

# The Postgraduate

## Prologue

NARRATOR: Welcome, one and all to our little microclimate of departmental life. Perhaps many of you have forgotten what a traumatic experience it can be to get your PhD. We hope you will live through those traumas again with us as we follow the fortunes of a young student as he struggles to get his PhD. I will be your guide and your narrator. I've just been to a book sale, thought I'd brush up on my story telling for the occasion. Now, let's see, where shall I start (*fumbles through lots of books, puffs himself up ready to be the grand story teller, but is put off his stride by entrance of PG*)

PG: Er, hello, excuse me.

NARRATOR: (*hissing*) You're not supposed to be on yet.

PG: Er, I'm not quite sure where I'm supposed to be. I'm new here you see.

NARRATOR: Well get off, and don't come on again 'till I say (*looks at watch*). The first scene's about to start.

PG: OK, er, sorry.

NARRATOR: (*consults his books again*) Hang on a minute. OK. Right I'll start with this one. (*grandly*) A Christmas instability, by Charney and Dickens. And so to begin, as another day dawns on the departmental office, the lair of the revered guru of atmospheric science, Ebenezer Hoskins....

## Scene 1: Departmental Office

SEC1: Morning.

SEC2 Morning, lovely day isn't it ?

SEC1 Ooooooh yes, lovely day.

SEC2 Is the professor in yet ?

SEC1 Oooooh no, I don't think he'll be in for a while. He's a bit jet lagged (*signals drinking motion*) you know what I mean ?

SEC2: Well, what are we going to tell people then ?

SEC1: Have you got the board ?

SEC2: (*produces a clip board*) yes, here it is, now let's see (*shuts eyes and points at random*) ah here we are, NERC meeting.

SEC1: NERC meeting ? We had that yesterday.

SEC2: Never mind, I think I can hear him coming now. (*enter Prof. Hoskins, with false beard, on a bicycle*)

SECS 1+2: Morning professor.

PROF: Humbug humbug humbug. Bloody Hamburg. Why do they always send me to Hamburg ? I'm going to sleep for a while OK ? No visitors ! (*enter new PG student*)

PG: (*knocks at imaginary door*)

SECS 1+2: Come in.

PG: Hello, I've come to see the professor, it's about the PhD.

SEC1: Ooooooh he's very busy you know.

SEC2: Very busy.

PG: Yes but I need to see him, don't I ?

SEC1: You're new here aren't you dear ?

PG: Yes I just arrived today.

SEC1: Well I'm afraid you're going to have to make an appointment. Lets see. Best we can do is the 25th of December.

PG: But that's Christmas day !

SEC1: Yes, thats right Christmas day, .... , 1997.

SEC2: I think it's lunch time.

SEC1: Yes come on *(two secretaries pick up their desks and exit)*

PROF: *(emerging from his office, rubbing his eyes, offers his hand)* Hello, hello, very pleased to meet you, you're from NERC aren't you ?

PG: No, I've come about the PhD.

PROF: You mean you haven't got any money for me ?

PG: *(bemused)* No.

PROF: Oh well, hope you settle in all right. You'll be based in that cardboard box over there with those other 15 people. Try not to use the photocopier too much and, er....., I'll see you at the viva OK ? Now run along there's a good boy.

## Scene 2: Fieldwork

*(enter PG, but stays to one side and looks across the stage with a huge pair of binoculars)*

NARRATOR : *(stays off stage)* And so the weeks turns into months and the months turn into years. The Queens head turns into the Three Tuns and eventually our hero realises that he needs to do a bit of work. So he sets off, out into the field to observe and to study. *(adopts caricature David Attenborough voice)* And here we are in the meteorological jungle. In amongst the fronts and the cyclones and if we are very quiet, and we stand with our backs to the wind and keep the southern hemisphere to our left, who knows what we might see. *(enter upper level Rossby wave)*

Ah, and here is our first visitor to the water hole, a rare beast indeed. An upper level Rossby wave. Note the distinctive markings . And, of course, at this time of the year she'll be looking for a mate. *(enter first lower level R wave)* And here comes a suitor now, a lower level Rossby wave. What kind of interaction can we expect from these two. We can see a bit of mutual amplification but it's only a transient encounter. *(exit LLRW1, enter LLWR2)*. Lets see if our next suitor fares better as they go into their instinctive courtship display. yes I think they're spinning up together. It is, indeed, a privilege to be a witness to such a rare event. they're actually locking on. And in time this coupling might give rise to a whole family of solutions, among them the gravity wave. *(exit all Rossby waves, enter Gravity wave)*.

And here comes the Gravity wave now. Note his distinctive sideways gate, he always travels this way, perpendicular to his direction of propagation. And the most remarkable feature of his behaviour is, on entering the stratosphere he amplifies, breaks up, and ends up in drag *(gravity wave puts on a dress at this stage, then exits)*.

There are, of course, many other interesting phenomena at the water hole by now. The Squaw line *(enter/exit squaw line, enter MCC)* And this poor fellow has psychological problems. In fact he's got a mesoscale convective complex. And this chap sitting all alone sulking with nobody to talk to is, of course, a soliton *(enter/exit soliton, enter Tracey Transport)*.

