

This diary is of a period in October – December 2010 when Ro went on an extended trip to Australia and Brazil. Until she left for Brazil and would not be reading email, I wrote down my doings each day, together with a few small nuggets from the papers, radio, etc., written in the form of “daily bulletins”.

25 October

Diary section: I went to Whitechapel with a stick of photos. I have earned one enlargement, which I will take in tomorrow when I go to pick them up. Still no food waste bags at the idea store.

Then to work, to read email and do various essential jobs. One of the emails was from Graham Farr: we have got our grant, although they trimmed the budget a bit – don’t have details yet. Told Dave straight away.

I went for coffee. Shahn was there, and before he left Boris arrived, so I sat there chatting until 12:30. I have a slightly better idea of what the directors are thinking about. Shahn is terribly concerned with how people are labelled, but when challenged on this, claims it is just for the sake of putting proposals to the centre. At least someone has persuaded him that “Discrete Maths” doesn’t just mean “Baby Maths”. (But does he really believe it?) Boris was very willing to listen to what I have to say. It seems that the directors still listen to me as long as I keep off the vexed topic of Financial Maths.

At lunch I skimmed the Guardian. There was an opinion piece contrasting the present corruption in Tower Hamlets with the former Poplar borough, which was one of the best-run boroughs anywhere and had a proud history of standing up to central government on behalf of its citizens (and winning). Depressing.

In the afternoon I set the next group theory sheet, saw several people (including Linh Nguyen who came to invite me to her graduation at Kings (she hasn’t got her official results yet but the course tutor has said that she will certainly get a distinction – and that Volkan Yildiz will also get a distinction). Then went down to tea before the seminar. There was a letter on expensive stationery marked Private and Confidential: it was the Principal. Starting out with the usual stuff about how difficult times are, he went on to say that College were giving me a 1K increment anyway. So that’s nice.

Matt gave a brilliant talk as usual, mostly on the blackboard except for some complicated diagrams which he gave us both as handouts and on the screen. Only small fault: too much material!

Then home after a quick drink; the Group Theory coursework has to be marked.

Questionnaire section: What do you want done with your mail? Should I open it and deal with anything urgent?

Magazine section: A question of language. The spud-faced nipper has resigned with Manchester United. This is the opposite of “resigned from Manchester United” which is what everyone expected him to do. Do you think he just got confused?

26 October

Diary: Beautiful orange sky this morning. The clocks go back late because there are five Sundays in October, so it is dark in the mornings this week. Next week will be better – but dark early in the evenings! But it was “red sky in the morning, shepherds’ warning”; by the time I went out a cold rain was falling.

The photo shop had the pictures; I left the Nilgiri tahr to be enlarged. The idea store had food waste bags as well, so I took a roll.

At work, there were some time-consuming emails to deal with; a title and abstract from Robert Woodrow (we’ll have a double-header on Guy Fawkes’). I had a nasty moment when I couldn’t find the RAB files for AS II; it turned out that I had put them in the Group Theory directory by mistake . . .

Then I discovered that I had left the Group Theory coursework on the sofa, so I went back to get it, getting a sandwich on the way back.

Sam Tarzi (hard work) and Adam Bohn (ideas flying around) filled up the afternoon until time for the Group Theory class. Heiko finished a few minutes before the hour for a change, so we started and finished promptly. Amir had some AS II questions, so I answered those as well.

Then an appointment with DKA about the discrete mathematics bid. He waffles around a bit, but is much easier to deal with than Shahn. One thing I learned is that we have “sold” the financial maths plan to the Economics Department; they will make the major commitment and shoulder most of the risk (and take most of the money if it is profitable).

When we had finished, I sent some notes to Celia for tomorrow, finished off a couple of things, printed out various papers I need to prepare talks (I am giving four different talks in the next week, only one of which is prepared), and went home.

The weather was by now so unpleasant that I decided not to walk home via Whitechapel but to go directly. I fried a piece of chicken and had it with vegeta-

bles, and then spent the evening on talks.

Magazine section: Someone has brought out a “Sponsored Tube Map”, subtitled “A missed fundraising opportunity for TfL?”. Examples of the proposed new station names include Caledonian Spring Road, Ambrosia Rice Pudding Mill Lane, Old Spice Street, London Pride, B&Q Gardens, iPaddington, Basildon Bond Street, Fruit and Nutting Hill Gate, Dolcis Hill, Zurichmansworth, Canada Dry Water. Our local station is Stepney Green Giant.

Oddity: The council’s food waste bags are now green. I wonder why they didn’t do that in the first place?

27 October

Diary: To Cass Business School for session with Celia. I took my camera, to photograph London’s biggest heron, and to take some autumnal shots in Bunhill Fields.

On the way, I passed a geezer with a bent coathanger eyeing up a parked car. He gave me a sheepish grin as I passed, and moved away, but I expect he went straight back to it after I was gone.

We had a good session. We talked for a while and agreed a heuristic for the frequency allocation problem in one of Celia’s variants, where there are “co-sited” transmitters. Then Rob Schumacher came in to tell us what he has been up to, and got very interested in the diagram on the board; from the diagram he invented a large part of our heuristic off the cuff. He does seem to have found his feet already!

On the way back, I stopped at the photo shop to pick up the goat. I went into the Co-op looking for lunch, but the queue was so long that I went to the student shop instead. I just had time to bolt down my lunch before the network coding seminar.

Max did a good job of explaining the connection between the guessing number of a graph and whether the network coding problem can be solved on a slightly different graph. But the explanations took him longer than he had anticipated, so he will continue next week (but I won’t be there; I will be at the Old Codgers).

I went back to my office and started work on preparing the talk for Royal Holloway on Monday, when there was a thunderous knock on my door, and there was John Bray saying “Are you coming?” It turned out that he had sent me an

email just after I went home yesterday asking me to accompany him into the lion's den (not the big lion, only Boris) as he was being carpeted. The problem is a blind student in the first year. John had been asked for source code for the lecture notes because the student "only has facilities for HTML and Word on his computer". John claimed not to have had a relevant email from Francis. This is absurd anyway because, firstly, John had had lengthy discussions with the blind student's helpers, and had been told that the PDF files are perfectly adequate; secondly, John is typing up Leonard's handwritten notes, which is a slow business because of all the diagrams; and third, because even MicroS**t Internet Explorer can read PDF files, so what is the problem?

The real problem, it turned out, was elsewhere. John had reacted negatively to this stupid request, and fired off an email in which he was very rude about administrators, comparing them to dead wood, not noticing that the email was going to most of the "administrators" in the department. They were, understandably, quite upset. I told John that he had better apologise to them, which he agreed to do. Let us hope it blows over.

So I went back, read some more emails (including no less than four from my favourite person in Adelaide – you might like to re-punctuate that!), finished a draft of a talk for Royal Holloway, and went home.

Private Eye had arrived, so I carried it off and read it in the bath. Then I ate, and wrote my talk for tomorrow, and looked over my lecture notes.

Magazine section: A couple of nice gags in the Eye, including the PM saying "It's the Big Issue Society!!", and with the Chancellor greeting a Halloween trick-or-treater with "Stick or carrot?" The cover, as I suspected, makes fun of the recent incident (which you may have missed) when a British nuclear submarine struck a rock and ran aground. Be very afraid!

Oddity: (You may have seen this.) The psychic octopus which predicted the result of the football World Cup on German television has just died. Already the conspiracy theorists are claiming that it actually died in the summer, two days before it supposedly made the prediction.

28 October

Diary After breakfast, I started on my talk for the Old Codgers. Went into work and continued with it. Aylin is away this week at her boyfriend's graduation so I

got an hour extra to do that, and to make a start on the next section of group theory notes (and to do email: Vijay wants me to enlarge on the answers to the interview questions the students asked me, and sent me a copy of the existing file – it has two more photos in it, which may not squeeze into the India album now . . .)

Lunch on my own, but Shaun showed up just before I had to go to lecture.

Lectures went well. Got through the further material on group actions up to Iwasawa's Lemma without too much rush, and even put in some examples that were not in the notes. Not too much noise from the drilling.

An email from Hugo offering spicy Mexican lollies, but by the time I got to the common room they had all gone.

When I was going back to my office, I (nearly) ran into Basia, who wanted to know if Rosemary was going to be back by the week after next, since she is down to invigilate her test. I said No; Basia will tell Vivien so. I am down to invigilate John's test, just what I don't need: my lectures will not be stopping in reading week.

So to my algebra colloquium talk. I had agreed at short notice, since there was a gap in John's programme, so I talked about some old stuff I'd done with Sam Tarzi. I'd sent John an abstract, but he had only managed to put the first half of it on the webpage; I teased him about this. (After the seminar, he was a bit late coming to lead us to the bar; it turns out that he was correcting this: ever the perfectionist!) I spent 50 minutes on the first part, and was tempted just to stop, but decided to just say enough to give people the flavour of the second part too. The talk went over surprisingly well given its genesis, with three people from Imperial, two from Royal Holloway, and Anton Cox from City; there were lots of questions.

We went to the SCR bar and had a very pleasant drink and chat. But there was a quiz starting up. John and Matt were keen to stay, but I made my excuses and went off home. (They made a bet about a disagreement they'd had earlier on which English king had died from eating jellied eels: Matt said Henry I while John claimed it was Henry II.)

I cooked a chicken breast in sauce with some vegetables, and made a start on an Araucaria crossword while it cooked: easy to get a few clues but I hit a wall just as the dinner was ready. After dinner, I wrote out solutions and marked the homework for AS II. Both Nicky Cleaver and Amir Foley had got 100, with excellent, clear and thoughtful solutions; I was delighted. The other two had not done so well, though not disastrously. Clearly it was worth the effort of giving this course!

Magazine section: Neill's book is published today. I found one favourable review on the web, together with an interview with the author. Neill says he is dreading the first bad review. Amazon emailed me to say they have sent my copy, and it should arrive about the middle of next week.

Oddity: The news this morning had an item about how some clever scientists can use a computer and brain scanning equipment to find out what people are dreaming about, referring to an article in Nature. A quick scan through Nature showed no such article.

29 October

Diary: Busy day. Into work in time for office hour at 9:30 – fortunately nobody came. Fuad came at 10, so we talked about permutation codes and I explained Robert's work to him; next week we will try to get down to a specific problem.

At 11 I met the AS II students. Only Amir Foley and Michael Gregory came. They wanted examples, so we worked through the group of upper unitriangular 3×3 matrices over the integers mod p (a group of order p^3), working out its centre and the number of conjugacy classes with minimal "bare hands". They wanted me to go through the proof of Sylow's Theorem, so I went through the proof in the notes, and then showed them Wielandt's proof.

I got back to my office in time to see Harcharan Singh, another of my waifs and strays – he did a maths degree here some time ago, and now has got interested in number theory, is doing a Masters at the Open University (and getting stunningly good coursework marks), and is trying for Oxford. He had a new number theory book which he likes, and didn't have many questions.

I got a sandwich from the students' shop, and came back in case Saad Arshad came, which he did. He has started reading on his project, and has produced an intelligent summary of what he needs to do. We talked about homotopy for a while, and what it means for a space to be contractible.

Then Matt and I had to interview a PhD applicant. Unusual in a couple of ways: first, he is deaf (he can speak OK and lip-read a bit but it was quite hard going); and second, he is currently enrolled on a PhD at UCL (in computer science) and hating it, wants to do real mathematics. We asked him to prove Sylow's First Theorem, and he came up with a proof which was new to me (or, if I had seen it, I'd forgotten), which I will now sketch.

The proof is by induction on $|G|$; starting the induction is trivial, so suppose

it holds for all groups smaller than G , with $|G| = p^n s$. Write the class equation: $|G| = |Z(G)| + \sum |C_i|$, where C_i are the non-singleton conjugacy classes. Now divide into two cases.

Case 1: Some $|C_i|$ is not divisible by p . Then the centraliser of an element in this class is divisible by p^s , and by induction there is a subgroup of order p^s .

Case 2: Every $|C_i|$ is divisible by p . Then $|Z(G)|$ is also divisible by p . Take an element of order p in $Z(G)$, factor it out, and use induction and the Correspondence Theorem.

Then I had to go and see the AS II students again. The same two showed up. They thought that a problem sheet with only two questions meant that the questions were going to be hard, but after a brief discussion realised that this was actually an easy sheet. Michael came up with the group we had discussed in the morning (with $p = 3$) as an example for order 27. Then we talked about various things: I told them the proof of Sylow I had just learned, we talked about groups of order 8, the quaternion group, and hence the quaternions, spinors, and other strange things.

I went to the common room and found just one of Hugo's lollipops there, so I took it. Interesting, but I don't think I am really a fan yet.

Then the second of my four talks. There was a big crowd, despite it being algebra in a combinatorics seminar. Lots of good questions: everyone sees it in their own way. Bill wanted to know the complexity of finding a transversal generating the group; Mark wanted to know the probability of generating.

We went to the bar. They had threatened (or promised) a Halloween party, but it hadn't started, and the place was remarkably quiet. I left well before the music, and went home to wait for Neill, who arrived before 9, with a very heavy bag containing thirty copies of his book which he hopes to shift. (He gets about a pound for each copy sold in a bookshop or online, but five pounds for each copy he sells personally.)

Oddity: During the day I had an email about PubLists. The actual message was five lines long, in HTML so I couldn't read it without saving it; but the whole email was 1700 lines long, almost all of them addresses (mostly silly addresses). If I had been a spammer, I could have had a fine time. This is the standard of our administrators: John is quite right (though unfortunately I can't say so).

Talking of stupidity, I had expected better of Richard Nelson than an email I got today. He needed either PDF files or links to the papers we are submitting. I sent him the DOIs. He seemed to think this was not adequate. I am afraid he has

gone over to the other side.

30 October

Diary: There was a party out the back last night. It started getting really noisy about 4:30, and I didn't get too much sleep after that.

Up bright and early. We had a quick breakfast, then I walked to Limehouse with Neill, to remind him of the way and help him with all the stuff.

It was a glorious morning: the early light on the cobblestones and plane trees in Stepney Green was lovely, and there were stunning colours in St Dunstan's Churchyard. On the way back, the goats on the farm were having mock battles, rearing up and then crashing their heads together as they came down; and a couple of squirrels were playing tag on the fence. It was almost like spring.

I decided to go for a walk, starting in Hertford, so I walked to Liverpool Street for a train, catching one by the skin of my teeth. On the way out, Sonia said, "The next stop will beware", but perhaps I mis-heard her, since later she said "We are now approaching . . . where?" followed soon after by "THIS is where!"

I headed south on the Hertfordshire Way. To my annoyance, a couple of miles out of town, after I had slogged my way along a narrow muddy lane, I came to a big notice telling me that the path was closed a mile ahead for six months for bridgework, no alternative route, pedestrians strictly forbidden. They admitted that the closed section was only thirty yards long; I was tempted to chance it, but decided that since there was an alternative (involving not too much backtracking) which I had never seen, I would take it.

This is a disused railway line which used to run from Hertford to Welwyn and is now a very nice walking track.

After I turned off the disused railway and headed south, there were more annoyances. The path went through a landfill site, where it was a bit churned up by big lorries. Then I got lost (I came to a junction, where there were half-a-dozen arrows pointing one way and none the other, so I let my better judgment be overruled), but got back on track without too much trouble. By this time I was quite hungry, having had an early breakfast, so I headed for Little Berkhamsted, which had a pub marked on the map. This involved walking on a narrow road with hedges on each side, no verges, with a lot of traffic, all ignoring the 30mph speed limit. The pub, of course, turned out to have closed down – there was still a sign saying "New menu now available", but there were builders spraying stuff around and no sign of life. So I headed on to the next pub, at Newgate Street,

getting briefly lost and nearly mixed up in a paintballing site. This pub was open, and very friendly, though the food was none too great.

A heavy shower came over while I was in the pub, and another in the afternoon just before I reached the Loop; it made one of the brightest rainbows I have seen for many years, but it also made the clayey paths in Enfield Chase very slippery. I arrived at Cockfosters in daylight and decided to stop there. Unfortunately, the Piccadilly line goes to Arsenal, where there had been a football match, so the train got absurdly crowded.

