

An interview with John Widdicombe

Conducted by Dafydd Walters and Saffron
Whitehead

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John Widdicombe photographed by Harold Lewis in the 1950s.
From The Physiological Society's photograph collection.

This interview with John Widdicombe (1925–2011; JW) was conducted by Dafydd Walters (DW) and Saffron Whitehead (SW) on 4 June 2008. His obituary by Saffron Whitehead can be found in *Physiology News* (85, pp. 54–55) and there is also a Living History article by him in *Physiology News* (84, pp. 7–10).

John Widdicombe studied medicine at New College, Oxford 1943–46, and then went to St Bartholomew's Hospital, London ('Bart's') for his clinical training, 1946–49. From 1950 to 1953 he was a Junior Research Fellow at Queen's College, Oxford while taking his DPhil at the Nuffield Institute for Medical Research under Geoffrey Dawes. He recalled that 'it was Queen's who paid me £450 a year and the MRC was £150'. In 1953 he was conscripted and worked at Porton Down (the Microbiological Research Department, Ministry of Supply), after which in 1955 he went to St Bartholomew's Hospital Medical College as a lecturer. In 1960 he went on sabbatical to the Cardiovascular Research Institute (CVRI) of the University of California, San Francisco. From 1961 to 1970 he was at Oxford as a lecturer in physiology and Fellow of New College. From 1972 to his retirement he was Professor of Physiology at St George's Hospital Medical School. He was Treasurer of The Physiological Society 1990–96.

DW: What we'd like to do, if it's possible, is to start at the very beginning, if we could [...] where you were brought up, where you went to school, to see if there are any influences then that actually shaped your career. Perhaps you'd like to tell us where you hail from?

JW: Well, I was born in Barnet, and at the age of six weeks went to live in St Albans, Hertfordshire, where I spent all my childhood until the war. And I went to primary school there and then to St Albans School, which was then a grammar school.

DW: So you sat the Eleven Plus?

JW: Yes. But the first step in my career was on Brighton Pier, and I went at the age of eight or nine and had my hand read, and this man told me what my future career was going to be. And I've still got the certificate that says that you are bound to end up an engineer, and you will be civil engineer. So that impressed me until, in the school, I got as far as the Sixth Form, and they kept on saying to me, 'Well, what are you going to do?' and I said, 'Well, the war is coming up – the war is on now – and I'll be called up. But after that I'm going to be an engineer.' And they said, 'Well, your call-up date is six weeks from now – fill it in somehow.' And I said, 'Oh, well I'll just take leave then.' 'No you won't – you'll work, and you'll take the Oxford entrance exam.' [...] So I had six weeks to work this out. And I went up to Oxford and booked the exam and I remember I had boils on my face because of bad nutrition; I must have been a horrible little boy. And can even remember some of the questions, which I'll tell you about, if you like. And I got an exhibition, and that made me exempt from military service. So I went to Oxford in 1943, but the...

DW: To read what? What was the subject?

JW: Medicine. Medical students were exempt from military service then because the argument was the war was going to go on for 20 years, get your degrees, and then join the services later. In fact, they called me up in 1953! I had a letter saying, 'In eight weeks' time you are to report for your two-year military service,' And I hadn't even got my DPhil/PhD then – I had done most of the work but I had eight weeks to write this up and submit it. And at the time I shared my house with John Vane – the Noble Laureate – and he was not called up. He was much the same age, but he was not a medical student, and they didn't want to conscript him after the war. So I went and did my two years and he didn't.

DW: Gosh, now we skipped over quite a lot of years there. So you went up to read Medicine and you were going to tell us about the questions you had in your interview, which sounded intriguing.

JW: I can remember some of them: one I remember was a practical [physics experiment?] And you may have either done this or seen it. You have a little capillary tube and you blow it up with pressure, and on the top there's a soap film, and you measure the diameter of the film as it blows up like that, and you plot on the graph pressure versus diameter. Do you know this one? And I had a lovely curve, up a straight line, then it wobbled like that, then up another straight line. And the examiner came round and he said, 'Well, can you tell me what this means?' I said I'd draw a straight line through it and that shows the linear relationship between the bubbles. So he looked at this boy with the boils on his face and he obviously was lenient and let me in.

DW: That's very nice. What college was that?

JW: That was at New College.

DW: So you did the whole 5/6 of medicine at that college.

- JW: Well, I did three years at New College and then went on to Bart's for the clinical. In those days Oxford wasn't taking clinical students. There were only six or eight of us doing medicine, doing physiology, basic sciences and medical sciences at that time. And I remember, remember our photos in the corridor in Physiology here. In the Department of Physiology at Oxford they have all these photos of all the classes of each year, and for all the years you have about 20 or 30 or 40 students and the examiners in the front. When they came to the class of six students, the examiner stood behind us.
- DW: Because he felt that was more appropriate...
- SW: So you were doing your medical degree and then you were actually doing Physiology at the same time, as an undergraduate?
- JW: It was a complicated system. Most medical students did two years and then went on to clinical school. If you wanted to, and were encouraged, you could do an extra year for an honours degree.
- SW: Which is the equivalent of what we call intercalated now?
- JW: And [they] encouraged me to do this, which I did, and then went on to Bart's for clinical work.
- SW: And how long were you at Bart's for doing clinical work?
- JW: I was there for three years as a student. It was a very anti-feminist place. I was there when they appointed the only woman academic [...] And then they changed the rules when I was there. They took no female students until the year I turned up, or the year after that – not cause and effect, but it happened that way. And I remember the fuss about chaperoning them... And the men had to be chaperoned who examined a female patient – I don't [think] you do that now.
- SW: No.
- JW: They'd have a nurse standing beside you to make sure you behaved properly. And then the women came up and we said, 'The women have got to be chaperoned. You should have a male standing next to them to make sure they behave.' I forget if they did this or not. But, yes...
- SW: So did you chaperone a few female students, then?
- JW: No, I never did. I think it never came in; it was just one of the better students' jokes. Were you ever chaperoned?
- DW: Just before we proceed to the end of your medical degree. Your extra year in Oxford: was that physiology that you did then?
- JW: Yes ... Physiological Sciences.
- DW: Can you remember any of your teachers?
- JW: Oh, very well, because it's interesting... My main tutor – you're taught in the College of course, at that point – and your main tutor is the college fellow in

medicine. And in my case it was [John Mills](#). Now he had an interesting career – ever heard of him or not?

DW: No.

JW: But he's dead now. The New College tutor in medicine was Richard Creed, who I'll come back to in a moment, if you want. And he went off to his National Service in the war, war service – he must have been about 45 or 50 but they still took him into some administrative job, and he was replaced by this young man, John Mills, who had only just qualified himself. He was a great enthusiast. He used to baby-sit in the evening for his baby on the rug in front of us for a tutorial. And he'd do a stretch and the effects on the baby. And do you know about the Oxford tutorials of those days? You had to write a long essay, and the one aim was to make your essay long enough to fill up an hour, so you could read it for an hour and not have to answer questions. And John Mills was really very bright. He was up with all the latest material and we used to go to the library and get the latest *J Physiol* and look up something that was obscure and rare and put that in our essays, try to catch him out. We never did.

SW: So did you – how often did you have these tutorials?

JW: Once a week.

SW: So you had to write a long essay once a week?

JW: Yes.

SW: Ooh, that's hard going.

JW: And then [...] Richard Creed came back for the last year of my stay there and he was completely different. He hadn't looked at any physiology for about 20 or 30 years. He was a typical Oxford don, spending all his time drinking and talking, not doing any work. And he's the man we had to write these long essays for. And if your essay finished about 20 minutes before the end of an hour, he would say, 'Well, that's very interesting, Widdicombe. I think I remember something about 1890, and he'd go over to the bookshelf, pull out volumes of books, pull out very old *J Physiol* and, 'Oh, here it is!' Completely irrelevant!

SW: They weren't allowed to finish tutorials earlier then?

JW: Oh no. You had to have your tutorial. Oh yes, you were, about five minutes before the end of it he'd say, 'Well, Widdicombe, would you like a glass of sherry?'

SW: Why physiology? You could have done any other sciences? Physiological sciences.

JW: I enjoyed it. [...] When I was an earlier medical student, I wasn't keen on biochemistry – that was too detailed. I don't think you could do anatomy: it was biochemistry or physiology. So I chose physiology.

