Board in the office.

Though university buildings can vary tremendously, from weathered mediaeval stone, to Victorian brick, to sixties plate glass, to seventies decaying concrete, to twentieth-century 'Wellcome' hollow towers, and even labs can very hugely from rabbit warrens to vast open-plan shared spaces, academics' offices have a surprising amount in common. Their most obvious feature is probably the mess of papers that always seems to be present, with journals and re-prints stacked in the tottering towers of a 'vertical filing system'. Then there are the bookshelves, typically just too small to hold what they need to, so volumes end up being stacked horizontally on top of the books already in the conventional vertical arrangement. There is usually something lab-ish in the office that really ought not to be – an intricate part of microscope anatomy, for example. There is often a black- or white-board covered with scribbles, almost always overlain on previous scribbles that were not quite wiped off. And a kettle, coffee and collection of dodgy-looking mugs is almost always to be found somewhere under the papers.

Another near-universal feature is a pin-board somewhere near, and usually directly above, the room's main desk, with notices and scraps of paper pinned to it. I often see these when visiting other people's offices and, especially when I am left alone in the office waiting for then to come back with marking/ data/ a washed-up mug, I cannot help looking at what is there. Not private-looking notes, of course, but photos of pets, cartoons cut out of papers, sketch graphs and photographs of cells. There are often lists of seminars, and phone numbers for the editors of key journals, and discount codes for favourite suppliers. A few people have reminders of time-zone differences, useful for planning phone calls. Reminders of keyboard shortcuts for computers are common, as are passwords to various university systems (really!). One person in London has a 'List of Bastards' on the pin-board, written in pen and continuing as vertical text added to the right of the original list once that original reached the bottom of the paper. Another has an impressive collection of fast food outlet phone numbers. I have often wondered to what extent a snapshot of someone's pin-board might be a valuable clue to their character and priorities. That would be a novel interview question – *Please tell us what is on your pin-board* – indeed I might even try this question in a real interview (with a 'but please don't tell us about any photos that would inform us of your home life', to keep the legal folk at HR happy).

So, what is on my own pin-board, in front of me now? Some things are prosaic, and reveal nothing more about me personally than the day-to-day focus of a typical academic scientist. There is, for example, a Gantt chart showing the contract times of all of my lab's grant-funded staff and students: there are currently seventeen of them, and it's important that I know exactly when the tenure of each expires so that I can plan with them either an application for a new grant to allow them to stay, or a strategy for moving onwards and upwards. This chart is prominent. Under it is a list of the internal accounting codes for the eleven grants we currently hold, and a green-amber-red code for whether each grant is currently under, on or over-budget, so that I can allocate spending for generic lab consumables to keep all properly balanced by the time they expire. Next to those is a list of publications on which we are working, and any deadlines, and next to that a similar list of grant applications being worked on or submitted and awaiting evaluation, together with deadlines or expected decision dates (there is usually a lag of 6 months or so between submission of a grant application and getting a decision; long enough to lose track, in a busy lab, without the reminder).

Also pinned to the board is an idiot's guide to the duties of a PhD internal examiner, an idiot's guide to depositing manuscripts in the university's open access repository, and an idiot's guide to depositing data in our Datashare system. These are accompanied by a list of phone numbers for people to help me when I prove to be a bigger idiot than the authors of those guides expected. There is a copy of the 'Dimensions' of the 'UK Professional Standards Framework' for higher education, against which I am supposed to judge applications for formal teaching awards (you really don't want to know!). There is also a small piece of paper with a Linux command that I need to type into the terminal of my server when it restarts, to get it to adopt the correct screen resolution: I can never remember the exact syntax without this prompt. There is also a copy of the train time-table home, with a very prominent 'LAST TRAIN' note inked in red, pointing to the 23:03. There are some data images, photographs (yes, they really are that old to have been taken on film) of some results I got from an experiment many years ago, that I have never understood, and that I keep up in the hope that one day the penny will drop. Then there are some more personal things, such as a magazine cover that happens to feature my 74 year old boat, moored up at a rural wharf in Wales, and a beautiful drawing made by Fran, an artist friend, of Katie and me dancing the Lindy Hop. Scattered amongst these are various invitations to college garden parties later in the summer (I don't know why I pin them there – I seldom have time to attend). Finally, and I was going to miss this out in order to hide my vanity but decided to add it in the interests of honesty, there are some e-mails written by undergraduates to say how much they enjoyed my courses. These are there as a kind of

spiritual antidote when I am dealing with complaints about the very same courses from students with a very different view, generally people who want to be spoon-fed material to regurgitate in the exam, which is not something I do.

People who know the lab notice-board outside our rooms, in the public corridor, probably expect my own pin-board to be covered in cartoons and jokes, as the public one is, but in fact there is only one cartoon. This is from Jorge Chan's *Piled Higher and Deeper* series. It made me laugh when I saw it, but I keep it one on the notice-board not to amuse me again but to remind me not to fall into the common form of professorial unreasonableness to graduate students that the cartoon depicts. Instead of cartoons, there are quotations. These, like the e-mails from undergraduates, are there as a kind of medicine for the mind.