I had a relaxing evening until Neill got home about 9:45.

31 October

Diary: Another party out the back, but not as noisy and at a more conventional time. I went straight to sleep; I was woken by loud laughter a couple of times but went straight back to sleep afterwards.

The clocks went back, so no hurry getting up. We breakfasted and Neill went off to his convention. I finished writing my talk for the Old Codgers. It is in memory of David Daykin, and I will refer to him, but I will also refer to Dima Fon-Der-Flass; I hope this won't be thought improper.

I did some more work too, but must confess I fell asleep sitting in the armchair.

At lunchtime I went out and reconnoitred the way to the Morgan Arms, to check that they were doing food in the evening. I have never walked past Tredegar Square before; it is lovely there, and the autumn colours were really at their finest. On the way home I got a loaf of bread from the Co-op for my lunch, so fresh that it disintegrated as I cut it.

Neill came home about 5:30, absolutely zonked. The combination of his cold, the effort of spending two days on high-pressure salesmanship (which doesn't come naturally to him), and the let-down at the end of the event had really drained him. We set out for the pub, where there was bad news. First, they had been unexpectedly busy earlier in the evening, and several dishes from the rather limited menu were off. Second, Neill was almost too tired to eat, and certainly too tired to drum up any enthusiasm for anything. Third, Hester, when she arrived, found that she could eat almost nothing of what they had left on the menu, and had to settle for welsh rarebit in the end. Neill had roast beef, and eventually finished it off, though it took him a long time.

Apart from that, we had a very pleasant evening; I put them both on the Central line at Mile End, and went back to put the clocks back and then sleep. Big day tomorrow.

Social media: Neill had a quote which he repeated: “Twitter is for people who are not your friends, but should be; Facebook is for people who are your friends, but you really wish they weren’t.”

Hester had just seen the Facebook film; Neill had seen it earlier. Both of them said that it was better than one would have expected.

1 November

Diary: I was awake early, and had time for a bath before breakfast. It was a damp grey morning (though it fined up later). I went in to work for the morning; I got various things done including the solutions for the group theory problem sheet and ordering next year’s calendar.

At lunchtime I set off. I walked down White Horse Lane to the Thames Path and along that into town, over London Bridge and on the south bank to Waterloo. The building works at Blackfriars had forced a big deviation from the riverbank at that point; the canopy over the platforms is built but I couldn’t get close enough to see much.

I bought a ticket, for the vast sum of £2.70, and had a sandwich before getting on the train. A quick and smooth journey, lovely colours everywhere. At Egham, as always happens to me, I set off in the wrong direction. You would think I would know the way by now!

Ruediger Schack was in a meeting when I arrived, so I talked to Peter Wild for a while (he has taken early retirement but has been asked to take over the MSc administration for a while for a colleague on compassionate leave), and then went to the common room for tea. Lots of friends came, from oldies like Richard Walton to Fanis Alexoudas who is doing a PhD.

At 5:15 we went over to the foyer of the lecture theatre. There was a lecture going on, so we couldn’t set up the kit; but they had very nice pastries. There was some disagreement about when the lecture should start; the web page said 6, but an email had gone out saying 6:15, and it was decided that they had better stick to the later time.

The large lecture theatre was pretty full. The computer and data projector worked fine but the batteries in the radio microphone were flat; someone went off to get new ones. I started without a mike and everyone could hear fine, but I did use it when it came.

The talk went well, and there was quite a lot of discussion afterwards. I did manage to upset someone. I said that personally I prefer cryptic crosswords to Sudoku, and I do not know why they bother to publish the solutions to yesterday’s

Sudoku in the paper; apparently at least one member of the audience does check them . . . Discussing this over dinner, I compared this to students who say “Can you just check my work please?” Surely with a Sudoku you know whether you have got it right?

There were drinks afterwards; a former QM maths student, now doing research in psychology at RHUL, spoke to me, as did many other people. Then a nice dinner in the Picture Gallery. I sat with Ruediger and his wife (keen walkers who have walked the Three Castles Path among other things) and the Dean of Science and his wife, as well as Simon Blackburn and Mark Wildon (so a little coterie of three PMN students).

After dinner they drove me to the station in good time for the 10:23 train, and I was home a little after 11:30. There was a package on the doorstep; Neill’s book, two days earlier than promised. So of course I had to read it before going to sleep. The story reads well, and on finishing you want to go through it again and pick up the details you missed first time.

Each year when the clocks go back I hope to get up early and get some work done for a while; this year, two late nights are going to put paid to that.

Oddity: South West Trains have replaced their Sonia with a male. One of the things he says at every stop is “The door buttons are now activated”. This seems a bit unnecessary since it comes immediately after a very loud and annoying alarm.

Observed: Some huge stainless steel pipes have been delivered to the maths building, perhaps something to do with heating. The trees in front of the building are almost leafless, but the leaves on the birch trees in front of the gym have scarcely begun to turn yet.

2 November

Diary: I woke up at the usual time by the sun, but lay abed until nearly 8. Busy day ahead.

I was in my office before 9:30 for my re-scheduled office hour. As I expected, nobody showed up; but I got plenty of work done, including marking the group theory coursework ready for the class this afternoon. I was really waiting for Robert Woodrow to show up, but he didn’t appear either.

An email from James apologised for getting the time wrong; Arthur’s thanksgiving is at 10, not 10:30, on Sunday. Another email from John asked me to

observe his lecture either today or Thursday. I thought that since Robert hadn't arrived, I could do it and get it out of the way. But just as I sent off the email, Caroline called to say Robert was there.

So I got the stuff from the office, and helped him fill it out. (Jason had prepared all the paperwork.) John happened by so I made my peace with him and said I'd do it on Thursday. There is another hour of my already overcrowded Thursday gone. I took Robert up to sysman to get his password. Sad to say, it would be the day I had forgotten my building card (I'd taken it out of my pocket at the weekend and not put it back), and so I had to bang on the door till Femi came. It was all very simple, since Robert already had Eduroam on his laptop.

I left Robert filling in the form for an access card while I did some urgent jobs, then took him over to security and then to lunch. We ate with Rob, and then had coffee with Franco and Shaun. Franco uses the Barclays blue bikes, and told us an amazing story. The basic rate for using the bikes is £1 an hour (though it goes up rather than down if you use them for more). You have to get an access key; Franco had got a second key, so that he would have one for any visitors he has. He discovered that there is a bug in the software, so that, if you have two keys, you are charged 2 an hour, and so on, even though you are clearly only riding one bike! They know about this bug but claim that will take a year to fix it! Apart from that, Franco is a very strong supporter of the system.

We went back; I had to leave Robert since I had to see Adam and then do the group theory class. I think I have persuaded Adam to push our calculations for quadratic integer chromatic roots to cubic integers. The group theory students struggled a bit with all subgroups of the dihedral group; on the other hand, Claire Blackman wanted to know why you need the Axiom of Choice to show that every infinite group has a non-trivial automorphism. This was a good question, since we had just been discussing why elementary abelian p -groups should be thought of as vector spaces over the integers mod p .

Then I went down and joined Robert in the common room. He was doing some research about how the tube strike will affect him. Nowhere did it say what time the strike starts, but it said "evening", so we had assumed he wouldn't have to leave while I was still busy.

I gave him an abridged version of the short course on Synchronization. He liked it and asked some sensible questions.

I persuaded him that the Old Codgers' meeting (which Anthony still calls the Old Codger's Meeting, referring to himself presumably) would be worth going to. He knows both Roland Häggkvist and Rudi Ahlswede. He has to figure out how to get from Belsize Park to Paddington. (Belsize Park station, like Stepney Green,

will be closed all day, but the Zone 1 stations seem to be mainly open.) I have decided to walk, so I will have to be up early.

I tidied up various jobs (though I was unable to find out, either from the web or old emails, who the checkers from my courses are, so the questionnaires may have to be arranged at short notice). Then I went home, cooked some mince, rice and vegetables, and worked until bedtime on lecture notes, problem sheets, etc.

Curious fact: I learned from the Metro I picked up on the Egham train that 118 and 118 sleep together, in twin beds; their KGB girlfriends bring them coffee or tea (not sure which) in the morning.

3 November

Diary: I was up soon after 6, and out of the house by 6:45. The increasing daylight revealed threatening clouds, but they blew over as I went on my way. At Kings Cross, where there are towpath works, they have put a pontoon walkway to keep the towpath in use; big signs say “No cycling”, but the cyclists pay no more attention to them than they do to red traffic lights. Between Camden Town and Little Venice there were some nice autumn colours, especially in Regents Park.

Every major road I crossed or went under was choked with traffic at a standstill.

I got to Paddington shortly before 9, bought a ticket, and jumped on the 9:06 Plymouth train; I was in Reading by 9:30, plenty of time to walk to the University and then have a coffee before the talks. The attendance was rather disappointing; when I arrived, the only people in the common room were other speakers; even the Old Codger himself wasn't there. (I teased him later about the position of the apostrophe in the conference title.)

We had a mixed day of talks. Roland Häggkvist talked about a nice problem, but with his usual scruffy slides. (The problem he wants to solve is this. Take an $n \times n$ array, each cell containing a random subset of $\{1, \dots, n\}$ (each number included with probability p); he wants to know whether this array “contains” a Latin square. He can't do this, but for a certain fairly large class of Latin squares (obtained from the two squares of order 2 by “iteration”, the threshold probability is just greater than 0.92 (more than this and the probability tends to 1 as n goes to infinity, less and it tends to 0). Jacqui Daykin talked about unique factorisation questions for classes of words generalising Lyndon words. Interesting stuff, but it went past too fast for me to catch. Rudi Ahlswede talked about the Hilton–Milner

theorem. Mike Baines talked about a theorem he proved with David Daykin in 1962, which was generalised in 1980; he was the only one apart from me who had decent beamer slides, but they had rather a lot of mathematical mistakes on them. (Jacqui's slides were power-pointy.) Kurt Lindner talked about some very specialised design theory problem which he and his mates have just solved. He becomes more and more a caricature of himself as he gets older. I don't want to know some of the sordid personal details he reveals about his colleagues.

One of the most remarkable things was that I had to be the technician, trying to get the document camera to focus (it wouldn't; I think it is just clapped out), loading Rudi Ahlswede's talk onto the computer and explaining to how how to run it (it was just a paper in portrait format, which he scrolled through by tapping away on the down arrow key), and even trying to offer a laser pointer to a speaker (but the battery in mine is flat).

I had lunch with Robert Woodrow, and then we walked around the lake. The Reading campus is looking particularly fine at the moment, and quite different from how it used to look when the meeting was in buttercup time.

After my talk (a bit fast maybe but it provoked a lot of discussion) we went down town to a posh restaurant for dinner. The buses were screwed up; they are supposed to be every ten minutes or so, but when we arrived at the campus bus stop the indicator said that the next three buses were in 23, 25 and 29 minutes, which turned out to be about right.

I sat next to Jacqui Daykin at dinner. She has two sons, called Paris and Alexander. (Her husband is Greek.) Paris is studying marine archaeology, I didn't catch where; Alex is in his first year at Queen Mary, studying aeronautical engineering, and most of his friends are maths students.

A pleasant evening, then off to the station. I found David Penman waiting for a delayed train, which was switched from platform 9 to 8 while it was actually pulling in; but we hurried and caught it.

At Paddington, despite the publicity, no tubes were running on any lines, so it was the 205 bus. It took a long time to come (several buses on each of the other routes had been and gone when it appeared), and of course was very crowded and slow. I got home just before midnight.

4 November

Diary: Tired this morning, but at least I could lie in bed until nearly 8.

Plenty to do in the morning: put notes, problems and solutions on various web pages; read email (one from the photographer at Royal Holloway enclosing three

pictures from my visit there); and so on. At 11, I had to observe John Bray. No sign of him in the common room, so I went over to the lecture theatre (by a longer route since the passage past the old chemistry building is now blocked off) and sat inconspicuously at the back, where he didn't notice me until almost the end of the lecture. It went fine; there was a bit of noise which he quelled, and one intelligent question, so I was able to tick the boxes.

I had emailed Robert to say I was busy until 12 but would have lunch in the SCR. He showed up there shortly after 12, wearing his new ID card which he'd collected from security while I was lecturing (and Jason had shown him the visitors' room). Yesterday, he had told me a new result by Claude Tardif and someone else. Take your favourite homogeneous structure, and consider the group of automorphisms of the hypergraph whose hyperedges are the subsets carrying a copy of the original structure. If your favourite is the rationals as ordered set, then this group just consists of the order-preserving and order-reversing permutations; but if it is the random graph, there is more. This is connected with some of my unpublished work with Sam Tarzi (which I talked about last week), so I printed out the papers and gave them to him. At least he would have some entertainment while I was lecturing.

John had decided to observe me; since he had a visitor to look after for the algebra colloquium, he would just come to the first hour. But he ended up staying for both. This was maybe because he was interested! I did symmetric and alternating groups, including the outer automorphism of S_6 done in Sylvester's way (using Sylvester's quaint terminology).

After that I saw Aylin. She has read about factorial designs and was a bit discouraged since it is not at all clear how optimality plays out, given that it probably depends on which orders of interaction you are going to neglect. We talked it through and it became a bit clearer to me after a while. Factorial designs are like codes; and for codes, as Shannon realised but people later tended to forget, the really important thing is not the minimum distance but the probability of incorrect decoding, if symbol errors occur independently with probability p . You need to know what the error probability of your channel is, and then find the code (with given number of codewords) which minimises the decoding-error probability. Is there anything similar for orthogonal arrays?

I went down to the common room to meet Robert, as arranged. He tried to recall the proof of the result about the rationals; he could remember it in general terms but not the details. In the meantime I was a bit clearer about the connection with my and Sam's results.

Robert had to leave at 5, so I went to the algebra colloquium. It was David

Craven, talking about units in group rings. Lovely talk, but I did fall asleep a couple of times. Afterwards, I decided to pass on drinks since I have some AS II coursework to mark. (Francis belatedly decided that coursework deadlines on Wednesday should be put back a day because of the strike - no problem in my case. Nicky Cleaver had scanned and emailed his, the rest were in the box when I went to collect them on the way home. Alas, the class has really separated into those who can and those who can't.

So home to eat, mark coursework, produce more coursework and notes, and have an early night!

5 November

Please to remember ...

Diary: I woke up early, which was probably fortunate, since I had quite a bit of course material preparation to do. So after breakfast I proofread the AS II ring theory notes and wrote out solutions to the last problem sheet; then I went in to the mines and put the stuff on the web page.

I read my email. There was one from the photographer at the UQ reception saying that the photos had been posted on Flickr from where we could download them. The first part was true – there were some nice photos – but the second was false. Flickr had disabled the right mouse button so that it was not possible to save a picture. They claimed that there was a button you could press to negotiate use of a picture with their lawyers, but even that didn't exist. So I gave up on them.

At 10, Fuad came; he has taken advantage of Alex's absence to meet me and try to start up a research project. I hadn't really had time to think it through this week, but we talked about the fundamentals of coding theory (in my mind following my discussion with Aylin yesterday) and how these might be applied to permutation groups.

I finished in good time before going to meet the AS II students. Amir, Nicky and Michael showed up. We talked about techniques for showing that groups are not simple, and the possible orderings of the composition factors in a composition series, with lots of pictures.

I went back to my office, and fairly soon Robert knocked on the door and we went to lunch. Afterwards, I had an office hour to which Nicky Cleaver came to talk about his project and to discuss his PhD applications. Then I saw Andy Drizen. He thought he had proved his theorem for generalised 1-factorisations

with even λ . I picked a hole in it, but we managed to come up with what is hopefully a fix.

Then the AS II class, with the same three. We talked about groups with orders between 25 and 29 inclusive; I took them through the complete list, without attempting to prove that it was complete. They asked about Cauchy's Theorem, so I went through that with them.