- DW: And in Bart's: any old sort of robber-baron professors of clinical medicine there that you remember?
- JW: Yes. The physiologist I knew best was [Kenneth Franklin](#), who died some years ago. And he wanted me to do some teaching for him but they refused to let me and said, 'You must be a full time medical student.' And the person who taught me most was [Ronald Christie](#), who you probably haven't heard of. He was an interesting man; he built up a department of respiratory research, with a lot of people who again you won't have heard of: McElroy, ooh, the names have gone now, but about four or five of them.
- DW: Now how old would McElroy be? I met a McElroy in [CVRI](#)...
- JW: Malcolm McElroy.
- DW: Malcolm – yes!
- JW: Sure. He would have then been about 30.
- DW: Now I'm going back to 1980 and he was coming up to retirement. Would that be about right?
- JW: Well, I was there in 1960/61 and I knew him and Margaret McElroy very well. They had a lovely house in [Tiburon](#).
- DW: That's it, and he had a vineyard when I was there in 1980.
- JW: That's it – and it used to get flooded. He had a room at the bottom and every winter the water would come up.
- DW: Oh gosh, well I didn't realise you were at the CVRI. We'll come on to that a bit later. I think we've got you now to the end of your clinical years, and you qualified, and did you then register? Did you do your house jobs?
- JW: Well, I don't know if your questions are perceptive because you are perceptive, but they bring back memories about registration.
- DW: Good.
- JW: The problem was that I took my medical degrees in June in Oxford, but in those days you couldn't actually get the degree until September, because everybody went off on holiday. They weren't going to come back and give you degrees. So when I in theory qualified in June, I went to Ronald Christie who was going to give me a house job, and I said, 'I won't have my degree until September.' He said, 'Well, just take conjoint in the meantime, and then you're qualified.' So I took conjoint and I failed pathology. But I went back to Christie (by that time, I passed my exam the week before I started as a houseman) and I said, 'You know, I think I'm going to pass, I hope I will. And I haven't got conjoint, what should I do?' He said, 'Well, don't sign too many prescriptions.' For three months I was a houseman, I was in fact signing prescriptions.
- DW: Well, I think it's a bit late for you to be struck off now, I think...
- SW: Did you retake your pathology?

- JW: No, no, no, no. I got the Oxford exam and that was all I needed.
- DW: So you did two house jobs, that's surgery and medicine, I guess?
- JW: No, no. In those days you did one for six months, in either medicine or surgery, and I chose medicine.
- DW: Interesting.
- JW: I also wanted to go back and do research. I mean I could have stayed on, perhaps clinical work, but I didn't want to, so after six months I just got up and went back to Oxford.
- SW: So that was all the clinical experience you had, then?
- JW: I did one locum GP about two or three years later, and made a complete mess of it. And I can still visualise some of the patients and I'm quite hopeless at it, but had to earn a bit of money.
- SW: Had you ever, did you always want to be a doctor or was it just because you got this scholarship to go to medicine school?
- JW: Because I got a scholarship. I wanted to be an engineer – that was my fate in life.
- SW: Even when you embarked on your medical course?
- JW: Oh no, when I took up medicine, I changed my mind. I was sticking to that.
- SW: But then there was a change again because you never actually continued in your medicine. So what made you take that...?
- JW: Well, the reason I went on and did, took my degree in physiology and then my tutor, again who was Richard Creed, said, 'If you want to come back and do research and be a physiologist, get your medical degrees first. Spend three years, get them. They're behind you – you'll never regret it.' And he's right, because I'm always glad to have done that although from the point of view of research it was a waste of time.
- DW: And obviously you negotiated your return to Oxford then to do the research, at some stage.
- JW: Yes, in fact before I left to go to Bart's, [Geoffrey Dawes](#), who you also know of, had said, 'Get your medical degrees and I'll keep you a place to do a DPhil at the Nuffield Institute. So I was always lined up to go back, and I did my six months house job because I wouldn't have got my name on the register without it. Now they're taking my name off.
- DW: And this is because of your age, is it? Or was it because you hadn't been reappraised? That's the new thing.
- JW: No, no, they changed the regulations a year or two after I took my medical degree. They said, firstly you can now do a, I did one year then, and you got to do rotation in different departments, but I was one of the last people who

could [do] six months in one department. Had I stayed on, of course, I would have had to go to other departments and get MRCPs and so on.

DW: Higher degrees, yes. So what was the project that you did for your DPhil? What was the topic?

JW: [...] It really was due to Ronald Christie, and he was a chain smoker but never inhaled [...] And he was puffing away all the time irritating everybody, so I said to him, 'With respect, Professor, you do inhale because you're coughing.' And he said, 'Oh well, nobody knows anything about coughing anyway. Don't waste your time with it.' And then I went to work with Geoffrey Dawes, and Geoffrey Dawes said, 'I want you to work on the oesophagus. It is the most neglected tube in the body. Nobody understands it; it will be completely your research.' And in those days you had to wait eight weeks to get your licence in research. Now it's what, six months, eight months? I don't know. [...] So he said, 'You've got eight [weeks] before you can do anything; there are two things you must do: you must learn German because German is the language of science', which is complete nonsense, 'and secondly you must read all about the oesophagus in German.' So I went to the Bodleian Library and I spent day after day for eight weeks in the basement digging out all these dusty *J Physiol*s and so on, and there was nothing about the oesophagus. But what I did come up with, pretty much by chance, were the papers by [Hering](#) and [Breuer](#) and Katchmeh and, who was the other one, [Head](#), in English that was of course, on airway reflexes. And Keller and Loeser. And I translated all these – I took up translations – and after eight weeks I went back to Geoffrey Dawes and said, 'You know, nobody knows anything about the oesophagus; it's a deadly dull tube, I'm not interested in it, but respiratory reflexes are fascinating. Do you know about Breuer and Katchmeh?' And he said, 'Well, if that's what you want to do, carry on.'

SW: So it was as vague as that, your DPhil?

JW: Oh yes, he gave me no guidance. He said, 'The oesophagus.' I said, 'I don't want it' – I'll tell you another story later on along the same lines. I said, 'I want to work on lung reflexes' so he said, 'Carry on.' And I did that for three years.

SW: So who was funding?

JW: The MRC.

SW: But didn't they have projects...

JW: No, it was completely absurd. You had to apply for licence to do these experiments. The licence qualifies you, in one sentence, to study the physiology of the body. I could have looked at the oesophagus at any point in the project. Nowadays there are paintings painted of it. I was entitled, licensed, to study the physiology of the body. There were restrictions: you had to work on only anaesthetised animals; you had to have a special licence to give demonstrations; a special licence for unanaesthetised animals; and you were not allowed to work on horses, asses and mules. Because these, of course, the gentry loved them, and the members of parliament. But for things

like dogs and cats and guinea pigs, as long as they were anaesthetised, and as long as there wasn't an audience, you could do exactly what you want. And you did. At the end of every experiment, we'd get together more or less as we are with the animals lying on the table anaesthetised – 'What else can we do?' Now [if] you tried that nowadays you'd be shot. Unless it's in your application.

SW: So did the MRC not worry about what you were doing?

JW: Well, they didn't care at all.

SW: They just gave money for people to get DPhils?

DW: [...] Was it enough to keep you going, or not?

JW: Well, I got married a bit before then and that did cost a bit of money, but my wife, then wife, was earning good money.

DW: But we're talking now, late 40s early 50s, I guess, are we?

JW: My house job at Bart's was in the first half of 1950, so I went back in about June 1950 for three years.

DW: Now Geoffrey Dawes I associate always with fetal physiology, actually. But I mean, was he into fetal physiology at that time?

JW: He was not only into fetal physiology, he made me get into it, and he was doing all these fetal experiments and I was a kind of technician working for him all the time. And I could only do my own work on reflexes when he was away at meetings, or when there were no fetus around, because you know part of the year you can't get them. And I only had about a quarter of my time working on lung reflexes. And that's why I hadn't written my thesis when they called me up to the air force.

[...] Now let me ask you a question now. If you have a sheep, a ewe, and you want to get it upstairs, how do you do that? [...] Well, where we worked at the Nuffield Institute had a wonderful – it was a Wyatt building – wonderful spiral staircase going about a half spiral. And to get them up, you pushed them against a wall and you walked alongside them and they thought they were in a flock. And as long as you walked they'd follow you. If you tried to push them up they wouldn't go.

DW: Pushing's useless. That's right.

SW: And you did this openly in the laboratories and up the stairs?

JW: Yes.

DW: Look, Saffron, even in my time at UCL we used to get deliveries of sheep and we'd just run them along the road. And one did get away and went down the Euston Road one day and into Regent's Park and created havoc.

SW: So you were half way through your DPhil, then you got conscripted...

DW: No, you wrote it up in 6 weeks, is that right?

- JW: Geoffrey Dawes – I have tremendous respect for him – he made me learn typing; workshop mechanics; electronics – I built all my amplifiers; photography – I did all the pictures for my thesis and I had eight weeks to do all this, not that I had great deal to do with the photography; and bind the thesis; and write it and type it and so on [and] get it in. And I just about made it. My wife was furious.
- DW: Can you remember the title of your thesis?
- JW: Oh, go on. *Respiratory Reflexes from the Trachea and Bronchi*? That's the title of my first paper – something like that.
- DW: And this was all done on postnatal animals – on adults – adult sheep?
- JW: Adult cats. These were on cats. I had my own separate room with a screen cage then, which you don't use nowadays, for recording nerve impulses and doing the work there.
- SW: So what was the thrust of what you found then, in your thesis?
- JW: Well, it went back to an interesting paper to somebody you've never heard of before: Keller and Loeser ([1929]). Written in German, and between then and when I started work, [Adrian had done all his work](#) and we knew about pulmonary stress receptors and so on. Keller, Knowlton and Larrabee had published all their papers on rapidly adapting receptors and so on. But neither Adrian nor Larrabee and Knowlton mentioned cough. In fact, Larrabee and Knowlton mentioned it once in [two long papers](#) when they said that perhaps their rapidly adapting receptors caused the deep breath before a cough. And that's the entire mention of it in total in those two, three classical papers. Keller and Loeser in a paper that very few people know about, published pictures that looked rather like seismographs – very bad ones. And if you look at it very closely, indeed wobbling along only a few little spikes like that, and they said these were coming from deflation receptors and it caused cough. And that was completely ignored by everybody else. So I went to Geoffrey Dawes and said, 'Look at this. This is a cough receptor and nobody's studied it.' So he said, 'Well, carry on.' So that's what I did.
- DW: So you wrote your DPhil, you get called up as soon as you – when did you, you had to defend it presumably? Have an oral exam viva?
- JW: Yes.
- DW: Was that before you were called up, or did you have to come out of the army or whatever to do that.
- JW: No, I was on release for a day to do it. I'm trying to think, now. The examiners were Liddle and [David Whitteridge](#). Now Whitteridge you probably know, and Liddle, perhaps you'll... They were chalk and cheese. David Whitteridge was a very astute, penetrating, clever man, and somebody said of him once – it may be said of other people – that his IQ was lower than his PQ. IQ lower than his PQ, which is true. Whereas Liddle was again, like the Richard Creed kind of professor, and had completely forgotten all his physiology. And, visualise two

of them there, and David was making incisive comments, and how do you know, and why, and justify this and so on – instead of just sitting there being bored. And in the end, Liddle said only one thing to me, he said, ‘Humph – did you make your own apparatus?’ So I said, ‘Yes!’ But they passed me.