The most blunt of the quotations comes from Gregory Retsko (Nature 468, 1003), and is there to remind me that my job as a course-organizer is to design a course that will educate and develop students, not just leave them with their existing view of the world by giving them what they ask for. It says, bluntly,

> *Students have neither the wisdom nor experience to know what they need to know.*

Then there are quotations that are simply good advice. One that I met many years ago, and made a vast difference to my success rate in applications for research grants, is the statement made by Simon Sinek in a TED talk;

> *People don't buy what you do, they buy why you do it.*

I try to keep this in mind whenever I draft another application.

And, talking of why we do it, there are some quotations to remind me, on a day when nothing has worked in the lab and students are being obstreperous and administrative committees are throwing 'urgent – response needed' e-mails down the ethernet as if they are testing bandwidth, why I am here:

> *To live and not know whey the cranes fly, why children are born, why the stars are in the sky. Either you know why you are alive or its's all nonsense, it's all dust in the wind.*
>
> Chekov, The Three Sisters (Trans. M. Frayn).

Some of these quotations also help assure me that, in these times when research funders are obsessed with 'impact' on society, just finding out is still reason enough for what we do. My favourite is from the inimitable Richard Feynman;

Science is like sex. Sure, it may give some practical results, but that's not why we do it.

That quotation used to live on the public noticeboard in the corridor, but passers-by added other similarities between various aspects of science and sex, all of them too graphic to repeat here, and eventually an offended cleaner (we think) took it down.

One quotation that has been on my noticeboard for nearly twenty years now is something to which that any anatomist will relate;

> *Men that look no further than their outsides think health an appurtenance until life, and quarrel with their constitutions for being sick: but I, that have examined the parts of man and know upon what tender filaments that fabrick hangs, do wonder that we are not always so; and considering the thousand doors that lead until death, do thank my God that we can die but once.*
>
> Sir Thomas Browne, Religio Medici (1643)

It is there partly as a reminder that, however familiar we think we become with the human body, it should never stop being an object of awe.

One of the things I find really hard to cope with, in contemporary science, is the arrogance and hubris that is so ubiquitous in scientific presentation and writing. People write, speak and act as if we almost know it all, and as if their own work is some kind of crowning glory, yet in reality the few centuries of science that we have behind us have taught us only a small amount about a very mysterious world. We have no idea what 90% of the universe is made of, we can write equations for quantum mechanics but frankly do not understand it, we have precious little knowledge about how life arose, or how common it is. We know almost nothing about how the 'I' that each one of us has emerges from the neuro-glial mush that is our brain (assuming it does arise from that), and we cheerfully use words like 'complexity' of biological systems without having any clear idea of how we might actually measure it. None of this means that science is not worth pursuing – but it does mean that we could follow our pursuit with a lot more humility, both about our own powers and also the limits of rational deduction . Some quotes on my pin-board are about our limits:

I've studied now philosophy
And jurisprudence, medicine
And even, alas, theology
All through and through with ardour keen!
Here now I stand, poor fool, and see
I'm just as wise as formerly.
Am called Master, Doctor too,
And now I've nearly ten years through
Pulled my students by their noses to and fro
And up and down, across, about,
And see there's nothing we can know.

Goethe, prologue to Faust.

Ars longa,
vita brevis,
occasio praeceps,
experimentum periculosum,
iudicum difficile.

Hippocrates.

Finally, there are two quotations which seem relevant to the process of doing science. One is a reminder, rather like *On Westminster Bridge*, to remember to enjoy the journey and not just fix on a destination. It works for me particularly because I climb mountains in my spare time ('climb' in the sense of walking up, not in the sense of dangling from ropes):

You climb the mountain in an equilibrium between restlessness and exhaustion. Then, when you are no longer thinking ahead, each footstep isn't just a means to an end but a unique event in itself. This *leaf has jagged edges.* This *rock looks loose. From* this *place the snow is less visible, even though closer. There are things you should notice anyway. To live only for some future goal is shallow. It's the sides of the mountain which sustain life, not the top. Here's where things grow.*

Robert Persig, Zen and the Art of Motorcycle Maintenance, p204.

The final quotation is more to give comfort when Nature is guarding her secrets even more closely than usual. It comes from Donald Crowhurst, and was written alone on the ocean, when that brave, lonely sailor was losing the balance of his mind, though not, I think, of his values. If my eyes fall on his words in a quiet moment, I sometimes still find myself having to blink more frequently than usual;

> *Save some pity for the misfit, fighting on with bursting heart;*
> *Not a trace of common sense, his is no common fight.*
> *Save, save him some pity. But save the greater part*
> *For him that sees no glimmer of the misfit's guiding light.*
>
> Donald Crowhurst, written in the ship's log of *Teignmouth Electron*.

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