

## THE ETHICS OF CASH COWS: THE TROUBLE WITH RECENT CHANGES TO UNIVERSITY LEVEL COMPUTING EDUCATION

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### EXTENDED ABSTRACT

Computer Science has arguably become a ‘cash cow’ discipline, where income from computing students has become an increasingly large vehicle for heavily subsidising the rest of the University. As part of this, there has been a considerable increase in the amount of students taking degrees in our field, with many University’s seeking to engage in a digital goal rush.<sup>3</sup> These circumstances create a range of new ethical questions for our field. Should we prioritise the quality or quantity of students and thus future computer scientists? What is a fair balance to strike between access to education and quality of graduates? How about research: with increasing concerns about AI, shouldn’t academics in our field be able to use some of this income to conduct their own research, rather than having to obtain money from more compromised sources of income (e.g industry)? This radical reshaping of our field needs debate and discussion.

There are several fundamental reasons as to why this is likely to be a bad thing:

#### 1. Quality of computing professionals

It is positive that a new generation is interested in the field of Computing. But that doesn’t mean that all these students should be given the opportunity to study Computing, and to become professionals in our field (or likewise with Information Technology). I argue that we should be addressing a long-standing issue, namely the quality of many graduates in our field, which is already poor on average, likewise with the academic standards in our discipline.

The new model does a disservice to the best potential computer scientists of the future, whom rather than receiving a high-quality education, are taking part in an experience which is increasingly akin to a production line. The truth is that we need computer scientists who are as qualified as medical doctors, and are held to the same rigorous standards, given the increasing risk of our work to wider society. Consider the recent issues with the Boeing 737 Max, the Horizon Computer system (Wallis, 2021), or the concerns around Fair AI (Whittaker *et al.*, 2019).

What is presently happening is a race to the bottom: how much ‘income’ can a University abstract from our discipline?<sup>4</sup> This is not good for society at large. We need to be *increasing* the quality of computing professionals. The competence of computer scientists is at least as important as for lawyers, psychologists and architects (and so forth), yet it is a wild west

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<sup>3</sup> <https://www.bcs.org/articles-opinion-and-research/university-computing-departments-met-with-record-applicant-numbers-as-ai-hits-the-mainstream/>

<sup>4</sup> At my own faculty at Monash, about \$100m each year is going to the centre of the University. We receive about \$1.5m of ‘income’ per faculty member, the vast majority from student fees. This is a problem.

with little or no regulation, and inappropriate credentials: see (Kirkham, 2023) for an illustration of some of the damage this causes.

Unfortunately, there is no enforced minimum. I would argue that being able to program reliably in line with appropriate software engineering practices, have a reasonable level of mathematical ability, having the skills to solve human factors problems and acting as an ethical professional would be a conceptual minimum. There are many graduates (and even faculty members) who lack at least some of these core skills, and in many cases, perhaps all of those skills. This is not a good thing.

2. The interests of students

Many students can learn how to program to the standard of being able to secure employment by taking a much shorter (and more focussed) course. They do not really need a degree and should not be duped into doing one. Yet for the weaker students who are being recruited (so the University can 'cash in') the degree will only offer them the same opportunities as these shorter courses: it is difficult to see how this can be in the interests of those students. The stronger students lose out too, because they are getting an increasingly weaker educational offering, rather than the experience that they should be getting, namely being mentored directly by leading computer scientists.

An unhappy – and perhaps representative - illustration of what has happened in our Faculty at Monash, as alleged by the NTEU, is below:

**How are FIT students affected by Monash's cuts?**

**Why we'll be striking...**

*Give me the numbers*

Six years ago, a casual tutor who taught one unit to 108 students (6 classes x 18 students) could expect to earn \$1242 a week. Tutors were paid \$46 p/h for 27h of work.

Now, a casual tutor who teaches the exact same unit to 180 students (6 classes x 30 students) can expect to earn \$742 a week. While the rate per hour has increased with inflation to \$53 p/h, tutors are only being paid for 14h of work. Monash FIT has done this by reclassifying tutorials as "Applied classes".

Current minimum wage in Australia for a full-time worker is \$882.80 per week; or \$1103.50 once casual loading is applied.

Casual tutors are no longer permitted to teach multiple units. Most casual tutors are only offered 3-4 classes a semester. Most casual tutors only get work during semester. Most tutors in FIT are casual tutors.

Experienced tutors literally cannot afford to stay.