DW: And what was life like then in the army, as a, you were a medical doctor? Was it army or RAF?

JW: RAF. Air force. I wasn’t really in the Air Force; I only wore my uniform twice. I went to Porton, [Porton Down](#), the biological warfare department. And I wore my uniform the first time I went into the laboratory, and my supervisor there was Brigadier Frank Buckland – have you heard of the Buckland family? ... They’re a famous Victorian medical family, and I forget the Christian name of [the Victorian Buckland](#), but he was famous because he tasted everything of his patient’s. If he did a biopsy, he tasted it. Always tasted urine; if somebody sicked up a bit – he’d make his diagnosis from taste. Frank Buckland was a bit like that. So I wore my uniform on the first day when I went into work, and he said, ‘Widdicombe is not bound to wear a uniform in the laboratory.’

DW: So you had to sign the Official Secrets Act, presumably.

JW: Oh yes, very much so. Yes. Though I wasn’t doing secret work; I was working on botulism and anthrax and brucellosis.

DW: So it was all research then?

JW: Oh, yes, I had a research job there.

DW: Now, we’re talking about the mid-50s and there were some interesting people then in the mid-50s.

JW: The early 50s ... ‘50–’53.

DW: Oh right. Okay. And I’m just trying to think. Pattle. Was Pattle there? ... [Richard Pattle](#)? ... I met him twice, and I mean, he’s, he’s attributed to discovering surface surfactant in the lung. And I mean his original papers are an amazing amalgam of genius and rambling.

JW: I know, I knew him well ... He was a very tall man; he was a teetotaller, which was very unusual in an officers’ mess, full of military people and these scientists. And he had a conscience because he’d always stand his round of drinks, so everybody would go round the table, everybody would stand a round of drinks, getting pissed. And he would have his glass of water. And then his turn came, ‘A round of drinks for everybody – a glass of water for me!’ He was a nice man; he was, as you say, he’s got a surfactant – he didn’t call it that. We always called it, oh what was it? Pattle’s Peculiar Protein, that’s what it was – Pattle’s Peculiar Protein. Or when you’d had a few drinks you said, ‘Peculiar Pattle’s Protein’.

DW: How interesting. But you didn’t come across him in obviously in research...

JW: Not in research. Only socially.

- DW: Anybody else there who was...
- JW: [Lovatt Evans](#) was there, and he more or less moved out there to live in one of the Winterbournes. He was a very nice guy. [...] [John Clements](#) was a good friend of mine. I knew him well, as you probably did in San Francisco. And this is not meant to criticise him, but his two main discoveries were surfactant, or developing surfactant, which is not original by him but he did all the important work on it; and the other one was the method for measuring lung resistance – what's it called – inclusion method [...] he picked that up when at Porton, and he was honest about this. His two main ideas were collected from Porton and developed in San Francisco.
- DW: No, I mean, I spent a year with him, you see, when I was there. A year plus. And the one about him was he was always very straight about... Very honest. But he's still going, you know, and I saw him just last year.
- SW: [...] So why were all these scientists taken out of the laboratory to go to Porton when clearly some of, they weren't all working on war-related things, were they?
- JW: I think the Government were just being a government. You know, to say you've got to do your two years' military service, you'd be incompetent as a kind of officer, I think [...] but we'll let you wear a uniform twice and do some research, and we'll pay you. And they could have made me do secret research or something related to chemical warfare, but they didn't.
- DW: Well, better than treating coughs and colds and venereal diseases, I guess, which is [...] what a lot of Portham's doctors had to do. So two years there then, and they were good years, were they?
- JW: They were very enjoyable years. Scientifically they weren't up to all that much. I lived in Salisbury, of course, and I loved living in Salisbury, and the countryside was great. And, no, I enjoyed them.
- DW: And did anything come out of that in the sense of publications or discoveries?
- JW: About three or four papers. But nothing remarkable, I think. But I'll tell you a wonderful story about Frank Buckland. I may have told you this one before. Because he was Brigadier and I was a Squadron Leader, he was always pulling rank, and he had to be the boss. And we were studying anthrax [...] and injecting anthrax into lymphatics in rabbits and seeing how much the lymph nodes took up and how much got into the body. And because he was a brigadier, he had to do the injection. I had to hold the rabbit like a technician. So here we all were with gas masks and protective clothing and so on, and I was holding a rabbit. And as he put the needle in, the rabbit jumped and the needle went straight into my finger. This was a thick creamy mixture of anthrax spores, and he said, 'I wouldn't worry too much, Widdicombe. Go and get an immunology jab or something and then come back.' So I kept looking at my finger hoping my lymphatics were working. We had all been immunised against all these things, so it wasn't a real risk but...

- DW: So then you presumably went back to Oxford, did you, after that?
- JW: [...] I went to Bart's – back to Bart's. Department of Physiology with Kenneth Barklan [...] And at Bart's I had my own laboratory. Ronald Christie had gone; he'd gone to Canada – the team had broken up. And I enjoyed it very much.
- DW: You went back as what? A staff physiologist?
- JW: As a lecturer.
- DW: As a lecturer. So you were lecturing medical students and doing research at the same time. Right.
- SW: And were you still on lung reflexes?
- JW: I moved onto lung mechanics and bronchial tone. I was doing a bit on lung reflex, but mainly lung mechanics and bronchial tone. I remember – this will amuse you – I remember giving a demonstration to the Phys Soc that came to Bart's. And I was demonstrating something with the mechanics of guinea pigs, so I had an anaesthetised guinea pig on the table, and just before everybody came in to see me doing the experiment, the animal died. Blood pressure stopped. So I went and did the entire experiment measuring lung mechanics on a dead guinea pig and nobody noticed it!
- SW: Sorry, you'd obviously been a member, I mean, of The Physiological Society since what, since you were doing your DPhil? Was that a norm in the days?
- JW: I forget when I joined. I was the early 50s.
- SW: And in that time, was it like, which it is today, where you are members of several societies, or did you just have your one membership to The Physiological Society?
- JW: No, I had at least two. Physiological and Pharmacological. The Anatomical Society wasn't very active, and, but the Pharmacological was, and we used to go to their meetings. And we were doing a pharmacological approach often, certainly at Bart's, and, but those are the only two, I think.
- SW: Any societies abroad at the time that you were...
- JW: Not that I belonged to, no. Later on.
- DW: And how often did you go to the meetings. Was it, at that time, did The Society have meetings [every] couple of months?
- JW: Well, we'd have two or three a year and we went to nearly all of them. They were free, there were no registration fees, stay in student rooms – no, you went to them.
- DW: And you would present at every meeting, do you think?
- JW: Well, not every one, but maybe one or two a year if the results were coming out. Yes. I can still almost recite to you [my first talk](#), 10 minute talk, I gave to

the Phys Soc. I can certainly visualise it – again David Whitteridge was in the chair.

SW: Where was that?

JW: In Oxford.

SW: Oh, in Oxford. Right. And what was your communication on?

JW: It was about these afferences, these fibres on the lungs, respiratory receptors.

DW: And you, these afferences from the lung, you'd pick them up where? Anatomically, what part of...

JW: In the vagus. In the vagus on the neck. Later on, quite a lot later on, in the 60s I began to record them inside the chest from pulmonary nerves actually in the chest, and from sympathetic nerves and so on. But that stage entirely venal.

DW: And these would be using just inflation/deflation type of things, but you'd also be using drugs and irritations...

JW: Drugs and irritations, and a whole range of cough-producing materials.

DW: So you're at Bart's lecturing, and then you presumably were living in London at that time, were you?

JW: I was living at, first of all, in New Malden near where I live now. Then we bought a house, my wife and I bought a house, in Rickmansworth, and I commuted. In those days, I don't know if you still do, probably don't, we had to teach subjects that we didn't enjoy. I remember being told I had to teach neurophysiology, and I would get on the Metropolitan Line train with my physiology book there, and I had about three quarters of an hour to mug it up before I'd come in front of the students. On one occasion we'd been working on a cat and I got in this train compartment with all these very smartly dressed businessmen and a flea got off and got on my lapel and hopped across to somebody else...

