like a fool because I had jumped to a conclusion too quickly before getting my facts right. But I wasn't alone; a lot of academics had done the same thing too, taking the article as fact.

Nonetheless, I'm relieved, and you should be too. Though the funding hasn't been finalized yet, and it won't be until later this financial year, things are looking good for the Synchrotron. Mr. Green kept stressing the fact that the "Synchrotron is perhaps the most important scientific infrastructure in Australia". The fact that it had "clear benefits, scientific focus and had produced important scientific outputs" was "not lost on the politicians arguing for its future funding".

When asked where he saw the Synchrotron 5 years from now, Mr. Green laughed, "I can't answer in absolutes, though I believe there will be a growth, both in terms of the facility and of the number of scientific discoveries". Of course, this is only if budget constraints allow the facility to expand. This led to one final point made by Mr. Green: for those of us who still want to help and support the future of the Synchrotron, we can help it out by raising awareness of some of the Synchrotron's scientific achievements. This, in turn, would generate industry interest and would hence lead to increased investment and funding that could be used to make all of the Synchrotron's beamlines operational and, furthermore, would help fund its expansion.

"For those of us who still want to help and support the future of the Synchrotron, we can help it out by raising awareness of some of the Synchrotron's scientific achievements."

The general sentiment is that the Synchrotron is only getting started; it will grow bigger and it will continue to be at the forefront of scientific discovery in Australia. I think I speak for all of us when I say that we are all incredibly lucky to have such a magnificent facility right at our fingertips and I hope it stays that way.

For those of you who have questions yourself about the issue, you can either ask myself or contact Mr. Nick Green on (03) 8540-4289.

The Australian Synchrotron: one of less than 40 similar facilities around the world, the Australian Synchrotron provides highly intense light for a range of research purposes.

Source of photo: http://v21.nonxt8.c.bigcache.googleapis.com

Finances and job cuts within the faculty of science

...continued from page 1

money that other faculties had to contribute. According to the current Dean of Science, this situation is not sustainable and cannot be solved without reductions in staff.

Nonetheless, the fact that the Faculty of Science is still making a "profit" or "operating surplus"– and a greater one than that of previous years, according to forecasts – has led the National Tertiary Educational Union (NTEU) to label the current financial situation an "artificial budget crisis". As one postgraduate student put it, "They seem to be missing the point that a university isn't about making money, especially a science department - it is about providing the resources to undertake research, and in general, scientific research is not a profitable business."
Further objections have arisen in regard to how staff members were consulted throughout this process – not enough, according to some. According to one source, a review is supposed to be conducted before firing under-performing staff, yet in this case such reviews are only being conducted after the relevant technical staff have been fired. This has led to concerns that this may be the start of a trend where upper management makes decisions without proper consultation. One source described the additional fear that "in the current climate of uncertainty, it is not only under performing staff leaving the faculty, but also good researchers and teachers who…don't want to be stuck in an understaffed, under resourced department." On the other hand, in a meeting between the NTEU and Monash University a fortnight ago, the university maintained that "it has engaged in genuine consultation and complied with its obligations…including notifying and consulting with affected staff". At the same meeting, Monash University agreed to have an additional two-week consultation period, commencing 29 July (2011).

So what does this all mean for the rest of us, the undergraduates of science? One anonymous postgraduate has expressed concerns that "fewer academics means that more of the teaching workload is placed on those remaining. This means that people who already have incredibly busy schedules will be pushed even further, reducing the overall quality of their research, their supervision of students, and their teaching." He also believes that staff cuts will make it harder to provide sufficient resources for short-term projects, making it more difficult to find supervisors for Honours and undergraduate research projects. Some staff members have been so concerned with the process and consequences of these decisions that they have taken it to the media, resulting in reports in The Australian and on the radio. There are also petitions currently circulating, through which students and staff are expressing their opposition to the job cuts and the way they have been conducted.

Others consider the current hype to be an overreaction to a situation that is undesirable, but necessary. The Dean of Science, for instance, maintains that these changes are an important means to ensure the faculty can "prosper in the future". In a recent statement, the Dean expressed his belief that "it is critically important that we structure ourselves with sufficient discretionary income in our budget to be able to innovate and adapt into the future".