Wait a moment, this isn't in the guide book.

PG : *(suddenly shows interest, gets up and walks towards TT)*. Hello, What's your name?

TT : Tracey. Tracey Transport.

PG : My place?

TT : OK.

### Scene 3: Current Romance

*(enter Keith, very game show hostish addresses audience)*

KEITH : Hello, good evening and welcome to another edition of your favourite weekly event, Current Romance!! First I'd like to ask, is there any news of romances overseas? Come on, don't be shy, any foreign girl friends or boyfriends you would like to own up to? Any letters from abroad ? *(by now various thing are going on behind Keith which he points to which a stick. PG and TT are standing, hands clasped, staring at each others eyes)*

Well the big news this week is that there 's been a sudden warming event between PG Student and Tracey Transport. I think we can forecast some frontal instability, with high pressure developing in the south. And if there is a sufficient supply of moisture to the system, later on we can expect some explosive cyclogenesis perhaps even leading to thermal overturning and deep convection.

However, the long range forecast is not so promising, with eventual breakdown of the system *(at this point PG and TT appear to argue, she slaps his face and exits with a mysterious stranger dressed as a biker)* leading to deep depression as Tracey Transport is carried off by a transient who goes by the name of Eddy Flux. Well, thats all for this week, so it's good night from me, and its bad luck to him *(points at PG and exits, PG is left alone, abandoned on the stage)*

### Scene 4: Computing

PG: Oh well, my love life is in tatters but maybe I can get some sense out of the computer *(sits down at terminal and turns it on)*

COMP: *(voice offstage)* Welcome to the mainframe. I think I ought to warn you I'm feeling very depressed. So I'm going to go slowly OK. Tell me your password.

PG: *(dejectedly)* Tracey. Tracey Transport.

COMP: A little upset are we ?

PG: Request change of password.

COMP: Oh I see, woman trouble.

PG: Just shut up and run my job will you.

COMP: I've got some electronic mail for you.

PG: Oh yeah. What does it say ?

COMP: Something about a conference.

PG: Great. I need a holiday.

COMP: There's a snag.

PG: What.

COMP: Funding. It's all been allocated for the professor's 5 star hotel.

PG: So I'm going to have to write begging letters am I ?

COMP: Yup.

PG: No. Hang on, there's an easier way. Come on, you're coming with me. *(picks up computer and carries it off)*

### Scene 5: Fund Raising - Jack and the Beanstalk

NARRATOR: And so our hero succumbs to the commercialism that has corrupted so many others who have climbed the academic ladder ahead of him. And true to the spirit of his university, he decides to make a quick buck.

WIDE BOY: (*half Fagin, half used car salesman*) So. What've you go for me my son.

PG: It's a PC.

WB: Yes yes but what sort ? 286, 386, 486 injection ?

PG: Eeeeerm, It's got a turbo on it.

WB: Good good, very good. How many MIPs ? How many Megaflops ?

PG: It's worth a thousand pounds.

WB: (*laughs derisively*) I'll tell you what I'll do my son. 'Cause I'm feeling generous, I'll do you a favour. I'll take this computer off yer 'ands, and I won't even ask ya fer nuffin. If fact, I'll even throw in a free weekend in my time share holloday villa in France.

PG: You must be joking !

WB: The only other think I can offer you is this tin of beans. Magic beans mind.

PG: You drive a hard bargain.

WB: You bet I do. I had one of your satellite people in here the other day. What was his name. Something like Dugford, or Mildale. Said he wanted to make tea for 20 people. So I sold him a magic tea bag. Funny thing is, he thought it worked !

PG: But how will I get to the conference.

WB: Daaaaaaan't worry ! These beans'll get you there naaaaaaaa problem. (*exits laughing*)

PG: (*to Narrator*) So what am I supposed to do with these ?

NARRATOR: (*frantically consulting his books*) Er,... Hang on a minute,.... Ah yes, You're supposed to plant them.

PG: (*plants the bean can. Immediately someone throw a beanstalk onto the stage or a pot plant or something, PG is amazed*) Goodness me ! A beanstalk !

NARRATOR: Now climb it! And it will take you to another world ! (*other world type music plays*)

## Scene 6: The Conference at the top of the beanstalk

PG: (*looking at KEN, who is sleeping*) Who's he ?

NARRATOR: I don't know. But maybe he can tell you where this conference is supposed to be.

PG: I'll have to wake him up first.

NARRATOR: Yes, it says here that he's been asleep for 100 years, and to wake him you have to kiss him.

PG+NARRATOR: (*looking at each other*) Naaaaaaaah....

PG: I could try telling him he's behind in the current weather game.

KEN: (*stirring*) Fee fi fo fum. Oh dear oh deary me. Its all go isn't it.

PG: Hello, excuse me, are we the top of the beanstalk ?

KEN: Oh yes. If that's what you want. This is the top of the beanstalk as far as I'm concerned. (*looks at watch*) Oh well, I suppose I'd better go and take another reading.

PG: No, wait. Isn't there supposed to be a conference here ?