SW: So were you teaching medical students at Bart's or...

JW: Entirely preclinical students.

SW: Entirely preclinical students. Right. So you weren't doing any, there were no science students there or anything at the time?

JW: There were some intercalated BScs coming in. I don't actually recall teaching them. I've forgotten, maybe I did have the BSc...

DW: And the number of students in a lecture would be how many at that time?

JW: For medical students, there would be 60–70. It was quite big enough, large enough.

DW: But the intercalating BScs would be a handful, I guess. Just very few.

JW: Yes, yes. Just three or four.

- DW: And who was the professor of physiology there at that time?
- JW: That was [Kenneth Franklin](#), to begin with. Most of the time I was there. And then [Michael de Burgh Daly](#) came along.
- DW: Ah, yes. I remember him because he was my external examiner when I did physiology.
- JW: Oh was he?
- DW: Gosh, that's in the 60s I'm afraid.
- JW: He had a very good intellect.
- DW: Yes.
- JW: A nice guy, too.
- DW: Yes, he was. So he took over from Franklin?
- JW: Yes, that's right.
- DW: And you were there then, when this happened, were you?
- JW: In fact, he took over as I went to San Francisco for my sabbatical, for me, sabbatical, if you like. I went for a year to San Francisco, and he was appointed while I was away. And I had to, with some embarrassment, to write to him and say, 'I'm not coming back.' So I went to Oxford.
- DW: Right, well let's start then... we're talking about late 50s and you said, 'I want to go to America.'
- JW: 1960.
- DW: What was it that made you choose CVRI?
- JW: I think I got an invitation from [Julius Comroe](#). I don't think I chose that, see, because he'd moved from Philadelphia, building up CVRI and was trying to attract people to come and work there. And he said, 'Will you come and work in the Cardiovascular Research Institute?' And I said, in fact a little bit later, I said to him, 'I'm pretty happy to come, but you must remember that I'm working on lung nerves, that's not cardiovascular.' He said, 'I don't mind what you work on, as long as it's cornea or cartilage.' I'm terrible with all these stories: I'd forgotten them all and they're coming back.
- DW: Well, that's good. That's the purpose really of these chats. So who did you go and work with? Or was it, you left a gap...
- JW: I was on my own. I built a [steam room? – unclear] and I had people working with me. [Jay Nadel](#) spent some time working with me; beginning of a beautiful friendship if you like – a great relationship. And one or two other people came and did some research for me.
- DW: And how long were you there for altogether, then?
- JW: Eighteen months – a bit over a year.

- DW: Where did you live?
- JW: We lived in Mariam, Mariam County, [...] Kentfield.
- DW: [...] Therefore your commute into work every morning was over the Golden Gate.
- JW: Yes. I had a 1940 MG sedan. A wonderful car. I had shipped it across the Atlantic when we went to New York. I drove it across the States first of all with my family, and then used it for commuting all the time until it finally broke down. And then I...
- DW: So you crossed the Atlantic in a boat? That's how you got to...
- JW: Yes – Queen Elizabeth.
- DW: Gosh. And then you drove across the States.
- SW: Did you take your family with you?
- JW: Oh yes, yes.
- SW: You all got up and left?
- JW: They loved it, I think. I hope they did.
- SW: Did you ever want to stay out there? In California?
- JW: Not really. The children weren't happy in school, and my wife, Kay, wasn't keen on staying there, so we came back.
- DW: So how many children did you have there?
- JW: Three.
- DW: Gosh, and how old were they?
- JW: They were approximately 10, seven, and five. And they didn't like the American school way of life. My youngest one, the five-year-old, came home one day and proudly announced he'd been saying the Oath of Allegiance, which I thought was a bit... He thought he'd become military. And no, they didn't enjoy it all that much.
- DW: But the science was good?
- JW: The science at CVRI was superb. I mean, some of, you mentioned names already: John Clements, McElroy, Jay Nadel.
- DW: Hoffman? Was Hoffman there?
- JW: Yes, he was. He was there.
- DW: Abe Rudolph?
- JW: Rudolph? Yes, yes. Lost touch with him [...] John Sevenscote, I got to know very well indeed, yes, and his family.

- DW: [...] Well, can I tell you a story: when I was out visiting not so long ago, I mean, the head of the paediatrics there, at the CVRI, a young New Zealand chap [...] And he was pulling his hair out because he had all these 80+ year old professors who could, in America you see you can go on working till as long as you want. You're not forced to retire at any particular age. And of course, they were on top salaries and he had about six of them, and he could not get rid of them. [John Clements](#), to his credit, when he got 80, he did retire actually. Because the point is then, he couldn't recruit young people in, you see. It's an interesting system, that. But they were all there, still there.
- JW: Norman Stow was there... I think is still around.
- DW: Norman Stow... yes, I think he has retired now actually. But he's still around there, yes. Gosh, yes.
- JW: I remember I used to walk up the 13 floor steps every day to exercise. Couldn't do it now.
- DW: Now my record – because I used to leave it late for catching the bus – and my record for coming down the 13 steps, running down, was I think 45 seconds, to get into the bus. The commute bus.
- JW: I remember a lot longer, years later when I was there; I went up in the lift because I couldn't walk up the 13 flights. I got to the top a CVRI and everybody was standing out in the corridor. 'What are you doing here?' And they said, 'Didn't you feel the earthquake?' And of course in the lift you didn't. The others really got shaken.
- DW: Yes, I remember some shakes out there. The reason they put – it was a hospital this, you see, this building – and the reason that they put the scientists there was because they thought they would be the ones who were not superstitious on level 13. That's what it was actually.
- JW: While I remember [...] one wonderful thing that Conway instituted was not to have a common room. I'm sure you experienced that. You simply got together on the cross-roads. And you simply stood around the corridor and got the coffee machine and so on. So everybody had to meet everybody. And I think that was a good innovation. We didn't do it in physiology here...
- DW: [...] Who was funding you, out of interest? Did you get a scholarship or a grant or something?
- JW: I'm pretty sure it was Comroe. He found the money.
- DW: Well, the American Heart Foundation have put a lot of money into the CVRI, I know. Maybe that's what it was. So you stayed for 18 months, decided to come home for family or personal reasons really, was it?
- JW: Well, two reasons. Firstly, I say the family and I wanted to come back to England, and secondly, I got this fellowship at New College. And I came across during my stay in San Francisco to be interviewed and...
- SW: Who offered you the job at New...?

- JW: Oh, it was competitive, but of course I'd been at New College and the people there knew me to some extent.
- SW: So you'd applied?
- JW: I applied for it, yes, yes, but they flew me across for an interview.
- SW: And then, so, but you could have gone back to Bart's, could you have done?
- JW: Oh, I could. In fact with some embarrassment, because Michael de Burgh Daly wanted me to go back, and I had to write to him and say, 'I'm awfully sorry but I'm not coming back – I'm going to Oxford to continue research.' And that was that.
- DW: So again, were you working on reflexes in CVRI? Is that what your work was?
- JW: I'm now moving to the other end of the vagus looking at motor outputs in the vagus – single fibre work on broncho-motor fibres, mainly. And again lung mechanics. And the later I was doing with Jay Nadel. Yes.
- SW: [...] Where are we now, about 1962–63? Or later than that?
- JW: No, we're '61 – middle of '61.
- SW: When you came back from the States.
- JW: And again, we drove back, this time in a very old Studebaker which we'd bought, and we came back through Canada. And drove down somewhere near Montreal and I had to fix the driving belt or whatever it is. And I remember we were coming back, to get on the Queen Elizabeth, and we drove down to the docks the day before and said to a service station person there, 'We're going on the Queen Elizabeth tomorrow, will you buy this car from us?' He said, 'Okay, I'll do that.' I said, 'How much?' He said he'd give us \$10. So the next day, what could we do, we went back to him, 'Okay, you can have the car for \$10.' And he said, 'It's \$5 now.' So I said, 'To hell with it' and we left it on the street. And I remember I then wrote to the New York traffic department saying, 'I feel very guilty. I've left an old Studebaker on the street, such and such a case, I'm sorry about that.' And they wrote back and said, 'Don't worry – we put it in the Hudson River days ago.' So it happens all the time. They just lift them up and...
- SW: Oh, my goodness.
- JW: So that was that.
- DW: And then the post was waiting for you?
- JW: Yes, it was there. We lived on in Rickmansworth for about a year because we had to find a house in Oxford. And I commuted. I had a room in College if I wanted it but I travelled up and down a lot.
- DW: Again, you can clear up something else for me. You said you had worked with Geoffrey Dawes previously [...]