I left them a bit early because the CSG was starting early (because of having two speakers). No tea or coffee, the machine was broken again. Soon Rudi Ahlswede arrived, with Anthony Hilton and Jacqui Daykin. I set up the computer for him (but had to get Leonard to log me in – why do we have this stupidity that a computer in a seminar room doesn't accept either departmental or college login unless you are on the teaching network??)

He had, once again, scruffy A4-format slides, partly handwritten and scanned, partly a copy of a paper. He wanted a pointer; I couldn't find one, so he used his very long hotel key, but had a habit of pointing at the monitor screen rather than the screen that we could all see! A big crowd including Søren and Max (it is very much in their area, and he has a paper with Søren). He talked about general questions of the capacity of a network when used for different purposes (communication, identification, sharing randomness) with different numbers of senders and receivers.

After the talk, we took a break and Rudi, Jacqui and Anthony all left, but most people stayed on to hear Robert. I was a bit worried that he was talking to me, but Thomas afterwards said something that showed he had been on top of things. He talked about his work with Pierre Ille. There are axioms satisfied by intervals in the usual order on the rationals; these generalise the notion of interval to an arbitrary binary relational structure, and they have shown that if the axioms hold for a family of sets then there is a binary relational structure in which they form the intervals.

We went to the bar and had a very convivial time. I admit that I had four pints, well over my usual quota. Robert admitted that he had been on the dark side but was returning to be one of us (“learning to breathe oxygen again”). If all University administrators were like him, we would be in a much better situation than we are. Thomas said that the two things that had really inspired him as an undergraduate were the construction of the real numbers (which he had in the third week of the first year) and a proof of the Lorenz transformation formulae using group theory. After that, his protests that he was a physicist went unheeded.

So I rolled home at about 9, ate the cold mince, and typed up my diary before bedtime.

6 November

Diary: I was woken at 1:30 by someone in one of the back gardens letting off fireworks, but went back to sleep again. I did wake up quite early, and got up and had breakfast. I had intended to go for a nice walk (since, for a change, the Met and H&C lines are running), but I realised that I had far too much to do, and even working all weekend will not get me ahead. In any case, it was a cool grey morning.

So after breakfast I wrote the last section of AS II notes, and most of the next section of Group Theory (where I am only just ahead of the students). I went to Sainsbury's (the most urgent thing being coffee, and I do prefer their coffee to the Co-op's). When I got back I had fresh bread for lunch, and then decided that I had really better go for a walk or I would just go crazy. I had well under four hours until sunset, so I decided the best strategy was to set out and walk until dark, and then find public transport back.

So I set off up the canal to the Capital Ring. The sky had cleared and the sun come out, and some isolated trees on Walthamstow Marshes looked quite splendid. There were quite a lot of cormorants fishing around the weirs. After that stretch the clouds came up a bit and it was less pleasant. In Finsbury Park there were banks of fallen plane leaves, and children were piling them up (making leafmen?).

In the Parkland Walk I met Richard Bornat and his wife coming the other way.

In Highgate Wood the sun fell below the cloudbank and bathed the woods in incredible orange light which persisted through Cherry Park Wood. By the time I got to East Finchley station the sun had gone, and I decided to pack it in; when I got to the platform all the amazing colour had completely disappeared. The leaves in Queens Wood and Highgate Wood had been a feast for the eyes. By the time I got out at Stepney Green three-quarters of an hour later, it was quite dark.

So I had a bath, and spent the evening working.

7 November

Diary: Up early: I hadn't looked up train times and had left the map at work (though confident that I knew the way). But at Stepney Green the H&C came straight away. I had decided that the best option was to take the London Midland train to Harrow & Wealdstone, and change to the Overground there (since Freedom Passes don't include the direct train to Watford Junction). There was one about to leave, so I jumped on.

I soon had a lesson in how the other half lives. The train was five minutes late leaving, and they took it off the indicator board. Three slightly tipsy Irishmen stumbled on. It seems they wanted to go to Willesden. Someone told them that this train didn't go there, but they decided to stay on and see where it went. Finding no seats, they went and sat in First Class.

My plan worked fine; an Overground train came almost immediately, and I was in Watford not long after 9. I set out to walk to the church. I was almost there, when I stopped for a car to pass before crossing a side road. It pulled up; it was Debbie's mother, who had forgotten her handbag and gone back home for it, so she drove me the last little bit.

The service started, with no sign of the Oxford contingent. Arthur's thanksgiving was the first event on the programme; they arrived just after it had finished, and had to sit through an unconnected christening. It seems they had got lost and asked for directions; but there are two St Peter'ses (not sure how to punctuate that) in Watford, both in roads called Bushey something, so they had gone to the wrong one. They were telling this story in the presence of the vicar after the service, and he was very scathing about the other St Peter's: "bells and smells". Hester and I afterwards both agreed that we prefer something a bit higher than the St Peters we were at – but at least they didn't use the electric guitars and drums that were set up!

Lex was well-behaved at first, but by the end of the service he and his two girlfriends were racing about making a very loud noise. The vicar was pretending, through slightly gritted teeth I thought, not to mind at all.

I hadn't realised that lunch was included. The idea was that, after coffee for the parishioners in the church hall, tables would be set up and food set out, and family and friends would partake. Hester is limiting herself to one coffee a day and didn't want church hall Nescafe, so we went looking for something better. We found something, but it wasn't much better!

When we got back, the setting out had begun. So we had a nice lunch and talk. After a while Logan overcame his shyness, and he and Lex had a lot of fun, egging one another to look behind doors, stage curtains, etc.

Finally the party broke up at about a quarter past two. I had planned to walk to either Chesham or Borehamwood, but it was too late for that. So I walked down the cycle path through Watford to the Ebury Way. The first time I have not got lost there, I think. Over the Bailey et al. bridge and down a tree-shrouded tunnel, with the sun sinking lower and casting a lovely evening light over Croxley Common Moor and the trees on the hill beyond. Then up the towpath, and the low sun produced some nice effects, though not as spectacular as yesterday. Some parrots

squawked in the trees.

By the time I got to Cassiobury Park, the light was almost gone; but so were the leaves on most of the trees there, and so were the batteries in my camera. I went through the park and got the tube to Baker Street.

I reached Baker Street and got to the H&C platform, to hear them announcing that it was suspended beyond Moorgate because of a signal failure. So I went downstairs to get the Bakerloo to Embankment. It was closed for engineering work, but a Jubilee was pulling in, so I got on, thinking that I could change at Westminster. But on the way it occurred to me that maybe the District was also affected by the signal failure, so I stayed on till Canada Water and went up to the Overground. At Whitechapel, the District was running, but I thought I might as well walk.

At home, sorted out photos and diaries, then spent the evening reading work stuff.

Business section: One New Change opened this week. This is a huge ugly shopping centre right next to St Paul's. I understand that it doesn't have "shops", it has "brands" ...

Property section: The Lesney Matchbox Toys factory has completely gone, and is being replaced by a residential development under the name "Matchmakers Wharf" (!) I expect that historians of the future will get confused, and believe that it was the site of the Bryant & May factory where the match girls went on strike.

Technology section: The keys on the white toy are really beginning to wear out. As well as V, the P key is now very difficult to use. It will be difficult distinguishing between SL and PSL in my lecture notes. Robert has a more recent Asus netbook (with Windows on it) and has Eduroam on it; it connects to our network with no trouble at all.

Culture section: Tonguetwister graffiti on Duckett's Cut: "Ken Dodd's dad's dog's dead".

Fiction section: Neill was in Exeter midweek for two events, a session at a school in Widdecombe-on-the-Moor, and a children's literature event in Exeter library. He told the following story (whether it was from this or an earlier event I'm not sure). He asked the children who they wanted a story about; eventually

they agreed on a schoolboy detective. To develop a plot, he asked them who the hero's enemy should be. One kid piped up "A teacher who's a suicide bomber". Neill says he was very shocked.

Music section: I had always thought that the second couplet of the first verse of "Amazing Grace" (the last hymn they sang) was

I once was lost but now I'm found
Was bound but now I'm free

But the hymnbook gave the last line as

Was blind but now I see

Hester says that is the version she knows. But I like mine (which I am sure I didn't invent) better; the internal rhyme ties the two lines together nicely.

Incidentally, the last verse uses "begun" as the past tense of "begin" just for the sake of rhyme. It describes eternity as follows (I don't remember the exact words, but this is the idea): After sitting round doing nothing much for 1000 years, there will still be as long to go as there was at the start.

8 November

Diary: MUCH colder this morning. When I got up, it was raining hard, but I didn't realise how cold the rain was until I went out into it. Then, inevitably, the heating in the Maths building wasn't working. I had lots to do, so I sat in my office shivering while I put up notes and problem sheets for my courses, wrote the next section of group theory notes, ordered Christmas cards, read email, put pictures of Arthur's thanksgiving in the temp directory on my webpage, and so on. To make things worse, the coffee machine is still out of order.

Robert came about 11:30 and we went to lunch at 12. I could hardly stop shivering, but they had Toulouse sausage soup, which was good and warming. We talked some more about permutations of the random graph R which map induced copies of R among themselves. I had suggested considering the permutations which, given an induced R , map some cofinite subset of it to a copy of R . I thought this would be strictly bigger, but I can't prove this!

A busy afternoon. I had Amir Foley to talk about his project, Max Gadouleau to talk about what we might work on, Michael Brough to discuss what he is going to do in Germany. Fortunately they had got the heating on again after lunch.

I knocked off at 4 and went down for Thomas Prellberg's talk. The coffee machine was also fixed, and Rob had brought some chocolate biscuits, so things looked up a bit. What he calls "vesicles" are what I know better as "polyominoes". The message of his talk is that it is possible to get recurrence relations for some fairly large objects of this sort, counted by perimeter and area; then these can be solved in a fairly standard way in terms of q -hypergeometric functions; then (the bit that really bears his stamp) he can calculate the asymptotics as $q \rightarrow 1$ by some clever contour integrals. He thinks that there should be a method to go directly from the recurrence to the asymptotics without the intermediate steps, and he is thinking of applying for a grant to do this, so we talked a bit about grants afterwards in the bar, where I limited myself to a single pint.

I went home and ate, and then got on with marking the group theory course-work for tomorrow. While I was doing it, there was a hoarse barking sound outside. Eventually it got so loud that I got up and looked out of the window, and there was the fox trotting across the courtyard making the noise. What it was so agitated about, I have no idea.

9 November

Diary: Didn't sleep very well.

Since I had no pressing appointments, I was able to sit and think for a while after breakfast. So I applied my brain to the problem that Robert and I came up with yesterday. I solved it – it turned out to be extremely easy – but more to the point, various new ideas popped up.

So off to work to read my mail, put solutions to the group theory problems up, and whatnot.

Robert came to lunch. He had been reading a couple of papers I wrote with Sam Tarzi, and had met Sam in the visitors' room (being curious about who would be looking at my web page). Since I was due to meet Sam at 1, we agreed to meet up then and have a conversation. Sam would be interested in getting some sort of a position in Calgary, so I thought that impressing Robert would be a good way to start. We talked through how our stuff might connect with the work of Laflamme, Pouzet and Sauer that Robert had told me about, that got this started.

Rob Wilson was at lunch, and had the curry, being bored with sandwiches. He said it was very good.

Adam Bohn came at 2, and we talked in a bit more detail about what he might do on the $\alpha + n$ problem.

Then I had a bit of time to start writing up the new stuff before it was time for the group theory class. Not much to do: I'd given them a break from coursework for the revision week, and none of them had any questions about the lecture material. We talked about a few of last week's questions, and then about general things, such as why it is not a good idea naming theorems after people, the time we gave Jean-Pierre Serre an honorary degree, and so on.

Claire Blackman wanted to see me to talk about an MSc project. I had thought she was at Royal Holloway and coming all the way to QM for group theory lectures. The truth is much more interesting. She already has a PhD in astrophysics, works at Royal Holloway, and is doing the MSc part-time. Moreover, she wants to go to the USA to do a PhD in maths, having seen the light; if she gets a good offer she might abandon the MSc to take it up.

She told me about some work she had been doing with an economist at Royal Holloway. What it comes down to is that, in a directed graph, you can define an equivalence relation by letting two vertices be equivalent if they have the same in-neighbours and the same out-neighbours; then one can collapse the equivalence classes to get a "reduced" graph, and you can go back if you know the sizes of the equivalence classes. They want to count reduced graphs up to isomorphism. She knows how to count arbitrary digraphs up to isomorphism using the Orbit-Counting Lemma (I think); I explained to her that there is also a technique for counting reduced graphs, namely Moebius inversion over the lattice of equivalence relations; and that it may be possible to combine the two techniques, as I did with the orbital chromatic polynomial. So she wants to do this for her project. She is good, and I think it will be an excellent project.

Then Volkan Yildiz came. This is more difficult. He has started, off his own bat, a project on an approach to human communication using Boolean algebra and graph theory. It seems it will be my job to keep it on a sound mathematical footing.

There was an email from Celia saying that she has been struck down with a bad cold and I shouldn't come tomorrow morning. So I have an unexpected bit of time; how to improve the shining hour?

After that, I didn't have anything else specific to do, so I decided to knock off early (4:30 – not so early) for a change, and go home, where I had a cup of green tea.

I worked, had a bath, had dinner, and worked some more until bedtime, writing up what I did today. I am sure there is more to come . . .

Literary section: You are probably aware that Dubya has just released his memoirs. There was a short interview on the World Service. He said that he still feels sick about the fact that they found no DubyaMDs in Iraq. The interviewer asked him if he thought he should apologise. Oh no, was the answer, if I apologised, people would think that I made a wrong decision.

10 November

Diary: A beautiful morning, and I awoke with the prospect of no appointments until after lunch. So after a slightly more leisurely breakfast than usual, I got to work writing up what I did yesterday. Then I decided that there was an obvious next step to take, so I did that, and wrote it up; then I thought about the step after that, but couldn't do it. I had planned to go for a little walk, but by then it was a bit late. So I went to the Co-op for supplies and lunch, ate the lunch, and set out for the mines.

I had time to put up a new AS II problem sheet, and compile what I had written, before it was time for the network coding seminar. Max gave an absolutely beautiful talk, connections with all kinds of things fizzing; I even saw that there might be connections with synchronization. So after the talk I offered to give a couple of talks about synchronization, to see if anyone in the seminar could help me spot the links.

Then a few routinish jobs: I sent some reading matter to Amir Foley for his project, agreed to be a referee for Nicky Cleaver, told Hugo Touchette that I had no questionnaires for Additive Combinatorics.

Then, as agreed, Irene came. She stayed for nearly an hour and a half; but I don't mind talking to her. She takes me out of my comfort zone, and she always has interesting questions. It transpires that she has some possible specific problems that she might be able to do a PhD on. (I said that a postdoc would be more suitable for the big generalisations that she really wants to go after.) We also talked about the balance between these two activities. She, like Sam Tarzi, can ask good questions but is much less good at working out specific details. So a more difficult student to supervise, but ultimately more rewarding.

She needs MathSciNet access for a few months, so I put in a visitor form for her. I went to pick up the AS II coursework; I was momentarily surprised to find there was none, until I remembered that it is reading week. I was grumbling earlier in the week that I have more, not less, work in revision week – everything else as usual, and also having to invigilate a test. But at least no coursework to mark.

Then I went home. There was a Private Eye, so I put some chicken and vegetables in a parcel and took the Eye to the bath while it cooked. It was delicious – a bit of hot sauce makes such a difference!

Eyewash section: Depressing issue of the Eye; not even any decent funnies. Here is an example.

New old saying

Give a man a fish, he'll eat for a day.

Teach a man to fish, he'll greedily over-exploit the fish stocks, create unsustainable seafood levels, and starve.

11 November

Diary: I woke up in the night with a touch of indigestion. The sky was a mixture of brightly-lit white clouds and dark sky. The clouds seemed to be moving very fast, but were in fact standing still. Maybe I was a touch feverish.

By morning it was completely changed; wet and windy.