It therefore seems that we will have to wait to know for sure what the actual impact of these proposed changes will eventually be.

If you would like to find out more you can try the following sources:

- **Dean's information page:** www.adm.monash.edu.au/human-resources/science-evsp/
- **MSA education affairs page:** msa.monash.edu.au/communities/education/education-public-affairs
- **World Today coverage:** www.abc.net.au/worldtoday/content/2011/s3275424.htm
- **Article in The Australian:** 'Monash Scientists Fight Cuts', 27/7/11

5 minutes with Dr. David Lupton

Dr. David Lupton is a chemistry lecturer and researcher at Monash University. Yuji caught up with him last week to find out what he's all about.

Could you please briefly tell us what your main research interests are?
The design of catalytic systems for reactions that are yet to be discovered.

Least favourite subject at School? Most favourite subject at School?
Most favourite was mathematics. It has a precision that you rarely get in any aspect of your life which provided me with great comfort. Chemistry was fun also, but it always came second to Maths. Unfortunately high school maths and research maths are very different. Least favourite, was probably Drama. My brother was very "into" drama and I generally disliked anything my brother liked, although we are now very close.

"Read widely and try and do something that may not work. There are no prizes for discovering the obvious."

What is your fondest memory from your undergraduate years?
In my Honours year, having the realisation that you should not have an investment in the outcome of a reaction. Regardless of what happens, you should know more about the underlying principles that govern chemistry after the reaction than before. I try and remember this in my research, although sometimes you can lose sight of this.

Who is the person you admire the most?
Many, but two chemists are most notable. Prof. Athelstan Beckwith and Sir John Cornforth. Both had an incredible impact on the landscape of organic chemistry both in Australia and internationally. Both had personal challenges in their earlier life which didn't hold them back. Never make excuses.

First ever (part time) job was?
I made fudge in my kitchen with my best friend from primary school (he is now the owl hand puppet in the ABC show "Giggle and Hoot") and sold it at the local corner store.

Is it true that underneath your beard is another fist?
Chuck Norris doesn't use a separating funnel. He eats the crude, urinates the aqueous and defecates the product in greater than 95% purity by ^{1}H NMR.

What's one piece of advice you'd give to aspiring scientists?
Always do something that interests you. Remember that your mentors are here to help you on your journey, but that they won't always have exactly the same interests as you do. Read widely and try and do something that may not work. There are no prizes for discovering the obvious.

Dr. David Lupton (source of photo: www.chem.monash.edu.au/staff/lupton/)

"Regardless of what happens, you should know more about the underlying principles that govern chemistry after the reaction than before."

Getting to the other side

Dale Buckland, speaking as someone who has been there / done that, answers our questions on the science Honours program.

How/when do you need to apply for Honours? What is involved in your application?
Applying for Honours involved initially looking through proposed projects relevant to your area of science and talking to the supervisors that interest you to get an idea of what would be involved. In the case of chemistry a preference form has to be filled out containing the list of your desired projects as well as the signatures of several potential supervisors.

I've heard that it can be quite competitive, getting into Honours. Is this true? What are the requirements?
Assuming the other schools are similar to chemistry, Honours generally requires a distinction average or greater in the corresponding undergraduate units. It can be competitive, yes, particularly if you are interested in a popular Honours project. If multiple students wish to undertake one specific project, it will generally be issued to the highest achiever. There were far more chemistry projects on offer than students, however. So as long as you get the minimum marks to do Honours, there's no risk of every single project being taken by higher achievers. Having said that, I imagine this should rarely be a concern for people already doing advanced science/scholars. :)

How much flexibility do you have with your research topic? To what extent is your topic limited by the focus of your supervisor's research?
There is a bit of flexibility. During Honours you are encouraged to take research into your own hands. If you want to steer it in a particular direction you can approach your supervisor and they can advise you on whether or not it's worth pursuing. Although, it's expected that you stick to the scope of the original project.