- JW: [...] He started off in the [Tower of the Whims](#), the Nuffield Institute, the Wyatt Building in the Radcliffe Infirmary Grounds, and then they converted that to [Green's College](#) and he moved to the [new Radcliffe at Headington](#) [...]
- DW: So you then, you were working in the Department of Physiology, were you?
- JW: [...] The Department of Physiology and New College. In those days you had a combination of the two. You were Fellow of a college and Lecturer.
- DW: But your research work would have been...
- JW: In the Department of Physiology, yes. And that was under [Sir Lindor Brown](#).
- DW: Oh yes. So he was a professor then? Head of Department?
- JW: Yes, yes.
- SW: I just wondered who else was there, who was sharing your interest in lung physiology.
- JW: In particular [Dan Cunningham](#), [Brian Lloyd](#), [Bob Torrance](#). I think those are probably the main three. Yes, and a few other people. [Denis Noble](#) was there working on the heart. And George Gordon – a neurophysiologist. Sybil Creed, I'll tell you a story about her. She was the widow of Stephen Creed – not Richard Creed, Stephen Creed, who was my tutor. And she came to me in about 1965 or '66 and said, 'Oh, by the way, do you know that Stephen died some months ago. I'd like you to have his academic robes.' I said, 'I can't take them – I haven't got a DM.' She said, 'Take your DM and you have them for nothing.' And it was £200–300, these glorious crimson and scarlet things. So actually, I applied for a DM – a kind of mercenary – I want those robes.
- SW: And did you inherit the robes, then?
- JW: Oh yes, yes, I've still got them. I now get [into] them at children's Christmas parties. Every Christmas I had to write a Christmas play for them, and somebody has to have an excuse for dressing up in the robes, so I used to write about this [unclear] for my son-in-law and dress him up as a wise man.
- DW: So what happened to your work then when you went back there? That was a good opportunity, I guess, for advancement.
- JW: I had a lot of visitors who did a lot of good work for me then [...]
- SW: So were you back on the cough again after looking at...
- JW: Oddly enough I did almost nothing on cough between 1955, when I moved on to bronchomotor tone and mechanics, until almost my retirement. I remained interested in it; I had visitors who came who wanted to work on it [...] but I wasn't doing research anyway, you remember perfectly well: I was spending all my time sitting around talking. Smart, young people came from outside, did work, I put my name on their paper, got credit for it.
- SW: Well, I thought as you are now known as a cough expert, that I would have thought you might have...

- JW: Well, no I didn't do much work on cough. Mainly on mucus secretion and airway liquid, bronchomotor tone. I kept an interest in cough, but not very active.
- DW: And did you have a lot of time for research, or were you spending a lot of time in tutorials and teaching.
- JW: I was never very good at teaching and I can't say I enjoyed it very much either, but I did, I hope I did, my share. [...] It's curious. You work in your laboratory until 5 o'clock, and then you go to your college and start taking tutorials. And if you're lucky you'd get to go to lunch in college to have a few beers, and that's really the high [end] to the day. But research time is 9 till 5, leaving other people working if you can. And wives hate it because the husband is away, or the husband if the wife is an academic, from 9 firstly till 7, and then you go to dinner in college, and after dinner you have your port. So you stagger home about 10 o'clock, so it's not a life for wives or husbands if the other member is academic. That may have changed now, I don't know. But certainly it was like that then.
- DW: Well, I do notice that, we know certain people who are, I mean, they're batchelors and they seem to do exceedingly well on that life because, I mean, you've got...
- JW: I loved it!
- DW: Well, yes, but it does put a strain on personal life, I think, doesn't it?
- JW: Oh it does, on family life. Yes, yes.
- SW: So did you have to give tutorials every day at 5 o'clock, I mean, when you finished?
- JW: I gave about six a week, so that would be about three, 2-hour sessions. And by Saturday morning I'd be going in to do it again and of course families hate that. [...] I think it was a very enjoyable system for the tutor and the student. The student had to work ... they were made to think, which is good, and to have scientific discussions, and it's a lifestyle that the tutors like very much. But I don't think in terms of science generally, it's economic as the best of either tutors' or students' time.
- SW: Do the students have many lectures to compliment their tutorials, or was most of the teaching...
- JW: Oh, the lectures ... turnout for lectures were pretty feeble; the tutorials were the main way of teaching. Some of them went to lectures, but many of them didn't. They had to pass their practicals of course, as well, which you don't have now, do you?
- SW: No, all the practicals are gone.
- JW: That's a pity...

- SW: In fact every type of investigative learning from students has completely gone out of the window. It's just rote learning as to what is fed to them on their Powerpoint slides.
- JW: Problem-solving, do you do that?
- SW: No, no, no, no, no, no. I mean, it's very bad. Very bad.
- DW: [...] So you were, so how long did you spend in Oxford at this department?
- JW: I was there for about 10 years until 1970. And about that time, St George's, you know as well as I do, was a purely clinical school at Hyde Park Corner. And the government suddenly said, 'You have the money to become a preclinical as well and move out to Tooting.' And about 1968, for reasons I've never discovered, they approached me to be their preclinical advisor. I used to come up and discuss plans with them and, you know... laboratories and so on.
- SW: Well, you were established by that time, John. I mean scientifically and things.
- JW: I don't know. I was offered the Chair at St Mary's and I turned that down. [...]
- SW: [...] What I'm trying to find out is why they picked out you. Obviously you were, they thought you were someone, a shiny academic and researcher, and would build up teams. And I'm just trying to find out, research-wise, where you got this reputation from. And don't be modest about it.
- JW: I'm not being modest. I published a lot of papers and I think some of them are good, and I had given quite a lot of talks, like research talks, now going to meetings – there weren't so many international meetings then, but local meetings. So I was developing a reputation and one of the astutest things I ever did was to pick a subject that nobody else was interested in: lung reflexes in 1950. Now, my retirement in 1967 it came, of course lots of other people were working on that as well, but it was more original at the time. So that was an asset.
- SW: So you were one of the big experts on lung reflexes at that time, and were recognised for that.
- JW: Yes, I suppose that. I think so, yes. Well, I don't want to sound conceited – I don't want to distort the truth – but people like Comroe were asking me to write chapters on this in the *Handbook of Physiology* – Chapter 2. And I was writing reviews for books and journals and so on, so I had got a reputation. Yes, yes.
- SW: Yes, that's what I wanted to know. Thank you.
- JW: But it wasn't a perfect reputation. St Mary's – I may be imperfect in many ways – but St Mary's offered their chair to Dan Cunningham and he turned it down. And then they offered it to me, and I turned it down for much the same reason because...
- SW: What was the reason?

JW: Well, it was so close I would have been expected to commute there to Paddington and walk along 100 yards. And I felt that would not be fair on my family then, and that to move them to London at that stage wouldn't be very desirable. Now you will ask then why did you accept St George's, which was only about three or four years later. And the answer was, I didn't. I turned it down. I'd been their advisor for a couple of years and Alasdair Hunter, who I'm sure you know of or perhaps have met, was the dean. A very nice man. And he was very independent, it was always said that if a student applied to come – a St George's medical student – if he came from Wichita, he'd accept him without any further test. It's true. Because he witnessed. And if you didn't come from Wichita, you had to pass an exam or things like that. And he said to me, 'Come and be our first Professor of Physiology.' And I said, 'Well, two things: first you've got to go through a whole procedure to do this, haven't you?' And he said, 'Oh, we'll sort that one out.' 'And secondly, I don't think for family reasons I want to do this.' So I refused. And then a week, a couple of weeks later – he was a persistent man – he got in touch again and said, 'Can we make you change your mind?' So I discussed it with my family again and changed my mind.

SW: How did you give up Oxford to Tooting?

DW: But this was Hyde Park Corner at this stage, but planning for Tooting?

JW: No, no, this was Tooting. I came in 1972 here, when Tooting opened. Hyde Park Corner was closing down, so I did come to Tooting. And why did I? That's an interesting question...

SW: Were you bored with Oxford at this time?

JW: Well, I'll be honest with you, for what you want is an honest answer, and that is that age, when I was [...] 45 by then, I knew what would happen if I stayed in Oxford. I'd become a Stephen Creed. I talked to my then wife Kay about this. And I said, 'You know, if you want me to stay here and be a crusty old don, I will; I'll do it; I love it. But if, on the other hand you're prepared to agree to a move then...' I think, from my marriage point of view, it was a great mistake. Bless her. Really difficult issue.

DW: But the children were older then, so...

JW: That was the other reason: they were older, two of them were either at or starting university, the third was heading for it fairly soon. So that was a main...

DW: So less disruptive for them, obviously, wasn't it? Right. So you started in, what was here in 1972, in this...

SW: Antisoma.

JW: Antisoma, is it?

SW: That's what it's called, yes.

JW: There were research laboratories.

- SW: That's right, and they had the animal house along with the physiology department, didn't they?
- JW: That's right. The animal house above us. There was a wonderful occasion when the animal house had a flood and all the water came down through the floor and hit the electron microscopes. And we were there when they were building up all this place.
- DW: So that was the one brick building on this site. Knocked down the old...
- JW: Well, they had the old-fashioned ones, the ones...
- DW: Knightsbridge.
- JW: But it was the only modernish one, they knocked everything else down and built it up. And all they wanted for me and other people appointed soon after me was to advise and make plans and get ready for the first in-batch of students a couple of years later.
- DW: So they were obviously planning this over quite a long time, then? Three, four years, something like that, wasn't it?
- JW: If three or four years is a long time; I think it's a very short time. And I remember the discussion we had with the Department of Health of the University of London – it was all done on the back of an envelope. The first plans for physiology which I produced – number of the booths [?] and so on, and space and so on, I put them to the University person who was taking decisions and said, 'This is what I think Physiology should look like,' and he said, 'Well, don't you want some really large, multi-user rooms?' And I said, 'Well, if we can have them. You didn't mention this last time.' And he's pulled down an envelope and said, 'We've changed our scheme. You can have five large laboratories.' And then he said, 'What about a neurophysiology suite?' And I said, 'We haven't got a neurophysiologist'. He said, 'Well...' But that is a planning guy, and you may call that slow or quick, I don't know, but it was haphazard... Oh, the other thing that happened in those days was that Chelsea was going to move in with us – do you remember the story? So we planned masses of space of Chelsea in what used to be the multi-user laboratories, and then they decided not to come. The Royal Dentals came for a time – Alan Thexton, I forget who else – then they moved out. So in fact we ended up with far more space than we should have had.
- DW: And what about, was there a story about the School of Pharmacy coming as well, or I have I got that wrong?
- JW: There was, yes. Yup. That was certainly discussed. It never got as far as being a plan [...] there were discussions about them joining us and we were told it had been vetoed by the pharmacists. They didn't want to be out at Tooting.
- DW: Ah, that explains why there's so much space here, really, compared to other medical schools. So the other people appointed with you at the same time were whom?