Busy day. Theepan Tharmarajah to talk about solutions to A-level practice problems he is preparing for his class. Then Aylin with some good news: she has proved that the line-plane truncations of projective spaces are optimal. This is the first non-trivial result in the programme I had in mind for her, though we still don't have any idea about how to prove general theorems.

A quick lunch, then back to lecture. Just as I was leaving my office, a student came and asked me if I was an expert on statistics. I said I wasn't. Eventually, after he told me that I had some lecture notes about statistics, and that he had looked for Professor Jackson but he wasn't in, I realised that he really meant probability. I told him to come back in my office hour.

In the two hours' lecture, I went carefully through finite fields and did the easy stuff about general linear groups and their relatives; the simplicity of $\mathrm{PSL}(n, F)$ will come next week. I forgot to do the questionnaires last week, so I stopped a bit early and handed them out; Amir agreed to collect them.

Then time to catch up on a bit of email before the algebra colloquium. Miracle of miracles, Godzilla was actually working; and John had brought nice biscuits, so I had a couple with my coffee.

The speaker was Paul Flavell, and he gave an even lovelier talk than usual, on the "nonsolvable" (i.e., general) signalizer functor theorem. I must admit that I didn't know there was such a thing; I knew about the solvable signalizer theorem,

which was proved by Glauber, after special versions by many people, and much used in the proof of CFSG. The general theorem was proved by Patrick McBride in 1981; according to Paul, though correct, it is so complicated that even Michael Aschbacher couldn't understand it. Paul has a new and simpler proof. He explained very clearly what the theorem says and how it is used in the "revised" proof of CFSG; and he gave us a fairly detailed sketch of his proof.

We went for a drink in the SCR bar, and then John, Paul and I went to the Japanese restaurant for dinner. We didn't stay late, since Paul has a 9 o'clock lecture tomorrow. I had my old favourite, Yaki Tokyo Udon, with miso soup.

I walked home through the dark park and over the canal bridge. In the road leading down to the bridge, there were a couple of vans packed with policemen sitting in the dark. No idea what was going on, and I probably never will.

Back home, there were surprises in the mail, some good, some bad. A postcard from my favourite person, and the Christmas cards from PhotoBox, were there. There was also a "sorry we missed you" slip. It turned out that Photobox sent the calendars (I assume that is what it is) by a private company rather than the Royal Mail as their website claims; the private company had left it in the box at the gate; and somebody had just found it, three days later, and put it through the letterbox. I have to do something complicated to get the parcel, but I don't yet feel quite strong enough to find out exactly what.

Misprint of the day: According to the Times, Ed Miliband and his partner are "overjoyed" at the birth of their son.

Change and decay section: Venus in the Park is in the final stages of conversion into a Nando's.

12 November

Diary: There was a beautiful sky before sunrise this morning, with pink speckled clouds behind the hospital. (Sure enough, the traditional weather lore was right – it was raining before evening.)

I got in early enough to go to work on the parcel before my office hour. As I expected, no joy from the delivery company, so I went to PhotoBox. They tried hard to persuade me that the answer was in the FAQs, but did let me send them a message. Quite soon I had an acknowledgment saying that my message would be dealt with within one working day.

My office hour was busy. As well as two group theory students, I had Bonchev Bonchev, who indeed came back in my afternoon office hour and stayed for the whole time. He mentioned that he has a proof that infinity doesn't exist, but that wasn't what he wanted to see me about. Mainly it was to discuss projects. There were three things that he wanted to do. One was software engineering, quite unsuitable for a maths project. The second was a new hashing scheme he has invented; I thought, and he agreed, that the mathematical content is too small for a project. The third seemed more promising. He claims to have invented an unbreakable cipher. He wouldn't tell me how it works – indeed, he was worried that the College would claim intellectual property rights on it if he put it in a project – but it seems it is some variant of a one-time pad.

Alex O'Neill is back from his travels around Asia, looking quite suntanned. He has reached a bit of an impasse. He had discovered that the cyclic group is “better” than other abelian groups (in the sense that its Cayley graphs are better with respect to various optimality criteria). Indeed, small cyclic groups are better than any other groups of the same order, but non-cyclic groups overtake them after a while. I had suggested that cyclic groups, having more distinct eigenvalues, give a finer mesh to approximate the continuous optimum. But he says that can't be so, since $C_4 \times C_4$ beats $C_2 \times C_8$. Since he is a bit at his wits' end, I suggested that he take a break from that and write up the Markov chain for Cayley graphs.

Then it was AS II time. The usual two, Amir Foley and Michael Gregory, came; we had a long talk about some of the hardest topics in group theory, Sylow's theorem and composition series, and went in detail through some examples.

Rob has been quick processing my questionnaires for Group Theory: very satisfactory, straight 5s, so I guess they won't sack me just yet.

Read my mail. My favourite person is not happy with me – she thinks I prefer eating chicken alone to being with her, and she is cross with me because I missed something in one of her emails (she doesn't realise how I have to speed-read everything). Maybe it would be easier if I stopped writing these daily bulletins... Neill had sent a link to an interview in the Oxford Times, the first in mainstream media since his book came out. The interviewer thinks (approvingly) that he has brought off the difficult feat of appealing to both boys and girls of that age group. I wish I could take some credit for bringing up someone with such a good view on things!

Then time for a quick sandwich before going over to the Octagon to help John with the Geometry I test. The students gave him a hard time. About two minutes before the test began, someone came in with a story about having lost a bit of foam off his iPod earpiece. Even when John found it for him, he was quite aggressive.

At the end of the test, a student whom John had caught writing after being told to stop came to argue the case with him, very tediously.

One of the students asked me if I had been on television talking about infinity.

Invigilating is one of the most tedious occupations ever devised. As usual I survived by singing long songs to myself.

Then straight back for my second office hour. Bonchev came back; he wanted to show me his software project, which I must say is quite impressive. It is a better file manager. You can merge, split, compress, encrypt, or sign files; you can delete or “really delete” files; and so on.

He was still there when Andy knocked on the door. Andy thinks his theorem is OK, and agreed to talk about it in the Study Group. He doesn't even need λ to be constant, though there is an inequality between the two different λ s in the 1-factorisation case which is avoidable in the Latin square case. He will try to get rid of this condition, but writing up what he has is more important.

Then the second session with AS II. We talked about the solubility of $GL(2, 3)$ and how it is actually easier to prove the solubility of all groups of order 48; that got us to groups of order 30, which can be solved by applications of Sylow's theorem, but eventually realised it can be more easily done by a method I put on the supplementary problem sheet. Cue a sermon on how the latter technique is great when it works and useless when it doesn't, and so more complicated techniques are still worth knowing.

At teatime, Mark Walters had his questionnaire results for Convergence and Continuity. He has 138 on the course – the second largest of all our non-compulsory courses – and got a majority of 5s. I have to take my hat off to him. Is there any other university in Britain where analysis teaching is so successful?

So finally it was time for the study group. Mark had his co-author Leslie Goldberg with him, and Wolfram Just also showed up, so there was a good crowd. He said that he expected the word “matroids” would have lost him half his audience, and the word “Ising model” would have lost the other half. It was a very nice, low-key talk, though he had so much ground to cover that he couldn't spend as long on the proof as he would have liked.

In the bar, we somehow got talking about people like Frank Harary and Douglas Rogers. According to Anthony, the department at Auburn accidentally hired Douglas Rogers instead of Chris Rodger (they were both at Reading at the time). They did get the right one eventually.

Conversation turned to the iniquity of the current grant system. Everybody is pressured to apply for lots of grants, and the people good at writing applications get them, while those who really need them don't get them. Then there is the

business of paying for the researcher's time. Leslie said emphatically that she didn't go into an academic career to have her teaching time bought out. She is 60% bought out in her current grant, but has managed to get out of some administration. Good for her!

Anthony Hilton said that the proportion of universities' salary bill which goes to academics has declined from 95% in the 1970s to 60% now.

After a while I came home and ate the leftover chicken.

13 November

Diary: I was awake quite early and out of the house by 9. On the news, there was speculation that Aung San Suu Kyi would be released soon.

It was a late autumn day of low misty cloud and dead leaves everywhere. At Stepping Stones Farm the sheep were back (but separated from the goats) and a parrot flew overhead, the first I've seen in Stepney I think.

On the Thames Path there were many joggers of all shapes, sizes and speeds. Two young men came past chatting in Dutch, then another two in French. In King Edward Park there was a sad little display on a park bench: three roses, a remembrance poppy, and a card saying "Happy birthday brother". As I walked I thought, in the past when I was so overwhelmed with things to do I often became quite depressed. It is something that at the moment I just feel tired, I suppose.

Unbeknown to me it was the Lord Mayor's parade. A girl tried to sell me a programme at Blackfriars – I said I had a different entertainment in mind – and near Temple a line of about ten horsedrawn coaches with chaps in red coats and top hats sitting up very straight. The further I went, the more crowded it became. The front of Westminster Abbey was crawling with people, all well-dressed and wearing poppies. I suppose it was a remembrance day service.

I got to the Shakespeare at about ten to eleven, went in, and ordered a coffee. The trainee behind the bar said that a double espresso was impossible, but was assured that it was. I found a comfy sofa and sat down to drink it. Sky News was showing pictures of the crowds round Aung San's house. I took out my camera to look at the pictures I'd taken, and just at that moment Neill, Di and Logan came in.

We sat there for a while; Logan had a sandwich and Di took him off to the toilet while Neill phoned Hester. Then we went to the station with about twenty minutes to catch the train. I left Neill in a short queue for a ticket machine while I joined the long queue at the ticket office. Soon it became clear that I would get served first.

We went off and sat on a train. Logan decided it was not working, but soon enough we were off. He saw what he described as “Cranky at pond”, which being translated means a crane beside the river. (Cranky the crane is apparently a new character in the Thomas books – Neill says he is no longer “Thomas the tank engine”, but Logan knows that he is an “engine”).

At Balham, Hester was waiting at exactly the right door. At Crystal Palace we alighted; Logan was entranced with the station, especially all the stairs, and reluctant to leave, but he was cheered up by the trainload of dinosaurs on the mural outside the station.

We walked down to the “real” dinosaurs. Neither Neill nor Di had seen them before; both were impressed, but Logan loved them. He was further delighted when the next thing we came to was a cafe; we went in, and though the adults were not so keen, we managed to get tolerably good food and all (except Logan) cleared our plates.

The next stop was the play area. As well as a helter-skelter slide, there is a huge sandpit with a concrete dinosaur skeleton (actually more like a Loch Ness monster). This took us a while but eventually we set out for the maze.

The maze was not a huge success. Logan was by now too tired to walk, and pushing his buggy through the loose gravel was immensely hard work. We found several of the pictorial stones, but failed to find our way to the centre, and eventually found ourselves heading back to the entrance. By this time Logan was fast asleep, so we decided to call it a day and head back.

At Hester’s suggestion we headed for Gypsy Hill station. The road goes over the top of the hill, and down side streets one gets a remarkable view of the City of London, from an angle I haven’t seen before. The gherkin is in front of the Broadgate tower, and so rather inconspicuous, but you can see how the shard is going to dominate the skyline.

The real surprise came at Gypsy Hill station. We just missed a train and had a quarter of an hour to wait, so we went into the waiting room. It is furnished with two comfortable sofas, a bookshelf with a small library of books, and a huge vase of flowers in the corner. Logan was still fast asleep, and if the train had been any longer I think the rest of the company would have been too.

But the train came on time; we got on and found seats together. Hester got off at Balham; I went on to Victoria and waved goodbye to the others before going off to catch the tube. I thought about walking, but the thought of vast crowds of people deterred me. In fact, the train was very crowded, but many people got off at Embankment, and it was much emptier the rest of the way.

Back home, I had my tea, and got on with writing the next section of the group

theory notes, about semi-direct products. Wreath products are in the syllabus, but I decided not to cover them when I talked about imprimitive groups; they fit more naturally here. Then I will go on to general extensions, and can mention the theorem that every extension of A by B is embedded in the wreath product.

14 November

Diary: Up early. I really would like to go for a long walk but there is just too much to do. I had breakfast and finished the notes on semidirect products. Then I emptied the rubbish and recycling, made up the bed that Neill had slept in. That strange piece of hardboard propped up by the side of the bed has decided not to stand up any more – I hope it hasn't been falling on top of visitors in the night – so I took it out. It made me a bit sad that I don't feel able to throw it away, but probably a good lesson in non-attachment. I sewed up a hole in my new trousers (not very well but it will do) while listening to the Beach Boys.

I stepped outside into a soft misty morning. I wanted to be walking in a forest, but no chance of that. A light breeze detached some of the remaining plane leaves; they fall in a tentative, exploratory way, trying all directions and orientations (unlike ash leaves which sometimes fall so fast it seems the tree is chucking them at you).

To the mines: first job, compile my lecture notes. A problem here, which my favourite person may be able to foresee. At first attempt, the command `\rtimes` is unknown. So I load `amssymb` which contains its definition. At second attempt, a bizarre error message with something about a table. Detective work shows that it is not in my file at all, but in `qm.sty` which happens to use `\limes` as a shorthand for “Lecture times”. These style files are extremely valuable and useful, but the trouble with them is that they do far too much with macros.

So I compiled and printed out the notes for proofreading; emailed Key Travel about Taiwan, having first located Hsinchu (the town where the universities are) not too far from Taipei, so suggested to them that we could fly there (and said I will phone tomorrow); booked tickets to Dublin; James has changed the date of our pre-Christmas get-together, so said that's OK but I have to get back to catch a plane; put up two CSG talks by Andy and Aylin; add a conference to the BCC list; and so on. After a couple of hours I can't do any more, so I go to the Co-op for food and then head home.

After a quick lunch I decide I really do need to go for a walk, even though it is raining now. The plan is to join up my last two walks by doing East Finchley to Cockfosters (Capital Ring, Dollis Valley, and Loop), though I realise that I

may not have time to get it done. The trains work OK, but somewhere between Angel and Kings Cross the driver announced that Kings Cross station had just been closed and he wasn't stopping there. He didn't switch off either the display or Sonia, so there were a lot of very puzzled passengers as we rattled through.

When I left the train at East Finchley, it was raining, though not hard; clouds threatened, but in fact the rain never got much worse and finally almost stopped. The parks along the North Circular were soggy and not so pleasant, but the Dollis Brook was pleasant, especially the wild bit just past the Mill Hill viaduct where it winds among lots of trees. The colours were quite muted and dappled; the brightest were the pale yellow birch leaves, with rust-brown oak leaves, earth-brown ash keys, and dark green evergreens; occasionally a maple or sweet chestnut brightened things up. Best of all were the very few beeches still in leaf and not totally brown. Plate fungi were having a field day on a birch stump.

When I got to Barnet, the light was beginning to fade, but I thought I might just about be able to make it, so I set off. It was not at all difficult to find the way on the clear path through the woods; the twilight had encouraged the birds to sing. Finally I reached the lane into Cockfosters. A car came along, and seeing me, the driver put the lights on high beam. A good illustration of pedestrian blindness in car drivers.

The only incident on the way home was Kings Cross again. We stopped in a tunnel between Arsenal and Holloway Road, and the driver said it was because someone had activated the passenger alarm on a train at Kings Cross. But after a couple of longish delays we were on the move.

Back home, I had a bath, and put the fish to cook while I did some writing.

Business section: Your mail so far:

- phone bill for £42.35 (paid by DD)
- bank statement (Co-op Savings Plus, £0.00)
- Pimlico Plumbers (boiler annual service due)
- Cambridge summer music festival, London friends launch (you'll miss it)
- Oxfam, flyer for Cirque du Soleil, 20 January
- Oxfam, begging letter
- St Hugh's College, magazine

- St Hugh's College, begging letter
- Camphill Family, begging letter

Architecture section: They have glassed in the bottom of the shard while construction of the top is far from finished. If the builders managed to drop a girder, it could make quite a mess.