What is the role of your supervisor? How much does your supervisor actually supervise?
Simply put, your supervisor is there to help guide you. Their level of involvement can vary from supervisor to supervisor. I had two – one helped with the overall scope of my project and the other was really helpful with the specific, hands-on stuff. A supervisor's level of involvement is often determined by how busy they are. I found it beneficial to have two supervisors because at least one was normally available if I needed assistance.

Where can you conduct your research for Honours? Is it possible to research overseas?
This depends on the department, but it is possible to do some Honours research overseas. I know of a few people in chemistry who have travelled to Germany during their Honours years and enjoyed it very much. Some areas of sciences would be likely to involve field work, too, for those who don't like to be stuck in a lab the whole time. I personally didn't investigate researching off-campus; I was happy staying at Monash to perform research.

Was there anything about doing Honours that you didn't expect?
Honours was pretty much what I expected. I can't recall any details that caught me off guard.

How does it compare to being an undergraduate? (in terms of intensity of work-load, the amount of support you get, amount of freedom you have, etc.)
Honours is very different to undergrad. Majority of Honours is research and thesis writing with only a relatively small amount of coursework. As a result the level of workload is up to the individual and how good a mark they want for their Honours. From experience, asses-

# of Honours

sors can generally tell how hard Honours students have worked and will reward them accordingly rather than just based on successful experimental results. Supervisors help provide an idea of how hard you should be working in addition to providing overall project guidance and hands-on help. Not all support comes from the supervisor, though. Other members of your research group are there to help too and usually prove to be an Honours student's most valuable resource.

What's the worst part about it? Best part?
The worst part is when experiments don't work out the way you hope, that and writing out a thesis (I'm not the best writer!). The best part for me was the social experience; making new friends, getting advice from each other and being a part of a lab group. It helps to get through the year.

What advice would you give to people going into Honours? If there is anything you could change about what you did, what would you change (any regrets)?
Make sure the project you are doing is interesting enough for you to spend a year of research on it. Also, don't go in expecting everything is going to go to plan; science can be a jerk. It's not the end of the world when experiments don't work out, just try a new strategy and write how your previous strategy was unsuccessful. As for myself, I possibly could have worked a bit harder. Oh, that's some more advice: don't be lazy!

There seems to be a big push towards doing Honours after undergrad, with more and more people taking the view that you have to do Honours to get a good job. From your experiences, and from people you've talked to, would you agree? Did this affect you at all as an Advanced Science student?
I have heard from others that it is indeed easier to get a job with Honours under your belt. Being an advanced science student I didn't think much of the decision; it was assumed that I was going to complete Honours anyway. In retrospect, Honours was a very important year and was very beneficial. For most people it would be a waste to do three years of a science degree and not do Honours because that's where the real science begins.

What now (for you)?
I began my PhD in chemistry at the beginning of this year, pretty much continuing the same research from my Honours year. However, I am currently applying for intermission to take a bit of a break from research, hoping to return with a fresh perspective.

Dale, as he appeared in 2007 when he began his Bachelor of Science Advanced with Honours.

Practical Applications of

"Hey! Wait! Don't go out! It's unsafe! Wild Pokémon live in tall grass! You need your own Pokémon for your own protection." – PROFESSOR OAK, 1995

Do you remember exactly where you were when you first played this game? When you were introduced to the magical and mystical world of Pokémon, or if you will, Pocket Monsters? I, for one, got home to find a package at the living room table. When I proceeded to open it, I could have sworn the package shone a golden ray and made that iconic musical chime unique to the Legend of Zelda treasure chest opening sequences (I also held the game above my head after I opened it from its box, where the game proceeded to rotate in mid-air). At once I was absorbed into the world of Pokémon. I could have spent hours on end walking around in the tall grass where wild Pokémon lived, and battling trainers and catching new Pokémon, and challenging the Elite Four, and training my Pokémon so that I could be the very best that no one ever was. But alas, I constantly had to compete with my brother over who got to use the Gameboy, and even then the game would find a glitch every now and then (blowing into the cassette fixed the problem most of the time, however).

16 years have passed since the first Pokémon games were released. In that time the main series of games have continued to be released periodically across all of Nintendo's handheld platforms, and it has made its way across 30 countries. Over 16 years, the Pokémon games have sold over 90 million copies (not including the latest Black and White releases) worldwide – that's the entire population of Vietnam, or over 4 times the population of Australia. In 16 years, the number of unique Pokémon species has risen from the humble 151 to 648.