JW: I was the first, then they had Pasternack – mustn't call him Boris – what's it? Charles Pasternack. Noel Dilly – anatomist. What, he's retired now obviously, or died... [...] I will tell you how he was appointed because I was on the panel, and he was probably the best candidate, or second-best candidate. And at the interview he was actually delightful, and he went through all his research and we said to him, 'You know, of all this research you've been doing, what is the thing that really strikes you as most important?' He said, 'Going to the Antarctic and seeing how penguins hatch their eggs.' And we thought, that's the kind of story you want to have told all the time. So he was appointed.

DW: I don't know if you now, I can tell you know this story, which probably ought to go on the record, really, because it's the sort of thing that won't be recorded otherwise, that at UCL, at the back of the hostel in Gower Street, backed onto the nurses home in Huntley Street. And when I went there as a student there were these huge white paint footmarks going up the wall of the nurses' home, right up onto the roof. And they were there – I mean, they were a fixture – for years and years and years, and I think they were still there until the place was demolished not so long ago. And it was always a big mystery as to who'd done them. And of course it was Noel Dilly who had actually painted them when he was a student at UCH. And he'd put – you know he's a great climber – he'd put some ropes around the chimneys and just went down and painted them...

JW: I had a few rows with him. [...] Pharmacologist was [...] Humphrey Rang.

DW: [...] Was that fun? Setting up a new medical school?

JW: Yes, I enjoyed it very much. It was. It was great to appoint people.

DW: Including Professor Whitehead?

JW: I was telling her a few moments ago, about an hour ago; we gave her the best room in the department. She still has.

SW: I was very green round the gills then, and I remember John coming – it was one of the first lectures I'd ever given – because in those days, we had to lecture on anything, and it happened to be kidney – and I can't say I knew anything about the kidney at all. And I could see John sitting right at the back on the thing listening to me, and the lecture was all over in 20 minutes, and because I didn't know anything more about the kidney, I couldn't ad lib at all! And I remember walking out thinking, 'What a fool I must have made myself look.' Luckily, John never said a word to me about it.

JW: I will say a word now, because later on, I remember, I was asked to revise the kidney for the clinical students. I studied that all. So I did a seminar with about 20 or 30 of them there, and they knew nothing about it. That was your teaching!

DW: [...] So we're into the 70s now, and the 70s was when this place expanded and established itself, really.

JW: [...] Well, I did as much teaching as I felt I ought to do. I went to committee meetings, I organised things, I went to international meetings, and I

encouraged research. I had a whole string of good people: the Laitinens, Jay Nadel [...] But there were always people working with me and they were doing the hard work, and I was putting my name on their papers, which suited me very well.

SW: Well, I must admit that's how I remember you in those times. There were always new faces coming in from John from all parts of the world. And, well, I mean you were running a department doing quite a lot for the medical school.

DW: [...] Well, I do remember in '76, John, that's the first time I met you: you won't remember at all, but it was in Paris, at – I think that was an... There was some little satellite meeting all about lungs, and it was the first thing – I was very young in those days – and it was my first international meeting and speaking at an international meeting. I remember you were the first speaker of the session or something. And I obviously can't remember your talk but it was about the trachea anyway, I seem to remember. It was just an awful meeting because it was not long after the riots, the student, and they'd obviously let the universities go to utter ruin, and there were parts that you just didn't want to go into. I mean, it was just squalid. And we had these huge barns of lecture theatres, built for thousands...

JW: Yes, I do remember, I can visualise it now. Yes.

DW: Absolutely ghastly, but anyway, I remember saying hello to you then. So that was '76.

SW: Talking of meetings, what were your memorable meetings that you went to? You know, there are occasionally some that you just remember either because they were so good scientifically or because they were...

JW: I'll think of that in a moment. My most memorable lecture I ever gave was the last one I gave at Guy's. And, now what was it, Stella Rowlands was off sick and I took over for her. And they had a group of 400 students, medical students. [...] And they had 400 students there, and I was lecturing on not my subject. And I went into this lecture theatre and about 300 students were there, and I tried to make it interesting, and when I tried to tell a few jokes, they were snogging at the back and when I got down to the basics and wrote it on the board, they were looking out the window, and I swore that's the last teaching lecture I gave. Some years after I left St George's. I've never given a teaching lecture since.

DW: You know, it's grim there, isn't it? Because they do have 450 medical students and it is so impersonal. I go there once a year and I don't like it very much.

JW: But one of the most interesting communications I went to at the Phys Soc, this is for personal reasons as you'll see in a moment, was when my son Jonathan gave his first talk. Now, he's in Oxford again – I told you I remember my own first talk vividly, and he gave his first talk. And I said to him before hand, 'Jonathan, do you mind if I come and hear you?' He said, 'I'm going to be so terrified I don't care a damn who comes.' So I went along and heard him, and I was walking along the corridor afterwards with Victor Coxon, and Victor said,

‘Your son did very well, didn’t he?’ I said, ‘Yes, alright, but he’s not got presentational skills. He spent most of the time talking with his hands in his pockets, or his hands behind his back.’ And Victor said, ‘Just like you, John, just like you.’ [...] Must have been the 70s.

DW: Yes, I would guess so. And I mean, what is your feeling about that? A son following you in your career? Same subject.

JW: He was hellfully rebellious and he wanted to do medicine, and he said, ‘The one thing I’m not going to do is copy your subject.’ And in fact, he pointed out, how Michael de Burgh Daly had suffered by comparison with his father because he took the same subject for research. It may be untrue that, but that’s some of what Jonathan said. So he said he was going to look at smooth muscle membranes with Alison Brading, who you might remember. And he did his PhD in that subject. And then he was unhappy in many ways, and he wanted to get away from home, which I can understand because our marriage was breaking up, and he went off to work in Canada, at Calgary. And he believed that in Alberta all you did was spend your time up in the mountains, looking at moose and wildlife, grizzly bears, and having a wonderful time. He didn’t realise that you can’t get in the mountains for half the year because of the snow, and secondly, it’s Bible belt. Completely non-alcoholic. So after he’d been there about six months, he phoned me, and he said, ‘Dad, get me out of here.’ And that’s the first time he’d ever asked my advice in his career. So I immediately phoned Jay Nadel, who you might remember I met in the 60s and knew very well, and said, ‘Jay, my son Jonathan, who you know, is very unhappy in Calgary, can you bump him?’ And he went to work with Jay in San Francisco.

DW: Well, in fact he was there in 1980 when I was there, actually.

JW: Yes, but the interesting thing was because he went with Jay Nadel, he and I began to work on the same subject, which is mucus secretion, airway epithelial transport and so on. So he started off, ‘I’m not going to be doing anything that you’ll be doing’. Now we came together in the same research; we even published one paper together, which I insisted on. I said to him, I’ve been invited to write this chapter, this review, I’ll do it if you co-author it. And he agreed to do it.

DW: And thinking of papers there was the marvellous – this is, we’re talking about *Respiration Physiology*, which is a little niche journal if I can put it like that. And there was [this wonderful paper all about dragons](#). And about how they have this special flame organ and how it’s been discovered, and a remnant of these dragons, which are lizards, you know, and how they can protect their mucous membranes from the fire, and how they, was it sulphur or phosphorous, I can’t remember, to make the flames.

JW: It’s brown fat, isn’t it, that’s heated up by nerves, and gets so hot it produces some heat and flames.

- DW: There was a little, I think a footnote, saying 'it must be remembered by the reader that this paper was submitted on 1st April'. And I thought it was a terrific spoof, actually.
- JW: I enjoyed doing that.
- DW: Yes, and I think particularly, it was good coming from St George's. I mean, that was the other thing.
- JW: Yes, I know exactly. Yes, yes.
- SW: Had that given you the impetus...
- JW: One of my co-authors was S. T. George, Mr George from Albania...
- DW: Albania, that's right. It was terrific. I mean, I couldn't quite believe this because it was done absolutely seriously with sections, through this flame, you know, microscopic sacules...
- JW: [...] Well Peter Shank, the editor, wrote an editorial for it and he and I exchanged a lot of fascinating correspondence before. He had to go to his Board of Directors and say, 'Do you mind if we publish a spoof article?'
- DW: And did, I mean, whose idea was it? Was it his or yours?
- JW: It was mine. No, it was mine.
- DW: Very good.
- SW: Was that yours over a few drinks one evening, John, or was it...
- JW: It was, as I said I think in the acknowledgement at the end that the story had developed by having drinks in the pub with Margaret.
- SW: Yes!
- DW: But had you, you'd retired then, hadn't you?
- JW: Yes, I think so. Yes.
- DW: Right, so perhaps we should move on into the 80s [...] And your research was going well here, and things were producing.
- SW: You were being well funded as well too, at the time John, and everything was...
- JW: Yes, yes, yes, that's right. We had plenty of money.
- DW: And if you look back at your research, body of research, is there one thing that you feel particularly proud of, or you feel you've contributed in? Or is it the summation of the whole lot?
- JW: I think the one subject that, in a sense, most original is going back to the beginning of the lung reflexes and the cough. I think the rest of the work, I mean epithelial transport, mucous secretion is a bit pedestrian and other people have are better. I'm a bit worried about the bulk of it sometimes.