Science and medicine section: Nature this week has a feature on schizophrenia. The lead article starts out with suitable humility, a scientist comparing schizophrenia research to the story of the blind men and the elephant. Then they get on to describing a new physiological theory, which raises the prospect of spotting a tendency to schizophrenia in people still in their teens (when some major re-wiring goes on in the brain), and possible prophylactic drug treatments. The writer is very gung ho about this new approach; though to be fair, he does go on to mention the absolutely horrendous consequences of false positives in such a test. (Imagine a teenager, having all the difficulties of being a teenager, being told that (s)he is going to go mad unless they take these expensive drugs.) Then sanity and humility is very briefly restored in a final comment. Here is a new opportunity for big pharma to really screw up people's lives.

Linguistics section: "Gung ho" were the first two characters of the Chinese name of the Chinese Industrial Cooperative, set up in 1937 to help China withstand the Japanese invasion: small factories were set up all over the country, many in remote places, to replace the production capacity destroyed by Japanese bombs or captured by their armies.

Politics section: Iain Duncan Smith said that it is "a sin" for people to refuse jobs offered to them. A Guardian correspondent points out that John Wesley said it is "a sin" for people to judge the poor without understanding their difficulties.

15 November

Diary: For a change, I slept well, and had trouble dragging myself out of bed in the morning. It was a sunny day, though without the sparkle of some recent sunny days: everything seemed slightly dull (or maybe it was just me).

I got to work soon after 9. There was already a reply from Key Travel, giving a provisional booking for the dates I suggested, at a cost of well over £2K per head. But they said they might be able to find something cheaper if the dates were flexible. The fare for this journey should be less than £400 each. So I phoned them and gave them three days' choice at each end. Later in the day they came back and said that no, there was nothing cheaper than the original booking. This depresses me more than anything. If I were a machine which simply made a booking as soon as I accepted the invitation, it would save a lot of money. I am not sure whether I can put this much money on my credit card. Why did I let myself be talked into this in the first place?

To rub salt in my wounds, there was an email from Jef Thas, saying how much he was enjoying retirement; time to do research, time to play with his grandchildren.

Lots of other things to do: I decided I was getting no further with the random graph problem, so sent what I had already written to Robert; I sent Neill some pictures from Saturday; I sent Amir Foley's project description to Shahn; I replied to someone who had written to me about his doubts about Hilbert's hotel; I don't remember what else.

At 12, Amir came; he had nothing on his project, but a question about an AS II problem. I had lunch with Søren and Max, and then went back for my office hour, to which Bonchev came. Then in succession I had Max and Fuad, with each of whom I had to set up a research programme. Max has some very nice ideas about a generalisation of covering radius that is related to strong domination in graphs, and so we agreed to work on that. The particular cases of Hamming schemes and permutations are likely to be interesting. Then Fuad came; I had some ideas but, as we talked, I threw out a couple of questions which he seemed to like, with a similar flavour. One is the following. Given a pair of orthogonal Latin squares, you can regard the $2n$ rows as a code. If you do it in the standard way with both first rows normalised, then it is no good at all, since it has a repeated codeword. But permuting the symbols in the second square can improve things. The question is, by how much? Fuad can get GAP running and do a bit of programming on this, and then we can try to prove something.

There was no pure maths seminar, so after waiting round for a while (Amir had threatened to come back if he was still stuck) I went home.

I had the leftover fish with some fried vegetables for dinner, and then, not being able to face sitting straight down to set a problem sheet, I sat on the sofa (something I haven't done for several weeks) and put the photos of Hester and Bob's wedding into my album. This was not as easy as it sounds: it turned out that

there were three different sizes: the place in Whitechapel does 6×4 , PhotoBox does 6×4.5 (same proportions as the original so you don't lose anything, but you can only get 4 to a page), and some that Hester had given me which were smaller, maybe 5×3.5 .

Then I bit the bullet and tried to make up some group theory questions.

How the world works section: A glossy magazine from Everest today. Who's next? (By the way, I told Hester and Neill about One New Change having "brands" rather than "shops"; they were not the least surprised.)

Science and medicine section: An American psychologist has discovered what makes people happy. Apparently, living in the present is important: thinking about what you might be doing, have done, or have to do causes unhappiness. But the reason it caught the headlines is his really remarkable and unexpected discovery: sex makes people happy...

Puzzle section: From a Gordius crossword in the Guardian:

It's a very little matter, like half our letters (4)

Literary section: This is a poem by Lewis Carroll, which reads the same across or down.

I often wondered when I cursed,
Often feared where I would be
Wondered where she'd yield her love
When I yield, so will she,
I would her will be pitied!
Cursed be love! She pitied me . . .

16 November

Diary: I woke up a couple of times in the night with bad dreams – trying to buy a ticket from Kingston to Slough from a totally inadequate ticket machine, or trying to sleep in a corner of a room where people kept coming in to sit and drink cups of tea and talk . . .

It was an even nicer day than yesterday when I dragged myself in to work. After sending off yesterday's bulletin and compiling the group theory problem

sheet, I turned to the business of plane tickets. First I read my email. There was a mail from my co-conspirator approving of what I'd done, so I decided to book it and waste no further time. The sum was so large that I had to split it between two pieces of plastic. (Another mail was from Hester, who needs the house money; when that and the cost of the tickets go out of my account I will be down to £2K, which is certainly too small for comfort.) What with paying a 2% surcharge on the credit card payment (£40 down the drain to no effect), it took a while to sort out, but eventually it was all done, and the itinerary arrived in the post. I forwarded it on to the people in Taiwan.

Lots else to do. I mentioned Hester. James had suggested a short walk and pub lunch in Ware on Sunday, which seemed fine until I checked train times; there are engineering works on that line until midday. So I might go to Hertford North on the other line and walk down the river. Since Lex can't walk very fast or far, I don't have to be there terribly early. There was an email from Tim King; apparently the daughter of the former freehold owner of Roland Mews has woken up and is demanding ground rent for the time since the old management company went into abeyance. Tim has written back a robust letter, and advises us not to brief a solicitor just yet, but to send him a copy of anything we get. There was a student from St Andrews wanting advice about research, a paper rejected, and various other things too boring to mention.

I also got RAB's mail from her pigeonhole and sent her a list of what's there.

This took me till lunchtime and I still hadn't started reading what Sam had written, so I got a sandwich and made a start on that. When he came we had quite a long session, then no time for much until Adam came, another long session. He seems to think now that our six-parameter family of cubic factors of chromatic polynomials will achieve all possible discriminants, and we discussed how that might be proved, how it might relate to Hilbert's theorem, etc.

Then the group theory class. On the way upstairs, there was a very curious patch of fog obscuring the buildings in the City, with bright sun behind. (When I came down again, the sun was lighting up some clouds behind the fog rather beautifully.)

The group theory students didn't have many questions, so I talked about a couple of things and then we agreed to stop. Amir Foley wanted to ask some AS II questions, so I did that.

Then I went down, produced the next AS II problem sheet (at least I am up to date with that), and headed for home.

I steamed half a cauliflower, but was too lazy to make sauce to go with it, so topped it with pasta sauce containing mushrooms and cold meat. No pudding so I

had a fruit.

Then, for a change, I sat down with the Guardian I'd bought with my sandwich, read it, and did almost all of the crossword before bed.

17 November

Diary: I woke very tired at 7 and closed my eyes for a few more minutes. When I woke up it was after 20 past 8, so I had to leap fairly fast. But I was out of the door within an hour, without any stress.

It was a cloudy and raw day but the threatened rain hadn't arrived. On my way through Bunhill Fields I noticed a big, well-maintained, tomb not hidden away behind the fence, so I detoured to look. It was John Bunyan's.

Celia and I had coffee first, and discussed various things, including Robert. The Cass Business School wants PhD students – they are high prestige – but has draconian regulations. They have to start enrolled for the MRes, which involves compulsory courses and rigorous exams and is really a full-time degree. Rather than strapping on her sword, Celia quietly negotiated various compromises, producing a diet of courses for Robert including some real mathematics and spread over two years, and the various lecturers will be understanding if his heart is not entirely in financial accounting. At 11, Robert came to tell us what he has done. He is off to an excellent start, and has a conjecture about which graphs (with given numbers of vertices and edges) have fewest acyclic orientations, and an original new way to think about them. A successful graduate of our MSc, beyond a doubt; with a 2.2 from Cambridge, he would never have got onto a PhD otherwise!

Then I set off at 12 to walk back. For a change, I stopped at Sainsbury's for a sandwich; the queue at lunchtime in the Co-op is rather slow, and Sainsbury's have a quick counter for things like that. I just had time to eat it and have a quick skim through my email before the seminar. Ben Parker had asked if we were using the room after 2; I said I would be sure to finish at 2.

It went rather well. I didn't get things backwards at all; the questions were good; and I left it that the two points of contact with Max's talk last week will come up early in next week's talk, and then we can think about whether there really is anything going on there.

After the talk, I read my email more thoroughly, and then set off for Whitechapel to try to get the bank to transfer some money to Hester. It was so much better than last time; maybe their charm offensive has worked to some extent – but in the end unsuccessful. They transferred the money from my special account into my current account, checked my ID (you need this if you are transferring £50K or

more to another person), all ready to go when they suddenly said, you have to wait for that £20K to clear. I said, Can I transfer £30K now and the rest when it has cleared? They said, Yes, but you will have to come in again and also to pay the bank charge twice. (The charge is the same for any sum of £5K or more.) So I said forget it, I will come back later.

I also asked the bank what had happened to my new servicecard. (The old one expires at the end of the month, and on past performance a new one should have come by now.) They checked and said it was sent five days ago, and that if it hasn't come by Friday I should let them know, and they will cancel it and send another.

I popped in to Sainsbury's, and was tempted to things like duck legs, Stilton and cranberry bread, and pawpaw and passionfruit yoghurt. No maple syrup though, or if they do have it, the staff don't know where it is kept.

On the way back, I saw a dozen or more policemen raiding the White Hart, searching people while others stood round drinking their beer watching. No idea what was going on. But that used to be a nice quiet pub.

When I got back, Irene was there. Her questions were, as usual, a bit off the wall; she claims that she can solve even quite hard problems in algebraic geometry, but then went on to describe how she learned music as a child (her mother was a pianist), and hated it so much that she played entirely mechanically, or as she described it "I wasn't even in the room when I was playing". Then an older student described to her the technique of imagining that there were little lead balls in your fingers, and they naturally go down onto the keys without you specifically moving your fingers. She hasn't reached this point with mathematics yet, and I fear she regards algebra as rather like exercises in piano technique. She said she'd sent me a copy of her research proposal but it never arrived, so she will re-send; when I have read this I will be better able to nudge her in the right direction.

I read my email again. There was one from Caroline saying that a parcel had arrived for me, so I went down to collect it. It was the calendars from PhotoBox. I must say that I am as positively impressed with PhotoBox as I was negatively impressed with the carrier they used. They had reprinted them all on Monday, and managed to get them to me by Wednesday afternoon.

So I went home and decided to indulge myself with a roast duck leg. While it cooked, I looked at the calendars – very satisfactory. The food was nice when it came, then I spent the rest of the evening preparing my group theory lectures.

Sociology/technology section: Apparently the latest thing with mobile phones is that you can use them to communicate for free: if the call is not answered then nobody pays anything, so you let it ring a couple of times, and then perhaps phone back, and you can create a code with the person you want to communicate with. The most popular code is very simple: one ring means “I love you”. (For a code to convey information, there must be at least two possible messages; presumably if the phone doesn’t ring that means “I don’t love you any more”.) Even businesses in some countries are using such codes to tell customers that their order is ready to be collected.

On a similar subject, I overheard this today, from someone not using this coding system: “I thought, fucking hell, it’s quiet here. But I was the other side of Letchworth, you know what I mean?”

18 November

Diary: I woke up early and started to think about one of the things Celia and I talked about yesterday, a Markov chain method for choosing a random acyclic digraph. I soon realised that it is quite easy for orientations of a fixed graph, and then noticed that one can do a similar thing for all acyclic digraphs with a given number of edges, though I wasn’t able to push this through to the conclusion. There are also the questions of convergence rate. But the Markov chains are so simple that I am quite hopeful that more can be done.

I had breakfast and was at my desk before 9. I sent the Markov chains notes to Celia. I decided that two pieces of bad news yesterday, the closure of both the MSOR network and (more seriously) the Schrödinger Institute in Vienna because of funding cuts, needed publicity, so I put a note about this on my blog. I got talk titles from Andy and Aylin and put them on the web pages. I forgot to email Hester about the money. I put solutions to the AS II problems on the web. (Nicky Cleaver had emailed me yesterday with a reasonable excuse for lateness, which I’d accepted; I waited until he’d been before publishing the solutions.)

I saw Aylin, and we discussed an interesting point: whether there is any way of using her result about the optimality of $(2,3)$ -truncations of projective spaces to get optimality of $(2,k)$ -truncations for larger k . The eigenvalues of the latter are a simple affine transform of those of the former. This is not enough in general to prove optimality, but perhaps there are some special features of this case which will help.

I went for lunch, then came back to give my lectures. As I was going up the stairs, Bill stopped me and warned me that there would be serious drilling in the

wall; bless him, he had found a couple of alternative rooms in far-flung parts of the college, but I said I would just shout louder. In the event there was no noise at all! I don't know what magic he managed to work.

So I proved the simplicity of $\text{PSL}(n, F)$, stated CFSG, and told them some preliminary stuff on group extensions; we will start that for real next week.

The Algebra Colloquium speaker was Peter Neumann. Someone asked him how he was enjoying retirement. His reply was that he is still far too busy. (He is in the last stages of preparing his edition of the works of Galois, which is to be published in time for Galois' 200th birthday next year; he had promised the publishers that they would have it by 31 December, but Sylvia put her foot down and insisted on the date being either before Christmas or mid-January, so of course Peter brought it forward.)

The talk, on a combinatorial property of finite groups with applications to the complexity of matrix multiplication, was absolutely lovely. Afterwards, he complained that we hadn't interrupted enough; Ivan said that it was so nice not to have a lot of noise.

As with most of the algebra colloquia this term, there was a very good attendance, with contingents from Imperial and Royal Holloway, as well as Sasha Borovik (in London for the LMS AGM tomorrow). After a drink in the SCR bar, nine of us went to the Japanese restaurant. The service was a bit slow, and in the end Peter had to eat up and dash off to catch his train. Afterwards a small group, most of whom you can probably guess, went off looking for a pub, but I went home to mark the coursework for my two courses. But I felt so tired when I sat down that I couldn't face it. I will just have to get up early again in the morning ...

Science fiction section: An American psychologist has proved that we can see the future. There is a classic psychology experiment in which you are trained on a list of words and then given a list including some of the words you are trained on; it is of course found that you remember these words better. This guy reversed the procedure: first you are given a list of 48 words and asked which you remember; then you are trained on a randomly-chosen subset of the 24 words. It turns out that the words you remembered are positively correlated with the ones you were subsequently trained on. He didn't say whether there was a control in which the random words were chosen but subjects not trained on them.

19 November

Diary: I woke up to see a thin band of orange-pink-grey cloud across a pale blue sky. I got up and marked the AS II coursework, had breakfast and went in to work.

I had extra things to do but a bit of unexpected spare time. Both Alex and Andy had said they didn't need to see me today. So in the morning, there was plenty of email to deal with before the AS II meeting, including entering the marks.

Only Amir and Michael were there; Nicky had submitted coursework but Saad seems to have disappeared. They were a bit late, so I looked out the window. A beautiful day, spoilt by three things: the filthy windows, a band of smog-like haze over the city, and the fact that the only clouds in the sky were contrails from jet planes.

We talked about lots of things, including the bizarre definition of the ideal generated by an element in an arbitrary ring at the bottom of the first page of the notes (I explained to them what was really going on in that definition), about units and zero-divisors in arbitrary rings, about why we don't usually assume that a ring contains an identity (with parallel comments about where the group axioms come from), about constructing the number systems, and so on. I was still in full flow at 12 when David Burgess interrupted, having booked the room at that time.