Year	Tutoring (2018)	Teaching (2023)
2018	\$1,242	\$742
2023	\$742	\$742

**How have classes changed?**

Six years ago, almost all small-group classes in FIT:

- + were led by a single tutor who knew your name, and taught to your strengths and weaknesses
- + had no more than 18 students
- + finished no later than 8pm
- + were led by a mixture of first-time tutors and experienced tutors

Now, "small-group" classes in FIT:

- can be as big as 60 students with up to 4 tutors
- tutors no longer recognise you by face, let alone by name
- finish as late as 10pm
- can be cancelled as late as week 3, and you can be forcibly reassigned to another class
- are led by your peers, as experienced tutors can no longer afford to stay in teaching

**How has teaching changed?**

Six years ago, your tutors were expected to:

- + be specialists in their material
- + spend time thinking about how to present their material
- + support you in and out of the classroom
- + think about you as a student and a human

Now, your tutors are being explicitly told to:

- not review the material beyond what is possible in 30-60mins
- not create lesson plans tailored to their class
- not provide you with professional or academic references when requested
- not read or respond to your emails
- rely on the solution sheet when answering questions

Under these conditions, tutors can't teach: at best, we can babysit.

**... When we'd rather be teaching**

*What can YOU do?*

SUPPORT your tutors and lecturers who choose to go on strike. TALK with your peers about why the strike is happening. ATTEND the rallies that will be held on campus! we need the university to see our numbers! TELL the MSA that you care about staff working conditions.

BE AWARE: SETU feedback is not a useful way to address university and faculty-level decisions.

Email MSA: [msa@monash.edu](mailto:msa@monash.edu)

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It is worth also considering consumer law. In Australia, it is an offence under the Australian Consumer Law (at Paragraph 151) to make "in trade or commerce [and] in connection with the supply or possible supply of services [a] false or misleading representation that services

are of a particular standard, quality, value or grade". The quality of education has degraded to such a point that provisions of this nature are likely to be engaged for any academic who promotes these courses, even in leading University's, not least because today's Higher Education operates in 'trade or commerce': see for example the discussion of this in Mbuvi v Griffith University [2014] FCA 1323.

3. Respect for our discipline

Allowing our discipline to be treated as a cash cow shows a sustained lack of respect for our research work. We are treated like an inferior discipline, whose function is to suction in money to the University. Yet surely it matters that we ensure the quality of the academics and the research conducted within our field? If not, then we are not a coherent field, nor one which can be respected or relied upon. The truth is that a field which does not operate based on merit can have serious consequences for wider society, especially where there are increased risks arising from errors made by academics, or poor-quality work (Abbot *et al.*, 2023). This is a major problem for our discipline.

4. Academic Independence

A major contemporary concern is the connection between 'big tech' and computer science research, perhaps especially in respect of AI. Unfortunately, most research lacks independence. This won't change unless Computer Scientists have control over their budget and do not need to go cap in hand to people in industry (Kirkham, 2022). This means keeping our own money within the discipline, rather than allowing it to be abstracted to fund other central administration. The present expansion risks nearly all academic jobs in our field, as there is always the risk of another 'dot com' boom and the cuts that go with that. It also means respecting quality over quantity: reducing the number of students and not massively growing the number of faculty for the sake of it would be positive, as would increasing the amount of money each academic staff member can autonomously spend.

These are just *some* potential concerns. The starting point is that we need to recognise this problem: treating computer science (and information systems) as 'cash cows' is harmful to society. It therefore goes against the core mission of the University, whether you think the telos of the University is truth, or social justice. It is bad either way: it reduces the truth quality of our work, and has a negative social impact, both on students and wider society. With the increasing recognition as to the importance of the independence of our discipline, this is an opportune time to act and to capitalise on these concerns.

Fortunately, there is much we can do. The reality is that much of the expenditure in Universities is unnecessary, serving the interests of an administrative class who is abstracting resources away from the front line (Ginsberg, 2011). We are perhaps uniquely positioned to point out this waste and propose alternatives. Automation and carefully designed interactive systems can be used to remove a considerable amount of administrative activity.

We can also actively discourage students who are weak from taking our courses, making it clear they are not up to the standard. It is possible to insist on assessments that only 'pass' students who are strong computer scientists, and thus raising quality (whilst reducing the number of students overall).

Our professional bodies could take active role in challenging any cases of abstraction and insisting on ring-fenced research allowances for computer scientists. They should be a lot more careful in accrediting degrees, insisting on appropriate staff to student ratios in respect of competent academics in the field (i.e. those who have research expertise). We need to grasp the nettle and fight to defend our discipline. For us to fail in this regard would be greatly damaging to wider society.

**KEYWORDS:** Academic-freedom; Cash-cow, education; professionalism.

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