- SW: Too much?
- JW: Too much.
- SW: If you had to do it again, what would you do then, if you're worried about the bulk of it? I mean, nowadays people are dying to churn out thousands of publications.
- JW: I know, I know.
- DW: But it's the only way you can...
- JW: I think you have to do it.
- SW: Yes.
- JW: You had to do it, even to get research grants, you had to have publications. It's a pity, but...
- DW: Well, I'm probably old enough to take the view that, you know, just publishing for publishing's sake just clogs up the journals and actually dilutes the truth that's in there. But a, not a fashionable or trendy thing to say, I think, is it?
- SW: Well, what worries me is what does go in the journal is sometimes poor science in that they present experiments that can't, they don't show any repeats for, or any you know, validity to it and things like that. I mean quality-wise it's bad.
- JW: Well, one of the most interesting papers, one of the most enjoyable papers I've written, is I've just finished, and that's on complementary medicine and cough. And I teamed up [with] Edvard Ernst. [...] He's just written a wonderful book on complementary medicine called *Trick or Treatment*. And I teamed up with him and its fascinating reading. But most science, most publications are dull, deadly dull. I don't say they have to be...
- SW: They don't seem to tell a story these days.
- JW: Well, I've, this is not that important – I don't want to waste your time – but there are two occasions when I've tried to enliven what I was writing. The one, was back in the 1960s this was – one, I said, 'Well, we have a discussion at the end of the paper, let's have a discussion.' And I said, 'Question: I think this is a load of nonsense. Can you justify this? Answer: Well, I think so and so. I don't believe you.' So I had a question and answer kind of discussion. It was turned down flat by *J Physiol*. But I think that kind of enlivening it is worth doing. The other was when I started off a paper which was published with Peter Sleight, who you may know. And I started off saying perfectly honestly, 'Working with open-chest dogs we noticed a thin line of fat that runs along the vena cava, superior vena cava. We wondered if this might contain nerves. We therefore dissected it out, put it under a dissecting microscope and found nerves. And this paper describes what, the result of that, what nerves they were, for the pericardium.' And he and I tried that on and got through.
- SW: Oh, well that was good. Yes, yes.

- DW: So can you tell us then about your becoming treasurer in The Society, and this was, we could look it up, but...
- JW: This was out of the blue. It was done in 1990, wasn't it? And it was Mike Spyer who was on the committee – I don't think I was on the committee, but I'd have to check that – who approached the committee and gave, put my name forward. And I don't think there was any competition...
- DW: Oh right, so you were co-opted in as Treasurer. I mean, that has happened since actually.
- SW: But by that time, John, hadn't you retired?
- JW: I retired that year.
- SW: As Head of Department, hadn't you?
- JW: So I did keep on office. In fact [...] I never left St George's. I moved into what was John [Henderson's] old laboratory. He then moved across away to a different one and I took it over as a Treasurer's office. We had a staff of two. Ron Edmondson joined us, and [...] Vicky [Victoria Penrice]. And we had three of us in that office for, I guess, [six] years. [...] But the Treasurer then was the nominal head of The Society.
- DW: That was, it was, it was. It was the senior officer.
- JW: Now you want the chairman of committees, quite rightly. But he was a senior officer.
- SW: Richard Boyd was around.
- JW: Oh yes, he was Chairman of Committee.
- SW: He was Chairman of the Committee. Because he was the one who phoned me up and said, 'Oh, um, will you be the editor of the...' [*Physiology News*] And actually that was the period when I really got to know John well because we were all in the Phys Soc together, and I think you looked after me and held my hand about my budgets and things I was supposed to do. So did we, I mean, I've always been slightly conscious of you being quite astute with money: did everyone know...
- JW: I was hopeless. Well, I wasn't hopeless because those were fairly flush days. Ron Edmondson was an accountant and extremely good, and I simply took his advice. But it was a difficult period because we spent one million pounds on the Glasgow Congress. And The Society, you know, in those days couldn't really give £1 million away, and I clashed with Dennis Noble a lot about this, and the Royal Society event, and Richard Croft, which you mentioned, that was going to make it worse. So it was difficult and we didn't really have enough money to spend on things we could have, should have spent it on.
- SW: But I understand, I mean not from you, but from people I met in that, well, you made some fairly sound investments during your time and...

- JW: I would have... we had an investment manager who helped, and Ron Edmondson was pretty astute. So when I look at the accounts now, which is what? 10 years after, more than that: they're not much more healthy than they were at that time 10 or 12 years ago. They're okay, but...
- DW: It went through a pretty dire patch just in the 2000s, about that time actually, and people were getting very worried about where the income was coming from. And also, well, it was, because the money – I can say this – the money for The Society all came from *The Journal [of Physiology]*. That's what makes the money for The Society. And in fact, the Cambridge University Press income was declining year by year by year. Sales were going down; even the income was going down. So that's why, I mean, it's a bit off the tangent, but that's why we had to renegotiate the contract in 2002, and we left Cambridge University Press and went with Blackwell. And that actually has made things rather better. [...] Yes, it's been a very interesting time for publishing and what should you do? I mean, John, could I just say that I remember somebody saying, in the late 1900s, he said, 'Well, people like me' – he was a Professor of Pharmacology, I think – 'so we're redundant now, we've had it because you see what used to happen was students used to come to us and say, "Do you know anything about so and so" and you'd say, "Hang on a minute, I think there's a book here about that", and you'd get the journal down.' Now, he says, it's pointless because everybody goes straight onto the internet and gets their answer straight away.
- JW: Yes, I know, I know.
- DW: So in fact the idea of the old, the old professor of any particular subject is gone. Do you think that's true, and do you think it's for the better, the change?
- JW: I think in terms of the memory of looking up old books, it's gone, and I think it's very good. I use the internet all the time – PubMed or whatever – for my literary searches, although a lot of them don't go back far enough and you can't pull the papers out. But I think, I'm sure, there's still a role for Heads of Department. You know, in a different, organisational way. And in giving advice and help to young research workers and students. Don't you?
- DW: Oh absolutely. I couldn't agree with you more. I mean, you keep seeing things about...
- JW: But I think you're right about literary [unclear] – to a large extent has gone out.
- DW: But of course, I mean, Heads of Department now, well first of all, as far as I can see, every single medical school in the country had done away with departments and they have these big conglomerations that we have here. So in fact, I think we're, we have Professors of Physiology, but we don't have a Professor of Physiology who's Head of Department anymore, do we Saffron?
- SW: No [...] And the worse thing is, it's broken down the teaching – I don't [know] if you remember, John, but we used to sit around and talk about physiology teaching. I mean, we literally would all of us sit round: who's doing that, who's doing that, who's doing that? And then we'd all design physiology practicals

together and it was all, you know, and then we'd intermingle with anatomy and biochemistry. Of course, there's none of that now.

JW: Now you'd have a Director of Teaching, I imagine?

SW: No. Nothing.

JW: None? Not even that?

SW: Well, we have these educationists, John. And we don't talk about teaching, we talk about standard setting exam questions to make sure that all our students will pass. It's all frightfully boring.

DW: And you must have lots and lots of learning objectives. At last count we had 5,000.

SW: Yes.

DW: And I think it's been, yeah, I think we've lost our way actually.

SW: Clearly.

JW: It's irreversible, that.

DW: Well, except it's interesting. Somebody was telling me, we have these things called OSCEs, do you know about OSCEs? Objectives Scientific Clinical Examinations. I'm not sure about the Scientific bit.

SW: No I don't think that's right. Structured.

DW: Structured. And of course you have this mindless form in which you have to fill in boxes and tick boxes. But the chap from Maastricht was over here within the last fortnight – Professor of Education – and do you know he said he's a bit worried about these OSCEs because they're finding that they're not very reliable. So somebody asked him, I think, what was the most reliable test of, this is clinical skills. But it's the same sort of thing. He said, 'Well, probably it's having two experienced clinicians watch the candidate performing,' which is in fact of course what we were doing 20 years ago before all this started. And, you know, the point is the wheel goes round, I think really. I just do wonder. You see, what worries me about it is that physiology as a department doesn't exist here, in the same way as child health doesn't exist or biochemistry. So that the youngsters, I think, must wonder who they identify with.

JW: What do you do about the Intercalated BScs? Do you have one in Physiology?

SW: Ooh, no, no. They just choose odd courses here and there, so you know that doesn't exist either.

JW: No, no.