So I set off for the bank. First, because I was a bit worried still about the non-arrival of my new debit card, I went by the house to see whether it had arrived yet. No, but there was a card from the postman saying that there was a recorded delivery letter for me, but I would have to wait three hours from the time on the card, 11:51.

I forgot to mention that yesterday I had a form about one of my advisees from the pastoral tutor, with a new excuse for not handing in homework: it seems there had been a murder on her estate and the police hadn't let anyone out. I mention this because as I set off for Whitechapel, I saw that the police had cordoned off the other side of Stepney Green for a block from Cressy Street towards the farm. There was a police car and a couple of cops standing idly outside. Again, no idea what was happening.

I went on down to the bank. This time everything worked, but it was slow, first waiting to be served, then being served by another trainee. But the supervisor at least fits with their charm offensive. She was going along the queue asking people what their business was; when she came to me, she recognised me from Wednesday and said, "You're here for your chaps", which took me a moment to process. At the end, I asked whether they had the reference number for the letter

containing the card, so I could check if it was the right one. But no, they couldn't tell me that.

I got lunch and ate it during my office hour. I was able to email Hester reporting success: she should have the money today. Then it was time for the afternoon session with the AS II students. Three of them were there this time, but there was not too much to talk about; I think they will find the introductory ring theory questions easier than the last bit of group theory.

So we finished a bit early and I was able to go down to the sorting office at Whitechapel and pick up the letter, which was indeed my new debit card. There were nice clouds in the sky by this time, and a nearly full moon in the sky the other way.

Back to my office, I sent the e-ticket to the printer in 102, partly because mine is out of toner, partly because I thought I might as well have it in colour. But when I went down to the common room, I found that Bill was printing out the Probability I problem sheet, and had accidentally pressed the print button twice and printed out 500 rather than 250; and following him someone had printed out several copies of a very long form. It was time for Andy's talk, so I had to leave it until afterwards.

He did a good but not brilliant job, and we really tore into him, almost like Chris Monteith on his first visit. Actually this was good because it showed everyone was paying attention, and Andy realised this. But with all the delay he never got talk about the clever stuff he has done on the problem. Never mind, it was much enjoyed, and there were several good questions.

We went and had a drink, and talked about origami, murders, dinosaurs, Iain Sinclair, and various other interesting things. When I had drunk enough I took myself home, ate a cold duck leg and a yoghurt, and subsided for the evening.

20 November

Diary: I wasn't in the mood to rush out this morning, probably because I was dreading Christmas shopping so much. So I had a more than usually leisurely breakfast (a boiled egg, a pot of coffee), dug out the house documents, and finally set off. I realised that I might just as well do the whole lot; James and family are urgent, but if I don't get presents for everyone, I will just have to go through the whole rigmarole again.

I went first to Spitalfields Market: absolutely hopeless. Even the shops outside have been trendified, so the Tibetan shop has been replaced by a fashion shop.

Then to Liverpool Street where I managed to get a couple of things in a Paperchase. I took the Central Line: desperately overcrowded since the District, H&C, Circle and Metropolitan are not running to our part of town today. I got off at Holborn and made my way to Covent Garden. Also very crowded; a toy shop was absolutely hopeless, and most of the jewellery was rubbish. (I saw a nice pendant that I could have got for Debbie but the stallholder was busy with someone else and refused to notice me.) I went to St Martin-in-the Fields but the market was not running. Back to Long Acre, I went in to Stanford's, and got a map of Taiwan and a global warming mug for James. I walked down Neal Street (nothing there any more), then Bloomsbury Street with its plethora of blue plaques, and various squares in their late autumn colours (Bedford, Tavistock, etc.), finally to St Pancras.

I hadn't realised that St Pancras Parish Church (on the south side of Euston Road) is not the same as St Pancras Old Church. It has a portico with wooden doors about thirty feet high behind the huge columns.

By forcing myself to keep at it, I managed to finish the job in St Pancras station. Hamley's has gone downhill, but with a combination of some junk from there and some books from Foyles, I was finally done, and sat down at a cafe for a rather late lunch.

Nothing I got was terribly exciting, but you may be interested in the fact that I bought a nice doormat for Hester and Bob, for a house present rather than a Christmas present. Probably you will get to see it sometime.

I thought about walking home, but it was now a raw cold cheerless day with a bitter wind, so I took the number 205 bus instead. The bus journey was notable for a resident of Booth House with a Santa hat and an unlit cigarette between his teeth blagging his way onto the bus, and a very unpleasant woman who sat down beside me and proceeded to phone a work colleague to have a long and bitchy conversation about another work colleague in which every third sentence was either "D'you know what I mean?" or "It really pisses me off". What a relief when she got off at Whitechapel.

So I went home, had a cup of tea, and read a copy of the Epoch Times that I had managed to pick up in town.

When I felt revived, I tackled the wrapping. Again, I thought, might as well get it all done. A bit of a shock; I discovered that the wrapping paper I had bought, which I thought had random coloured letters on it, actually said "Happy birthday". What the hell, I used it anyway. A bit of a hunt for the Sellotape. But finally the job was done.

Then I had a bath, ate my tea, and read until bedtime.

Business section: A letter for you contained your Barclaycard bill; you are quite substantially in credit, and this credit is added to your credit limit to calculate how much you are allowed to spend on the card.

Financial section: I also got a credit card bill today. Fortunately the airfare didn't make it onto this bill, since my account is down to £3K and would only just have covered it. (By the time this comes to be paid I will have a month's salary in my account.) With it were two leaflets. One advertises two exciting new features of my credit card next year: money paid will go first to items attracting the highest rate of interest; and you can now decline a proposed credit limit increase, and even ask for your limit to be lowered. The other was the legal fine print about these changes, which started off by saying that the changes were because of recent changes to the law.

Religion section: The Wee Frees have just voted to have hymns in their services, for the first time in their history.

Advertising section: Junk mail from Everest explains how you can, with one free phone call, "Make your home infinitely safer – and warmer". Perhaps the nutters who are worried that the LHC will produce a black hole which swallows the earth should be told that Everest propose to create a big bang in their customers' houses.

21 November

Diary: As a result of going to bed too early, I woke too early, and read for a bit until it was time to get up. After breakfast I went out to my office; I wanted to print out my boarding pass for tonight, email Tim about the fact that we own the freehold of our house, send off the last daily bulletin, and look up train times. (I had already established that it would be necessary to take a train and two buses but couldn't remember the details.)

Then back home to pick up the presents and map, and set off for Liverpool Street. I had an hour to make the train which would get me in to Ware at 11:30, the agreed meeting time. But I was a bit nervous about the fact that the buses would probably run late; so, by dint of hurrying, I just caught the one before. It was a train to Waltham Cross. Two railway men were standing by the gates.

They said to me “Stansted Airport”, and started pointing somewhere else. I said “Where?” and they replied “Here”.

Staff later on were less helpful. At Waltham Cross, the person directing us to the bus could simply repeat, to any question about where the bus went, “It stops at all stations”; she had clearly never heard of Ware, so I had to reassure someone that this was indeed the right bus for him. It didn’t help that some of the passengers mis-pronounced station names so badly, so that one person wanted Harrow Town, and another Bishops Stratford.

The driver went by a bizarre route. Once he went down a very long road to a roundabout, did a 180 degree turn, and back along the road. Then he took us round three sides of a square, with numerous speed bumps, past a housing estate and a primary school, just to bring us back to the main road we’d been on.

The next driver wouldn’t tell anyone where he was going, but made us refer to a half-obscured sign on the front of his bus. He grumbled that we had been ten minutes late. But when he got to Ware, he missed the turn to the station, braking when it was far too late, and had to drive into town and turn back at the next roundabout.

So finally I was there, twenty minutes early (or ten minutes late). I went for a small walk and got back at 11:30. A bus came by on the way to Hertford, saying “Mystery Tour” on the dot matrix (but with a small paper sign giving the correct destination). The staff at Liverpool Street said that trains would resume at midday, but there was a sign at Ware saying that the first train would be at 3.

James and family arrived only a minute or two after the agreed time. They drove round the block looking for a parking space, but came back and stopped in the station car park. They got out, Arthur screaming and Lex in a sulk, and set out. Within a short distance all was sweetness and light again.

Lex wanted to see a train, but was happy with boats on the river, while his parents went for a bottle of water. Then we continued downstream, splashing through the puddles, seeing coots, moorhens, and fishermen, until we came to the first lock. We tried to play Poohsticks from the bridge over the lock, but there was no current. We turned off on a little track towards Amwell. On reaching the New River, there was a much better Poohsticks bridge; low, and with a strong current. So we had a game, and went back along the river. We saw a big flock of geese, who went for a swim to let us pass. Then we came to a pub on the other side of the road, so we crossed over and went in.

It was a perfectly acceptable pub. The only slight problem was that Lex, all the way, had been saying that he was going to a pub and he was going to have sausages. The pub had a children’s menu which had lots of other things but not

sausages. Fortunately there were sausages on the grown-up menu, and it was 2-4-1, so it was actually cheaper to get him grown-up sausages. There were three big sausages, with mash and peas, and the sausages were quite spicy; but he finished off all the sausages and made quite a dent in the peas and mash as well. He ate so much that he couldn't finish his jelly and ice cream! I had no such trouble with my rocky road cheesecake.

Then we walked back into the town – Debbie was looking for a kettle, but Ware doesn't seem to have a kettle shop open on a Sunday – and finally turned around and headed for the station. As we approached, the level crossing gates were down, so Lex finally got to see a train, which pleased him very much; and it was going towards Hertford East, so I knew it would be back before long to pick me up. I waved them goodbye and went to catch the train, which went quite expeditiously back to Liverpool Street.

I walked home, getting back about a quarter past 4. Then the problem: my instinct was to set out for the airport straight away, but I knew in fact that I didn't have to leave before half past seven. So I had a bath, packed in leisurely fashion, GIMPed the photos from the day out, drank a cup of milk, and finally set out a bit after half past six.

No Woolwich train was shown, so I got on the first Beckton train. Once we got to Blackwall, there was a Woolwich train two minutes behind ours on the indicator, so I got off and caught it. (The Woolwich trains were starting at Canary Wharf; both Bank and the Stratford branch were closed, so I guess this evened out the traffic on the various lines.

So I got to the airport with what I thought was an hour to wait, but our plane was announced as half an hour late. I bought a sandwich and a smoothie, ate them, then found there was free wi-fi so I logged in and read some email. Hester got the money, but now has got beetles in the wood of her new house; this can be treated, and she is hoping to get a bit knocked off the price as a result. Marie is thinking of starting a blog with her writer friends.

Eventually I went upstairs and through security (they were very casual, and very nearly dropped the white toy on the floor). As I got to the departure lounge they had just announced a gate for our flight, so I went there. They kept us cooped up in a very small gate lounge for quite a while, but eventually we boarded and were soon away. We took off too the east and turned over Barking Creek. There was a big road, possibly the North Circular, then a cloud, then another big road disappearing into nowhere, possibly the M25 going into the tunnel under Epping Forest. Then all was dark as we continued on our way.

Soon enough we were making our descent into Dublin, arriving at the gate

about 20 minutes late. From there it was remarkably quick: no messing around with immigration, I got a very friendly officer. (When I said I was giving a lecture at UCD, he asked what subject, and then said, the politicians and bankers could have done with learning a bit of mathematics years ago. It seems to be a real topic of conversation here; the taxi driver had the radio on, and the disc jockey made a joke about it.) Then hand luggage only, so no delay in the baggage hall; plenty of taxis, so no wait there.

My taxi driver was very nice, and waited until the door opened before driving off, not wanting to abandon me in the middle of nowhere in the middle of a rainy night. But the landlady was very friendly too, showed me my room and didn't hang around afterwards, so I went straight to bed.

22 November

Diary: Awake at 7, watched the light slowly coming in as I dozed for a while. I got up and had a very quick shower before breakfast at 8, full Irish in a pleasant dining room with a large garden behind, an apple tree just outside the window.

Eimaer came to collect me a little after 9, looking a bit bedraggled in the persistent rain. She knows the landlady Margaret, who lent us an umbrella; but almost as soon as we set out, the rain stopped.

My talk will be in the UCD maths department, but the Shannon Institute (where I will spend the day) is across the campus and out the other side. I was installed in office (where the wi-fi connection is much too complicated for my poor brain to understand, involving setting "Proxy" and "Port" which don't appear on any of the white toy's menus. Not to worry, I can live without.

We went upstairs and got coffee, and then Eimear explained to me the work of one of her students, Alison, on looking for analogues of the connection between two-weight projective codes and strongly regular graphs, but over rings rather than fields. There is a nice theory but the downside is that they are rather short of examples. However, the interesting thing to me was that there are classes of norms for which the MacWilliams relations hold; exactly which norms do this seems like an interesting question. I said that I was fascinated about the fact that Curtis Greene's combinatorial proof of MacWilliams for codes over fields, using the Tutte polynomial and matroid duality, hasn't so far been extended to codes over rings, and I would like to see this question re-opened.

She had to go off and lecture, but left me to anyone around. Geoff, who is looking for completely regular codes in the Grassmann scheme (the q -analogue of the Johnson scheme) came to talk. He described his problem in general terms,

and I was only able to make very general remarks, so I suggested that he explain it to me in detail. So he did, and I was able to put him on the right track. He went off absolutely delighted, to write it down while it was fresh in his mind.

This gave me a bit of time on my own, to write notes for myself on homogeneous weights on Frobenius rings. This started me thinking. I had never realised the fact (remarkable coincidence of language) that associate classes in a finite ring define an association scheme. Can one decide for which rings this association scheme is self-dual?

While I was pondering this, Gary McGuire came in. We went up to the common room for another coffee, and he told me about a recent result on Terry Tao's blog. The "uncertainty principle" for finite fields says that, if f is a function from a finite field F to the complex numbers, and g its Fourier transform, then the product of the support sizes of f and g is at least $|F|$. Tao's result is that, for prime fields, the sum of the support sizes is at least $|F| + 1$, a much stronger fact. Gary wondered if it would be true for other fields; I managed to convince him that it wouldn't, since if f is the characteristic function of an additive subgroup of F , then the multiplicative bound is tight.

He went off to meet another visitor, and David Conti came instead. He had visited me earlier in the year; he is a student here but is working under Nigel Boston's supervision on pseudoweights of codes defined by tail-biting trellises. We had quite a long talk; on his main problem I learned more than he did, but I was able to tell him some things about the relation between codes and matroids.

Then it was lunchtime, so we went back up to the cafeteria where they do soup and sandwiches, except that the soup had run out. I had a nice sandwich: several choices (meat/cheese/fish, what kind of meat, what spread, which three kinds of salads), and a glass of tap water.

Back downstairs, I had a long talk to Alison, whose work Eimear had explained to me earlier. Now here is an interesting concurrence of words. Take any finite ring with identity. Two elements x, y are left associates if $y = xu$ for some unit u ; equivalently, if they generate the same left ideal. Now number the associate classes, and call two pairs of elements i -th associates if their difference lies in the i -th associate class. This is an association scheme. More generally, this is true if we replace the ring with any left module over the ring (i.e. code). There is something called "homogeneous weight" on a finite ring, and hence on the set of all n -tuples over a finite ring; associates have the same homogeneous weight, so this gives a coarsening of the "associate association scheme", which is not always itself an association scheme (but sometimes it is).

In particular, she claimed that the following is true. In the scheme which I

think you would call $(p/p) \times q$, p and q distinct primes (a 5-class association scheme), you can fuse two classes to get a 4-class association scheme. This association scheme is defined by the ring \mathbf{Z}_{p^2q} , and in these terms it is easy to specify the classes to be fused; the class of units, and the class of elements which are units mod p^2 and $0 \bmod q$ (if I remember correctly).

Following this, the German guy, whose name I didn't catch, wanted to give me a presentation, based on the slides of his conference talk, about pseudoweights (but just to confuse me, a different but related notion to that of David).

Gary had to interrupt me to take me over to the maths building for my talk. There I met yet another student, a Japanese girl called possibly Kyoko, who does something not a million miles from synchronization.