This had me wondering. The motto of the original anime series was "Gotta catch 'em all." So then, in that quest to capture the wild Pokémon in order to satisfy the "'em all" condition of the above motto, exactly how many Pokéballs are mid-air at any given instantaneous moment? I did some calculations, and here are the results:

Of the 90 million plus copies worldwide, it can be safely assumed that a good 50% have either:

1) a dead internal battery not allowing for savefiles and thus voiding the owner of said game any meaning of playing the game;

2) a rusty cassette conductor preventing the game from being payable at all;

3) been thrown away by the mother of the gameowner in a fit of family feudal rage, where she has stormed into the said gameowner's room and proceeded to throw every sentimental and valuable belongings in a cardboard box to leave out on the nature strip on garbage collection day for the garbage man to collect;

4) been dropped in the toilet;

5) there is no five;

6) don't talk about Fightclub.

That leaves 50% of "playable copies." From experience, whilst growing up the usual gaming time would have been about 4 out of 7 days, for 1.5 hours a day (on an average week). That's about 3.5% of the time spent playing a computer game of sorts. However, as the average child has more games than just Pokémon, and if we assume that the average child has, say, about 5 games that is of their favourite games to play (and Pokémon is eternally in that 5 "regular line-up" of games, because let's face it, Pokémon will never grow old), then 20% of the 3.5% of the entire gaming time is spent playing Pokémon (which will be a gross underestimate, but whatever). Further assuming that of the 50% playable copies, only a further 50% of them are in the hands of a child (and/or, ex-child) capable of playing the game (generally means having the correct hand

Below: Poké ball (*Image from: http://pokemon.wikia.com/wiki/*))

-held console etc.) or are not busy doing other things in life (i.e. gets out of the house), and if you multiply this by the probability of Pokémon being played by them at any given time (estimated above), you get the number of people playing Pokémon worldwide at any given time: 157,500 people.

Right: Ash Ketchum with a Pokéball (*Image from: http://pokemon.wikia.com/wiki/*)

Mathematics: *Catching 'em all*

- Yuji Nakano

The probability of a Pokéball being in mid-air of that time is a little trickier to calculate. First assumption made is that it takes roughly 0.5 seconds from the moment a Pokéball leaves the hand of the trainer 'til it hits the wild Pokémon; we call this the Pokéball velocity (V). The second assumption is that, approximately 1.5 Pokéballs are required to capture the average wild Pokémon in the tall grass of the area through the journey of the game (using the best available Pokéball at the time); this is the probability of successful Pokéball throw (P). Thirdly, it is safe to assume that an average player would spend approximately 2 hours (7,200 seconds) playing in a particular area before moving on (after capturing all the new Pokémon species and levelling up sufficiently, and defeating the town's Gym Leader); we will call this the residence time (T). And finally, that in any given area, there will be approximately 5 to 10 new Pokémon species (if we take the average, then that's 7.5 new Pokémon species); this is called the Pokémon density (D). So the fraction of time of a game which has a Pokéball in mid-air (f) is calculated by; $f = (V \times P \times D)/T = 0.00078$

Now, given that 157,500 people are playing Pokémon at any given time, the number of Pokéballs in mid-flight would be this multiplied by the probability that at the instance in their game they are in the hear-in-mouth-moment between throwing the Pokéball and finding out whether they were successful in capturing that Pokémon;