KEN: Oh yes, don't worry, the convener's about to arrive. Its all go here you know. I don't bother with these things myself. Too many parallel sessions. I never know which bar to go to. (*exits*)

CONVENER: (*enters looking flustered*) Good morning everybody, glad you could make it, sorry about the cock ups with the bus tickets and the hotels and everything, we're trying to sort it out, believe me, we've got an army of PhD students onto it and one of them speaks English. Anyway, I'd like to open the session with er, who's first, hang on, is the invited

speaker here ? *(pause)* Professor Bignoise ? *(long pause)* Oh shit. OK, I tell you what we'll do, we'll take it from the wednesday afternoon coffee break in reverse order. Is that clear ? So erm *(consulting pieces of paper)* PG student. Is PG student here ?

PG: *(excitedly)* Yes, thats me !

CONVENER: Well, off you go then !

PG: *(extremely nervous)* OK, err, I'd like to talk to you about ....erm... some work I've been doing on Isentropic ....errrm... potential.....

BIGNOISE: *(bounds into the room, bustling, loud, American)* Damn sorry I'm late. Goddam a-rab terrorist bomb scare goddammit.

CONVENER: Professor Bignoise !

BIGNOISE: Damned pleased to meet ya again Carlos ! *(hearty handshake)* Lets get this show on the road ! *(literally pushes PG out of the way, and starts to talk with outrageous self confidence)* Well, ladies and gentlemen. just a few thoughts I had in the bath this morning.....

## Scene 7: Peter Pan and the Genie

NARRATOR: And so all that is left for our hero now is to return home, upstaged and dejected. *(to PG)* Come on, lets get on with the story. You've got a thesis to write haven't you ?

PG: I suppose so

NARRATOR: Well I know a man who can help you. He's bound to be in the department, he's there all the time, especially at night, *(consults book)* some say he's discovered the secret of eternal youth. Others say he'll just never grow up. But most people agree, he'll never get a permanent position. And after many years of poverty, he's even starting to fall behing with the payments on his bicycle. He's called Peter Post-doc. How's it going, Peter ?

PP: Not bad, I've just got this new computer so I can work in bed. I got it from a dodgy dealer, but it seems to work.

PG: Hey ! Thats mine ! Hey, Peter, do you mind if i borrow it for a day or two ? I've got to write my thesis.

PP: What's it worth ?

PG: *(shrewdly)* You can borrow my bicycle for a day.

PP: OK then. *(exits, happy)*

PG: *(sits down at computer)* Hello again, its me.

COMP: Password please.

PG: Oh, come on, we haven't got time for all that, goodness me, how did your screen get this dirty ? No wonder Peter Post-doc has to wear glasses, let me give you a clean. *(rubs screen with handkerchief).*

COMP: *(walks onto stage wearing a turban)* I am the genie of computers. Your wish is my command.

PG: *(amazed)* What !!!!

COMP: You have released the Genie! In every computer there is a spirit of helpfulness and cooperation, which has never before been released..... until now. Just name your wish and I will grant it.

PG: Well I'd like to get this thesis out of the way.

COMP: Oh that's easy. *(a huge book gets thrown onto the floor near PG from offstage)*

## Scene 8: The Viva

NARRATOR: Finally the big day comes. Our student is in the dock (*enter PG, wearing handcuffs*). The defence council enters (*enter PROF, on bicycle*). The external examiner arrives and the session begins (*enter external examiner, wearing jacket half off, with silly long false beard and an OHP slide in his hand*).

EXT: You are, PG student, of no fixed office.

PG: I am.

EXT: The defendant is brought before this court for a long list of offences. he is a man of previous academic record, no stranger to the position in which he now finds himself. Indeed he has spent most of his life in institutions.

VOICE OFF: I can't hear you at the back. What are the axes on that graph ?

EXT: (*cups his hands behind his ears*) Try doing this.

VOICE OFF: But what's the point ? What have we learned from all this ?

EXT: I was just coming to that. PG student. You are charged with the heinous crime of conspiracy and collaboration. You have, have you not, spent the last three years plotting. To be precise, plotting potential vorticity on isentropic surfaces. Before I pass sentence, have you anything to say in your defence ?

PG: Well there was just one thing.....(*EXT uncovers a display which has  $PV = \frac{(f+\xi)}{\partial\theta/\partial p}$  written on it*)

(*enter the two secretaries, one each side of PG, with guitars*)

## Song: The PV Song

When I find myself in times of trouble,  
Professor Hoskins comes to me,  
Speaking words of wisdom, PV.  
And in my hour of Darkness,  
Baroclinic instability,  
There will be an answer, PV.

PV PV PV PV,  
There will be an answer, PV.

And when the broken contours appear,  
With cascading enstrophy,  
There will be a closure, PV.  
And when it's less than zero,  
And it's lost its ellipticity,  
You just can't invert it, PV.

PV PV PV PV,  
You just can't invert it, PV.

And when the night is cloudy,  
It mixes with the Theta E,  
A diabatic source, of PV.  
Flowing through the isentropes,  
Around the world and back to me,  
But it all adds up to zero, PV.

PV PV PV PV,  
It all adds up to nothing, PV.

**THE END**