Anyway, I gave my talk; it was a success, and got some good questions, to some of which I had to say, "Well, the long version that I gave last summer contained a whole lecture on the answer to that question". I referred them to the notes.

After the talk, a Masters student from Galway came up and introduced himself. His supervisor in Galway had seen him last Friday and insisted that he come up to Dublin to go to this talk. He is doing a Masters project on permutation polynomials, having done an undergraduate project on the Rubik cube, and is looking round for somewhere to do a PhD. He is definitely interested in QM, but I fear that if he comes he will want me to supervise him . . .

After half an hour of chat, it was time to go to dinner. Three students and I went down to the UCD bus stop to wait for a taxi, while Eimear went on her bike. The taxi was a while coming, but eventually we were ensconced in the rather nice restaurant.

Over dinner, every time I mentioned a mathematical topic, they wanted a mini-lecture on it; so I expounded on connectivity conditions determined by the Laplacian eigenvalues, on the theory of measurement, and on my attempts to combine the cycle index and Tutte polynomial. It was a very enjoyable dinner, but I was quite tired (though also quite wound up) at the end.

So they took me in a taxi back to the B&B. I went to my room, checked in on-line (of course I couldn't print my boarding card but they gave me the option to pick it up at the airport), read and wrote some email, and went to bed not too late. I need to be up betimes in the morning; they suggested that the airport bus would be the best way to travel at that time of day.

23 November

Diary: With the thought of having to get up early weighing on me, and the air in the bedroom much too hot and dry, I didn't sleep very well. At some point I got up and set my alarm, but I still managed to wake up at 6, half an hour before the alarm went off. I got up at 10 past, left the house at 20 past, and was on the airport bus by half past.

The bus had wi-fi, so I registered and read my email. Most was from my favourite person, now in Canberra, but there was an email from Shahn to say that Mark decided to give the last DTA to a statistics candidate rather than Irene. (Her exam results are against her. If she can't get a DTA, what hope for Volkan??) Warwick want me to be an external examiner; I haven't replied yet but will probably say that I will be within a year of retirement and their rules probably don't allow that. Also one from Cheryl to say she hopes to put in an appearance at Neill's book launch – good!

I'd been told that the bus trip was three quarters of an hour, or an hour if the traffic is bad. In fact it wasn't much over half an hour. I got a boarding card from the machine, went through security, and was in the departure lounge food hall by twenty past seven, with an hour to wait until the gate opens.

During the night I had thought more about these ring association schemes. In retrospect it is clear why $(p/p) \times q$ has a coarsening: it is just $p/(p \times q)$. Is there a calculus of such expressions? I am sure my darling will know, and probably it wouldn't be too hard to work out. Anyway, yesterday was quite an intensive day, switching from topic to topic as one student after another came in to see me, and even over dinner as the conversation turned to various mathematical things. I will be very tired when the last adrenalin is burnt up.

I read for a while, and right on time they let us onto the plane and we were away promptly. I was in an aisle seat, so I took a paper (full of Ireland's troubles, almost no international news) and did the puzzles (crosswords not very good, Sudoku in reverse order of difficulty from that claimed). Soon enough we were descending to the airport, where we landed a few minutes late. (The schedule gave us 90 minutes to Dublin and 80 back, roughly the reverse of the truth. My guess is that the prevailing winds are westerly, but the wind was from the east today.)

A short delay since they parked us off stand and took us in a bus, but once there it was very quick: no immigration, blue channel at Customs, and I was on the DLR platform by 10:30, and walking in the front door just after 11.

As I walked down Stepney Green, two policemen riding horses came the other way. They turned off in the middle and went into the park.

I picked up the mail and brought it in, then I marked the group theory homework (I'd carried it all the way to Dublin and not done it), and set out for work, stopping in the Co-op for a sandwich.

Sam Tarzi had said he wasn't coming, but I'd not saved any time since I'd rearranged my Monday office hour for today. So Adam Bohn came at 2. He has made what looks like an astonishing discovery. If you take a graph which consists of two cliques with some edges between them, and you switch the edges and non-edges between the two cliques, you don't change the splitting field of the chromatic polynomial. He was looking at the case where one of the cliques is quite small (three or four vertices), but maybe it is true in general. So I sent him off to do some more experiments, and a suggestion of what to read and what to try for a proof.

Then it was the group theory class. They had a few questions, not too many, and were happy to finish early, except for Amir Foley who wanted to have a chat about various things, including what to do if he wants to do a PhD in analysis (I said, "Read Simmons' book").

As usual nobody came to my office hour, so I typed the solutions to the last group theory problem sheet, and then went down to Sainsbury's for some food and other stuff. (It seems that the burning in my throat is not just from the dry air, but an incipient cold – that would also explain why I couldn't sleep – so I stocked up on Vitamin C.

Then back home for a hot bath and dinner, and an early night. I had got pasta and sauce at the Co-op, without noticing that one of the two containers of pasta sauce was actually soup (they were identical containers and on the same shelf); so the pasta sauce was a little thinner than usual, but otherwise fine.

Business section: Post for you: a leaflet offering extra points on your Barclay-card (what are points??); a big fat envelope of papers for the AGM of some capitalist organisation, saying "Important: these documents require your immediate attention" in SHOUTING CAPITALS (do you want me to open it?) There is also a Christmas present from Marie, presumably a calendar. I'll save it until you are home.

Entertainment section: A poster has gone up for the next Narnia film: it is *Voyage of the Dawn Treader*. Any guesses as to which one will be next?

Household section: I got some stuff to go in the bath. It is flavoured with Rosemary mixed with an Australian ingredient.

24 November

Diary: I was woken by the telephone just when I had dropped into a deep sleep. It stopped before I got to it; it was a local number. But I realised then I needed some yellow stuff so I went to the kitchen and made some. After that I slept until morning.

It was much colder this morning, and worse to come. The forecast minima for the next few days will be below zero, and on Saturday the maximum will be zero. So there will be frost now, and maybe snow later.

After breakfast I set off for City, after a small delay looking for my glasses. I gave Celia a little tutorial on Markov chains; it was new to her but tied in well with techniques she knew about for exploring the solution space for some problem.

Then Robert came and told us about what he has been up to. He has a conjecture about what the graphs with fewest acyclic orientations look like, and today he had the outline of a proof. There were a couple of places where we weren't convinced. There is a fine line between breaking the flow of his creativity and getting him to be good at writing stuff down. Anyway, my guess is that he is actually further from a proof than he thinks.

Then back home, with a stop for a sandwich in the Co-op, and barely time to eat it before the network coding seminar. I told them about the two points where I think it makes contact with the material on guessing graphs. I got one piece of information I didn't know. Max says that the clique size of the distance at most d graph in the Hamming scheme was calculated explicitly by Rudi Ahlswede, getting a rather complicated case-by-case formula. This will probably be useful to Michael.

Then back to my office, where it was freezing: the heating has failed again.

Nicky Cleaver came to talk about his project. He has almost finished a Maple program which will produce a Steiner triple system of any admissible order. It doesn't do all cases yet, but where it does, it beats Leonard's package by a large margin. (Understandable, since Leonard searches the entire tree until he finds one, whereas Nicky knows where the apple is; but still impressive!)

Then Saad Arshad came to talk about his project. He is having trouble with tensors. His brother gave him a physics book, which annoys him because it is not sufficiently precise. So I gave him a little tutorial on tensors.

Next was Irene. I had to give her the bad news that she lost out to a statistician (strongly backed by Steve Gilmour, it seems) in the competition for the last place. She is quite depressed about this; her exam marks are against her, and she was disinclined to apply again, because her marks will not improve and the same thing will happen. I personally think that we should have a different way of judging someone like her. After all, there are not so many people in the department, even on the teaching staff, who could take a course from Nick Shepherd-Barron and thrive on it. So we left it that I will go back to the DPG, DPM and admissions tutor, and try to arrange for something that she could do which could offset her results in exams many of which didn't interest her; perhaps, she suggested, a 50-page report on étale cohomology and its uses . . .

I told her about my day in Dublin on Monday. She said it was like a chess master playing simultaneous games against a bunch of people. Yes in a way; I felt under an obligation to come up with something clever about a whole bunch of new and different things.

Then Sam Tarzi. He is coming to the end of his tether; he wants to continue pursuing his dreams about triality, but he has a wife and child and needs a job. Don't quite know what will happen. Oh dear.

Among my emails was one from Hester forwarding an internal BP memo about the dangerous situation in Korea at the moment. I had to stare at it for a moment before I realised what was going on. So I replied to say "I'm going to Taiwan, not Korea." She got back and said "I knew that really but I am falling asleep. I should go home." I couldn't but agree.

Incidentally, I have heard nothing further on the Taiwan earthquake. I even went to the BBC news website and searched there; all I found was a cluster of news items from the early 1990s (when apparently there was a serious earthquake there).

Then I came home and had dinner. As I walked home I thought about a diary I kept in the mid 1980s. I was close to the end of my tether then, and the burden of the diary is rather similar to these daily bulletins: far too much to do, immediate reactions needed, no time to stop and think about anything. But what was very present in that diary but not (I think) now was that I was simply unable to cope with non-work stresses while I was under all that pressure. Perhaps I am getting better at coping . . .

There was a Private Eye in the mail when I got home, so I skimmed that before I got down to writing out solutions to the next AS II problem sheet.

Humour section, from Private Eye: A bear sitting on a toilet in the woods reading the newspaper and saying “Perhaps the Pope isn’t a Catholic.” (I don’t know whether you have heard this news. The Pope has just said that use of a condom is OK in some circumstances, e.g. prostitutes. He should know, I suppose.)

Business section: Nothing exciting in your mail here; just a letter from the Woodland Trust. At work, an A4 envelope from the Royal Statistical Society; I haven’t opened it but I peeped in through the window and it seems to be about your subscription. Also, your payslip, and a flyer for CRC textbooks.

Heritage section: After my encounter with John Bunyan last week, I looked at the leaflet; several other worthies are “outside the fence”. Today I went to see Daniel Defoe and William Blake. The first of these, or Daniel De-Foe as the inscription has it, has an obelisk erected by public subscription, and boasts about the number of members of the public who subscribed. Blake has only an ordinary tombstone saying that his remains and those of his wife Catherine Sophia are “nearby”.

Literary section: This gives me the excuse to quote his poem, “Eternity”.

He who binds to himself a joy
Does the winged life destroy;
But he who kisses the joy as it flies
Lives in eternity’s sun rise.

Music section: Tonight I put on Joan Baez while I had dinner. She sings Amazing Grace, and does sing the official words “Was blind but now I see”. So I don’t know where I got my version from. Maybe I really did invent it. (By the way, I followed her with some other female singers, Loreena McKennitt and Judy Collins.)

25 November

Diary: I didn’t sleep very well, being disturbed by dreams about a lovely girl on the other side of the world. I think I may have been slightly feverish.

Today was the first day of the first Ashes test, so I put on the radio at breakfast to hear the news. Interestingly, although all the British commentators had

predicted that the Poms are going to have a walkover this time, it seems that the Australians got the best of the first day's play by a small margin; a bowler who many thought was lucky to make the team took a hat-trick.

I got to work to find the heating situation much worse. I had to sit in my office all morning and half the afternoon, and it was absolutely icy. Not at all what my cold needs. So in the morning I had Mr Tharmarajah again, then Aylin who, flushed with success on the $(2, 3)$ truncations of projective spaces, is now looking at strongly regular multigraphs with the hope of proving $(2, k)$ truncations optimal for arbitrary k .

A few odd minutes in the middle of this gave me time to see that the lovely girl on the other side of the world had sent me a nice photo of herself (there was one yesterday, too), but had some bad news to report about her trip from Adelaide to Canberra.

I took a short lunch break, taking my lecture notes on semidirect product to read over. I was so cold that I decided to have a meat pie. Roger Sugden was there; he was more restrained, and had vegetable pasta.

Then I went back to give the lectures. The lectures went well apart from the inevitable drilling, and I spun the stuff out to last for two hours, so I didn't have to start on factor sets this week. After that, a chat with Volkan, then down to the common room (not much warmer) for Derek Holt's seminar.

It was a lovely talk, starting off with practical details about the matrix group recognition project, and then taking off onto some technical stuff that he and Colva have done on bounds for the minimum number of generators of a matrix group.

Because of my cold (still incipient, but hasn't gone away), I skipped going for a drink, and came home instead. I had a stirfry, and worked for the rest of the evening. I'm tired!

Business news: A letter from British Gas, no action required. Two planning applications, one for lopping two plane trees in Allport Mews, the other for conversion of an outhouse behind 35-37 Stepney Green. I didn't mention another that came last week: it varies an existing approved planning application for a 7-storey building on the other side of the Ocean Estate, to make it look less ugly (I think).

Travel news 1: There is going to be another tube strike starting on Sunday, the one chance I will have in a long while to go for a walk. I was already completely disenchanted with Bob Crow before this; now I would happily string him up from the nearest lamppost.

Travel news 2: In 2007, the Olympic Delivery Authority said:

The implementation of the Transport Plan will ensure that increased demand for transport services during the Games has a minimal impact on existing transport networks and commuters' regular journeys within London. It will also ensure that spectators can easily get to and from London from across the UK, and to competition venues that are located outside of London, such as the venues for the Football competition.

As part of the transport strategy, an Olympic Transport Operations Centre (OTOC) will be established to manage all modes of transport for the Games Family, spectators, workforce, and for all those travelling for reasons unconnected with the Games. This will help Transport for London, other transport operators, the police, local authorities and those running the Games to keep London and the UK moving.

So what are they saying now? They have effectively told us all not even to try using public transport during the Olympics. They anticipate delays of more than an hour at some of the busiest stations, and provide this little list:

Closed: Pudding Mill Lane

No exit: West Silvertown, Pontoon Dock, Woolwich Arsenal

Significant additional delays of over an hour: Stratford Regional, West Ham, North Greenwich, Charlton, Mile End, Canary Wharf, Bank, West Brompton

Significant additional delays of up to an hour: Stratford International, Earl's Court, Green Park, Victoria, Baker Street, Bond Street, Marble Arch, Waterloo, St Pancras International, Liverpool Street, Maze Hill, Westcombe Park, King George V, Woolwich Dockyard

Businesses are strongly urged to make alternative arrangements, to let staff work at home, etc.

26 November

Diary: I slept much better, and awoke to a lovely clear morning, but bitterly cold. When I got in to work, the heating was still not working, and the place was like an icebox.

I kept warm as best I could by working flat out to get the remaining Alg Str II problem sheets prepared and do various other maintenance jobs. At 10, Alex came. I got a bit of a shock when he sat down, clearly wanting a serious talk, and said that he found himself unable to work at the moment and thought he should take some time out. I told him to think about it for a week, since this kind of thing is no longer as straightforward as it once was. I also said that, if he should decide not to do this, or even if he does and wants a possibility of returning, it is essential that he writes something up. (I have been pestering him to do this for some time.) We agreed to return to the topic next week.

Then up to see the AS II students. It was the usual two, though all four had submitted coursework, and mostly the marks were higher than of late. We talked about various things that are not spelt out in the notes, such as the details in the proof of the Correspondence Theorem, and the difference between positive and negative applications of the Subring/Ideal tests.

I had lunch with Rob, Leonard and Graham White. I compromised on the soup (wild mushroom, very nice and very warming), and then had coffee before returning to my office for an office hour. Andy was not back from New York yet, so Aylin asked if she could have his time. She has found in the literature some optimization technique that allows her to improve some of her results: she thinks she can remove the binary condition in her present optimality result, and possibly do arbitrary $(2,k)$ truncations of projective space. Then back upstairs for the AS II class. Neither of them had looked at the next problem sheet, so we spent most of the time going over the last one, but managed to fill up the time quite nicely.

In the common room, Shahn told me some disturbing things about management's attitude to the various MSc courses, which Thomas gave me some more rumours on later. Mostly we sat round grumbling about the cold, and threatening to emulate the students and go and demonstrate outside the bureaucrats' offices. Richard Nelson told us an incredible story about the boilers, later confirmed by Bill White: There are four boilers in the building, all broken; the expensive Essex engineers have dismantled all four and are trying to build two working boilers out of the parts(!).