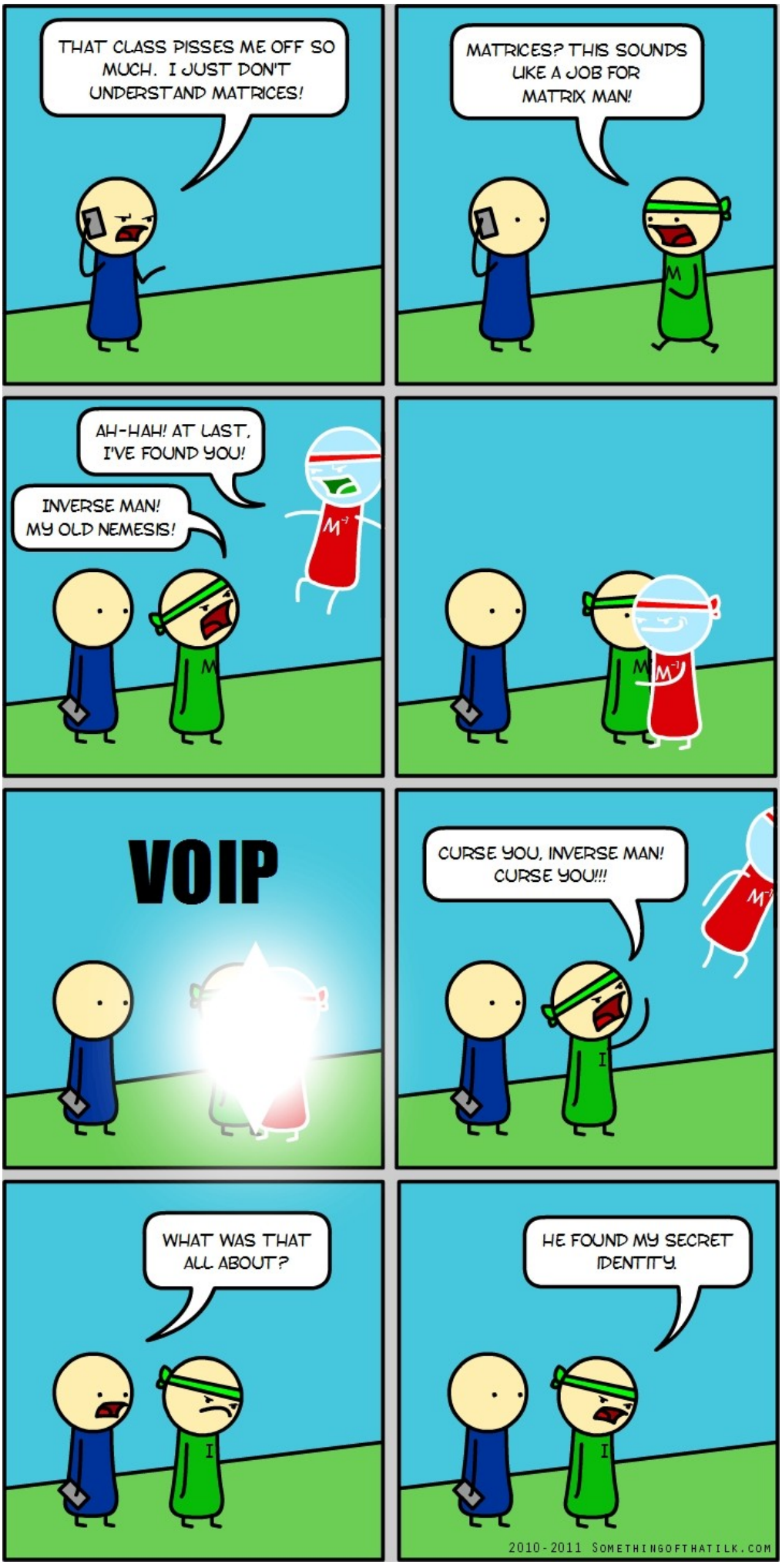
i.e. $157{,}500 \times 0.00078 = 123$.

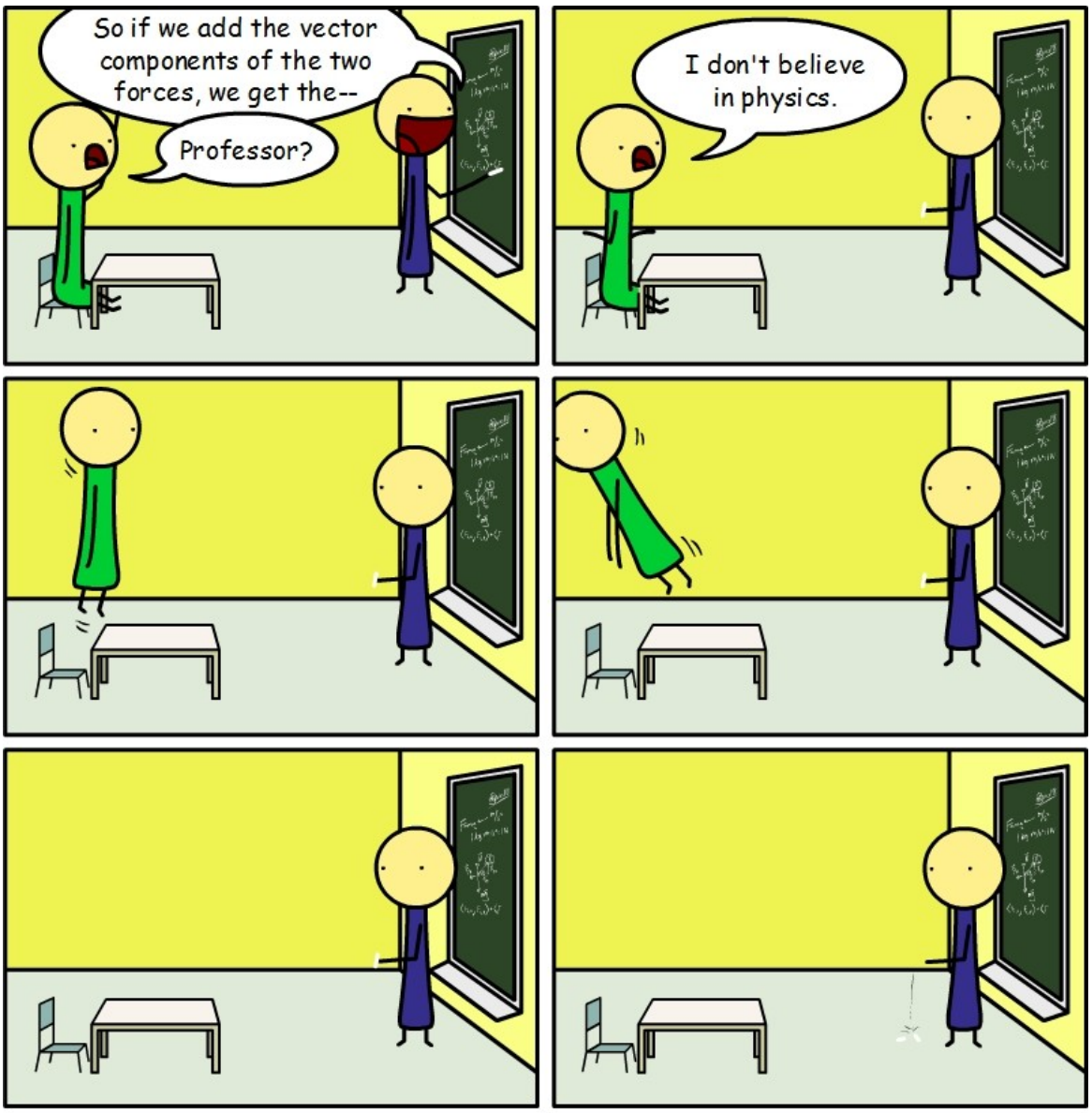
123? Surprisingly more than I thought…

In the next editorial, I will use more maths to prove that the cake is, in fact, not a lie.

Gotta catch 'em all!

COMICS


THAT CLASS PISSES ME OFF SO MUCH. I JUST DON'T UNDERSTAND MATRICES!
MATRICES? THIS SOUNDS LIKE A JOB FOR MATRIX MAN!
AH-HAH! AT LAST, I'VE FOUND YOU!
INVERSE MAN! MY OLD NEMESIS!
VOIP
CURSE YOU, INVERSE MAN! CURSE YOU!!!
WHAT WAS THAT ALL ABOUT?
HE FOUND MY SECRET IDENTITY.
2010-2011 SOMETHINGOFTHATILK.COM



Doghouse Diaries
"Kool-Aid filled Supersoakers."

Any queries, complaints, ideas, discussion material or advice for the editor?

Any content that you'd like to contribute to future newsletters (the next will be published towards the end of this semester)?

Send me an email at: aaul4@student.monash.edu