Aylin gave a not terribly good talk about a nice theorem, using a wide variety of techniques. The only problem was that she had been brave (or foolhardy) and included something she had only worked out today, and it had a hole in it. I am sure that the whole thing is right. Anyway, the theorem is true in an important special case.

We went over to the bar to find pandemonium, but (to offset that) lots of nice free food. It appears it was a party to celebrate the fact that SIS has lasted until

week 9 of the semester without any really serious crash. After a while, the noise level got too much, so I went home. I didn't need to eat after all the food I'd scoffed: an orange and a glass of milk was enough. Then I puzzled for a while and went to bed.

Puzzle section:

Jourdan'hew, trench consomm UN aphrodisiaque (6)

Politics section: This is what I have gleaned about management (Boris'?) thoughts about the MSc courses.

The three (Maths, Applied Statistics, and Financial Mathematics (not dead yet)) will all have different fees, so there will be draconian rules about students on one course not taking modules from another course. This despite the fact that our Financial Maths offering will almost certainly be scorned by any students who know what they are doing and will have to reduce its fees, while the rise in undergraduate fees will eat away at the differential.

Also, Boris wants to streamline the course structure. So he will have just one Combinatorics course (and similarly in the other subjects). I can think of a raft of reasons why this is stupid, but so can you.

Shahn, to his credit, is opposed to this nonsense.

Business section: You have:

- A letter, presumably identical to one I got, from Austin-Chapel, the College financial advisers, offering their services
- A copy of "Significance" (which I shall read).

27 November

Diary: Up early: LTCC open day, and I had forgotten to look up where it is. I remembered only that it wasn't in De Morgan House or where it was last year in UCL.

I had a leisurely breakfast with a boiled egg and two cups of coffee. Then in to the mines to check. It was in the Wellcome building at Euston.

I set off to walk into town, passing in Whitechapel a sign saying:

Beauty treatment
Ladies only

At St Paul's, I decided to vary my usual route and go down Ludgate Hill and along Fleet Street instead. But there was no way through the churchyard, so I had to make a bit of a detour.

I went to Covent Garden, thinking to have another try at buying what I failed to buy last week, as a birthday present for Hester. The stall had moved, but I located it eventually. The stallholder was laying out her stock. She saw me, said Hello, and went back to her work, while I stood there patiently waiting. Eventually she twigged that I actually wanted to do business with her. I told her that she had treated me the same way a week ago. But she did sell me the pendant.

Then I retraced my steps from last week, stopping for a coffee in a little ULU cafe before going on to Euston Road and in to the Wellcome building. They had a bookshop where I did the final Christmas shopping and got a book for myself as well, about European science in the Middle Ages. It will annoy me because it is so defensive of the Church, ("the Church ... certainly never burnt anyone at the stake for scientific ideas" – true in a Jesuitical sense) but it has a little bit (depressingly little) about people like Ockham, Buridan and Oresme.

I found my way downstairs to the seminar room where the meeting was to be. Everyone was there but the event hadn't started yet. There were two talks by Claire from Kent (mathematical physics) and Giovanni from Imperial (statistics). The first was lovely. She said "I couldn't do maths in PowerPoint so I used Beamer", and proceeded to tell us how she used results from statistical mechanics to solve an old problem in quantum theory (whether the eigenvalues of the Schrödinger operator for a generalisation of the simple harmonic oscillator are necessarily real. (They are.) The second was in PowerPoint, with horrid effects on the screen, so I read my book instead.

At (late) lunch I talked to a student from Bristol who wants to come to Queen Mary to do combinatorics. I must have made a good impression: she seemed even keener after the conversation than before. I talked to various other people as well and spread the word.

After lunch, there was a talk by Steve Noble, on the Tutte polynomial (very nice, and good use of Beamer), then a question and answer session (the students were very concerned about getting grants, but asked a lot of other good questions too), and more chat to various people. I think a lot of good was done.

Then I walked home: it was getting dark, so I didn't head for the canal tow-path, and I wanted to steer a course between Islington and the Barbican, which

I managed to do, by keeping the fading daylight behind me. When it faded too far to be useful, I was coming out onto City Road just before Old Street, back on familiar streets; I was back home in less than an hour and a half.

I just ate sandwiches for my tea, and did some puzzles until bedtime.

28 November

Diary: I woke just after midnight: a perfect half moon had just popped up and was shining in my face, and an animal (probably a fox) was calling out. I wished (not for the first time) that I had my darling beside me.

Then I slept until nearly time to get up. The fox was calling again, and was answered once by the bark of a dog.

I had breakfast and set out. All the tubes except the Harrow to Uxbridge line were running, but I was unable to take advantage of this good fortune because of Bob Crow and his thugs. In order to escape them, I decided to walk round Canvey Island instead of going to the hills; I can come back on our local line to the station formerly known as Stepney East.

I took the tube to Upminster, knowing that there wouldn't be anyone selling tickets at Limehouse. There was a woman almost opposite me who was muttering something very fast without a break, clearly not talking on the phone. All became clear when she got up and gave each of the (few) passengers in the carriage a little leaflet saying, Are you saved? As she handed it over, she said, "God bless you". I decided that if being saved meant being like her I would really rather not.

At Upminster I ducked out and got a ticket, and caught the train to Benfleet. In the courtyard, some of the leaves had looked a bit frostbitten, but the further out of London we got, the heavier the frost became; parts of Essex looked as if there had been snow. When I got off at Benfleet, I could see that the ice crystals were quite large; presumably they had been growing for several days.

From the bridge, I saw two egrets and a heron in the stream. The nearer egret was very skittish, and flew away each time I pointed a camera at him.

On the first stretch, it was clear that the tide was out and the mud was frozen. A few lapwings walked on the solid mud, and oystercatchers flew around kleeping.

One interesting thing: when I saw lapwings first, I instantly thought "Lapwings", and similarly for oystercatchers; there was no pause to think first "What is that bird?" I must be getting the hang of at least some waders.

Several people came past and belied the reputation of Essex folk ("Grays by name and grey by nature") by having a short conversation. One jogger even turned around just after passing me, and had a short conversation in both directions.

I got to the eating place on the other side of the island at 11:30, really a bit early for lunch but I'd had an early breakfast. The fish and chip shop seems to be gone, so I went to the Labworth Cafe, the one right on the sea wall. As I started reading the menu on the wall, they hurried over with the breakfast menu: they don't start lunch until 12. So I had bacon and scrambled eggs, toast and coffee, and continued on my way with a spring in my step.

As I stepped out of the cafe, the water in the estuary was mirror-smooth. It must have been the turning of the tide. On the Kent side, a fuzzy grey cloud that looked like snow was threatening, but moving very slowly in the still air; there was nice light from the west. There were lots of gulls, ducks, cormorants, and oystercatchers, and the little brown birds that might be turnstones.

On the bank of the creek I came to a huge flock of black-backed gulls, more than I have ever seen together in one place. There were also lots of big brown birds flying over, which may have been juvenile black-backed gulls. I saw another egret in the creek on the landward side, and a heron with the gulls.

Finally I was back; I went to the station and caught the train back to Limehouse and walked home, stopping at Costcutter for a loaf of nice-looking bread.

I made a cup of tea, and GIMPed some photos and wrote up the walk. Then I had a bath, cooked pasta and vegetables for my tea, and got down to write up the next section of group theory notes, on extensions. As I did so, I wondered whether it is a bit hard; but I think if I go nice and slowly it will probably be OK.

Technology section: I saw a man trying to operate a mobile phone and a cigarette lighter with the same hand. Surely there is a business opportunity there!

29 November

Diary: Strike day. no problem for me. I met up with Jason as I was walking in just before 9. We speculated on the heating. It turned out that it is working, but not very well. (I took off my scarf at 10 but left my coat on until 11.)

I compiled the group theory notes and sent them to the printer in the mail room, only to find out much later that it was on the blink. Looking at email, it was borne home to me how far behind I'd fallen last week: it was simply too cold to sit working in my icebox of an office getting things done. The urgent job was the presentation for the international review. So I spent the better part of the day on that, getting it finished on time; but none of the emails told me where to send it; and by the time I found out, the recipient at EPSRC had gone home and wouldn't

be in until Wednesday. Not very good.

With all this, my lunch was a sandwich from the Students Union. I got a Guardian, they being one of the papers that were publishing the WikiLeaks documents. Haven't read it yet, but the assessment I'd heard on the radio (that none of the revelations was in the least surprising, unlike some of the horrific things WikiLeaks published about the conduct of the wars in Iraq and Afghanistan.

The seminar was by Chris Sangwin from Birmingham, who is also apparently employed by MSOR. (I didn't get the chance to ask him about the fate of MSOR; but on the other bad news that came around at the same time, apparently the Schrödinger Institute has been saved by being taken over by the University of Vienna.

It was a very thought-provoking seminar, about computer-aided assessment. Was Francis there? Unsurprisingly no. Was Boris there? Unsurprisingly no. Was Dave there? Unsurprisingly no. Was Franco there? I was surprised that he didn't turn up, since he has thought hard about these issues and would have certainly contributed to the discussion.

What he is trying to do is to go beyond multiple-choice questions, and get the computer to check the student's answer (typed in mathematical notation) is correct. This raises difficult issues, since even in quite simple cases it is not known whether the problem of testing whether two formulae are equal is solvable, and in some slightly more complicated cases it is known not to be. (In practice this is not a problem.) Also he wants to allow questions of the form, Derive equations connecting the variables (from, say, a word problem.) If the equations are polynomial, he can employ Buchberger's algorithm to find a standard Gröbner basis for the ideal generated by the polynomials and see whether it coincides with the teacher's answer.

There is also the problem that, given there is a computer algebra system in the background, the students might simply type the question in and let the computer evaluate it. He uses Macsyma as his computer algebra system: apparently it has the property that every operation can be either a noun or a verb, so he can block this sort of cleverness.

After a drink, we went to the Japanese restaurant; I let myself be persuaded to go along, which stopped it being an all-Birmingham occasion. A nice evening, and then I went home. But no rest for the wicked, I'm afraid – I had group theory homework to mark!

Business section: Mail for you:

- A flyer for a personalised card containing real flowers, only £40 (I've thrown it away already)
- A flyer for PPP Healthcare (ditto)
- Bank statement for Co-op Current account (you are still solvent)
- Renewal notice from the IMS (10% discount if you pay by 31 December, sorry December 31)

30 November

Diary: Finally the snow arrived. I woke up to find a light dusting of snow, and it was falling while I was having breakfast. When I set off, wet flakes were falling and melting as they hit the ground. During the day, it snowed on and off, but no heavy drifts have built up.

I worked hard after I got to work writing out solutions to the group theory problems. I must admit that they were a bit rushed. There was also quite a lot of mail, and Mr Tharmarajah, to deal with.

So it was a sandwich from the students' union before the afternoon stint.

Sam Tarzi came and we tried to go through his triality proof. For his sake, I must get somewhere with it before the end of the week. Then Adam came. He has made his conjecture much more explicit. If a graph consists of two cliques with some connecting edges, then the chromatic polynomial has some linear factors and one factor f whose degree is the size of the smaller clique. If we complement edges between the cliques, we get a factor g which he conjectures to satisfy $g(x) = f(N - x)$ for some explicit value N . This made me think of Stanley's interpretation of the value of the chromatic polynomial at negative integers. So there is some hope of proving the conjecture. I told him to look for Stanley's paper, and also try to prove it in the case where f and g are quadratic (should be doable) or cubic.

Then I went to see the Group Theory class. We talked about many things, including an open conjecture: a finite group has the property that the number of endomorphisms is equal to the number of isomorphisms between subgroups if and only if it is abelian.

I decided then to go home. I had to do some shopping, and I wanted to have a preliminary skirmish at tidying the house. But I sat down in the chair and found myself nodding off, so didn't get as much done as I had hoped.

1 December

Diary: I found maybe the explanation for my waking up at night lately. Usually when I wake up, the light in the bedroom behind ours is on. Last night, when I came back from the bathroom, I noticed that the inhabitant was getting dressed, and next time I woke the light was off. So perhaps it is the light, or perhaps an alarm, that wakes me – quite unconsciously.

It had snowed a bit more in the night, but there was still only a very light dusting.

I turned over the calendar. It has a nice picture of two trees on the Banks Peninsula in the sunshine. Even better, it told me that my darling is coming home this month. Among the many other joys this brings, I will sleep better when she is here.

I took out three kinds of bags from the kitchen. Then I left for the Cass Business School. I left a couple of minutes early in case the snow made for difficult walking; but, apart from the park and a short stretch on Hanbury Street, it had all been well gritted and there was no problem at all. I'd hoped that Bunhill Fields would be really picturesque, but there was almost no snow there. (Celia said that out in the suburbs there is more; she lives in Mill Hill.)

Rob was off with a bad cold. (Incidentally, I fought off the cold that was coming on last week without any ill effects to speak of. Either the echinoderm, or the vitamin C, seems to do some good.) So Celia and I considered our Markov chain further and convinced ourselves that the nicest possible thing is true: you can get from any acyclic orientation of a graph to any other by simply reversing (in an appropriate order) the edges where the orientations differ, not touching the ones where they agree. I think it is OK, but I had a small crisis of conscience later when I came to write it up.

On my way back to college I passed Søren, whose first words were “Did you get my email?” I had to say, of course I didn't. His message was that he had been called urgently away and would not be talking in the network coding seminar. So I had an extra hour, and could have a more leisurely lunch than usual.

I went to the Students Union for the third time this week. But, oh joy, the Bundaberg ginger beer was back after a long absence, so I had one with my sandwich.

There was an email from my darling telling me that she will arrive at Heathrow at 0715 on Sunday. Of course, my first reaction was “Can I get there to meet her?” It turns out to be impossible by public transport on a Sunday. The first Piccadilly line train gets to Terminal 5 at 0714, but it only starts at Acton Town, and you

can't get to Acton Town on the District line until much later.

Robert Bailey had sent proofs of our paper for BLMS, with some grumbles about how they had screwed it up. I didn't want to send 35 pages to my printer, and the one in the mail room is still on the blink (as it has been for most of the last two weeks), so I didn't look. He told me that the Erdős Number website updated its data in October, but hasn't recognised that he has Erdős number 2, presumably because they have confused him with another R Bailey . . .

Irene came for her regular meeting. She told me, in the course of our conversation, that if I were to pass the word around that I was interested in a move, many universities would jump at the chance. If only . . .

After that I read my email and processed a few more before going home. There was one from Tatiana, saying that the Bulgarian government are going to shut down their Academy of Sciences, and asking me to sign a petition. So I put the address of the petition on my blog, which will probably do more good. Then home, through the cold air.

Since November is over, I copied my November photos to the silver toy before dinner. I made a salmon parcel (haven't had one for a while). Then some more tidying. Jon Hall is staying here tomorrow, since Karen failed to find College accommodation for him. I don't think I believe in this College accommodation. She has almost never succeeded in getting a room for any visitor of mine!

This will be the last daily bulletin that I will send, because the beloved recipient will not be reading her email after the day after tomorrow. It is a bit hard coming to the end of such a series, since it has become a sort of habit now. But sitting on the sofa talking will be better.

Business section: You have:

- Two letters from the Co-op, one giving your title as Dr, the other as Mrs. Each contains the statement for a fixed term deposit account (different accounts).
- A letter from Henderson which doesn't seem to say anything.

Sudden enlightenment section: On my way to Bunhill, I pass a photographic printing business by the name of "digitalbums". First time, I noticed it, thought "What an odd name", and thought no more about it; after that I didn't even notice it until today, when it finally struck me why it was called that. So I spent a few minutes in interesting speculation on how else it might be interpreted.

Puzzle section: A couple of easy ones to finish the series:

Having confused “kepi” with “wadi”, I seek clarification here (9)

Want pig to interrupt junior theologian’s old teaching aid (10)