DW: A course in Physiology, a course from History of Medicine, a course from Psychiatry, a course from Neurogenetics, whatever. Now, maybe that's good, I don't know. Perhaps I'm an old buffer; perhaps we're all old buffers, Saffron?

- JW: It may be good but I wouldn't want to go through it, but that's because I am an old buffer.
- SW: I think what upsets me now is the students are simply rote learning for exams. Anyway, I just want to get back to your days as Treasurer. What did you, I mean, apart from the interest in financial things of The Society, were you, you were still working then, weren't you? Or just writing?
- JW: No, I'd given up research. I'd given up my laboratory and I had an office here. And I came in and, I still wrote and so on, did academic work but not...
- SW: And what do you look, and when you look back on those years, because I have memories of, you know, those were the old days of the Committee and things: what do you remember about sort of being part of the Committee and...
- JW: I think I remember most the personalities of the people I met. Those Committee meetings were fascinating. I'm not going to put anything down on that.
- DW: Those were the all-day committees. You got stuck from 11 o'clock in the morning right through until 5.
- JW: Then there was dinner.
- SW: Yes, five minutes to change to get to dinner.
- DW: So who were some of the characters you met there?
- JW: Ah... Dennis Noble was a very strong element in The Society, and he and I clashed, especially over the finance of the Glasgow meeting. Best not to bring that up. [...] Roger Green I liked very much indeed. I thought he was diplomatic, he was friendly. He ran committees very well. In fact, the committee chairman seemed to be picked very adeptly. Richard Boyd was very good.
- DW: Was he elected by the Committee members?
- JW: I think they were elected by the Committee...
- SW: They were, because I can remember bits of paper going around the Committee, and we all had to tick the names off, and we were all going like that, hoping that our next door wouldn't see who we'd ticked.
- JW: That's right, that's right. Yes.
- DW: And they pick the treasurer? Oh no, you were co-opted as Treasurer is what you said. Because occasionally they would...
- JW: Well, I imagine there was a vote on it, but I don't think it was competitive when I was made Treasurer.
- DW: There would have to be agreement, I think, much like consensus.
- JW: Agreement, yes. That's right. The next Treasurer there was a vote on it and it caused a great deal of ill-feeling.

- DW: [...] And the point was you were saying that as the senior member of The Society, you actually made the major decisions then; you were actually the Chairman. Were you the Chairman of the small group of officers? Is that how it worked?
- JW: No, there was a Treasurer's Committee, which was four or five people. We met twice a year to discuss policy and to see the accounts before they were published. But my role in Society Committee was a very passive one. They'd ask me my advice, and say, 'How much money have we got for this? This is what we want to do – is it practical in terms of money.' But I never chaired any committee apart from this small group that met two or three times a year just to produce the Annual Report, and the Financial Report.
- DW: But the Committee met very frequently, so lots of chances for hammering out policy, I guess.
- JW: Oh yes, four or five times a year. Something like that.
- SW: Lots of chances for good drinking and eating.
- JW: Ah, they were good social meetings.
- SW: Well, I thought the Committee, well the dinners were more than extravagant, John.
- JW: We paid for them.
- SW: You know, they used to invite Members of Parliament, local MPs and the rest of it. And the wine, I mean, fantastic wine and things, just flowed.
- DW: Those were the days. We had a period of austerity, I'm afraid, following that. Maybe you put us into debt a bit, you guys.
- SW: I do remember though, John, one committee meeting and we all discovered, and I can't remember who was actually on the committee, we all discovered John's room number, and we were all – do you remember this?
- JW: Yes, yes! Oh I can visualise that...
- SW: Well, luckily, I hadn't used his room number but there were certain members in the bar after the committee dinner, and when they said, 'Room number', everyone said, '167', you see, and it all went down. And John came down the next morning –
- JW: I was furious!
- SW: – he was absolutely furious!
- JW: There was one particular culprit in that group, wasn't there?
- SW: And I think you sent a letter round to us all as well, it was really, you know...
- JW: Yes: don't do it again!
- SW: Yes. Oh dear.

- JW: I'd forgotten that – good story.
- DW: And you didn't have an administration at that time either, did you? Because there was Cambridge Office, which did exist.
- JW: I had my own administration here. Victoria and Ron Edmondson, the three of us, which is plenty.
- DW: So Ron Edmondson was an accountant, you said?
- JW: An accountant.
- DW: That's interesting. And he was based here?
- JW: Oh yes.
- DW: And he was employed for the period for the period of time you were Treasurer, or was he...
- JW: Yes, the whole time. So was Victoria. Both were.
- DW: But their term of office would end with yours?
- JW: Yes, it did, yes, yes.
- DW: That was the idea. Yes.
- JW: Ron retired, and Victoria I haven't been in touch with a couple of years [...]
- DW: [...] We don't meet very often now as a Society, do we, which is one of the changes which...
- JW: I know, I know. Well it has changed enormously in that respect. I mean, the meetings used to be fairly small and regular, frequent. Now you have these large congresses and...
- DW: What's your feeling about that?
- JW: I don't think it's attractive. I go to some international ones to meet people, but I wouldn't go to a large international meeting or large congress just because it's on the agenda. I'd keep away: I do. But the small meetings I went to, not just as Treasurer, I went to them all my academic life because I enjoyed them. I enjoyed the poster sessions, I enjoyed listening to people talk because they were small and you know...
- DW: And what were your thoughts about voting for the abstracts at the end, you know, after each presentation?
- JW: I think it had to go. It's not done nowadays. You have a vetting committee, presumably, or do you not?
- DW: Well there is a vetting committee but there are certain problems with that, I gather, from what I hear...

- JW: I think most people, myself included, agree that if some abstracts really terrible, they can still be published even though they're terrible. Then you don't quote them, or you...
- SW: I think the whole idea of voting, after all, you know, in given communications it's usually the youngsters in the lab who would give it, and it was really scary for them...
- JW: It is, I know.
- SW: ...to stand and watch the audience, or someone say, 'No, I don't think it should be published.' You know...
- DW: That was relatively unusual, wasn't it?
- JW: I had a foreign professor once who I introduced and his abstract was turned down and I felt embarrassed simply for him to come all this way from abroad to give a talk.
- DW: Oh dear. So publish and be damned really, and then let it stand and let other people make up their minds...
- JW: I think so, yes, yes. I think one has different standards for a full paper and an abstract.
- DW: That's true.
- SW: But they are refereed, aren't they? Don't the Phys Soc still referee papers?
- JW: That's what I'm saying: they're scrutinised, aren't they, before they're accepted? Are they? Some turned down?
- DW: It's the level of the scrutiny I think is... I mean our colleague Ann Silver, I mean Ann goes through every abstract, correcting it and making sure it makes sense and looking at the ethics. And she sometimes makes comments about the science, but then in fact, I think it's the CIG convenors that are supposed to be checking on the science. And I think they do throw one or two out if there's no data in it or something like that. But I don't think they scrutinise it too deeply now.
- JW: But you don't have the usual international system where if you don't like an abstract which has been put in for a talk, you'd have to make it a poster. Otherwise you'd select from the abstracts for talks, and the less good ones are posters. Most international meetings do that.
- DW: Actually I don't know what happens now for that in the meetings.
- SW: I suspect that what, most societies do it that way. They choose the good ones to be presented and the others as posters, yeah. But posters still have an abstract, of course.
- JW: Yes.

- DW: Because they're not published anymore except on the web, in The Society. They're never published in *The Journal*, in the hard copies, haven't been for some while.
- SW: So when you gave up, John, getting back again... your term of office was finished: what have you been doing since that time?
- JW: I've been organising meetings and going to them. International meetings and meetings in particular on cough... I've been writing a lot. And I've been enjoying myself. I've had no committees. I've given up any talks. I've given up scientific talks too, now [...] No I think people should give up and let the younger generation get on.
- SW: I thought you just said you were going to give a talk next week, or you were just going to go to a...
- JW: Yes, but it's a...
- SW: So you haven't...
- JW: It's a bit like dragons at talk – I'll have to learn how to put the coin in the machine... No, I enjoy life enormously. I do as much work as I want to and I have other interests, family interests, I read a lot.
- SW: Still got your place in Dordogne, in the Dordogne?
- JW: Going out there tomorrow.
- DW: Ah, lovely.
- SW: Oh lovely. There you go.
- JW: The Dordogne is rather far; we're down in the Loire Valley.
- SW: Oh right, okay.
- DW: And you've got no regrets about your career? Your scientific career?
- JW: No, I can think of very many ways I'd like to have 'done better' and changed it, but in general I'm very happy I've had the career I've had.
- DW: And what advice did you give your son, who's really followed in your footsteps?
- JW: They don't take advice. My eldest son gave me advice, 'I'm not going to follow you' and then gave up and did. But the only advice I ever gave him was to accept Jay Nadel's invitation. My second son –
- DW: And he's where now?
- JW: He's in Davis.
- DW: Right, that's right.
- JW: My second son had a very chequered academic career for various ways, and committed suicide, and that was obviously distressing to put it mildly. My third

son is in Anchorage, Professor of English and very happy. In fact, they'll be coming over this summer to spend some time here. We get on very well; see quite a lot of him. And by my second marriage, I have two children. My daughter is a lawyer, successful barrister, who gave up her career in order to raise her family, and has done extremely well, very happy, we never ask her if she has regrets, but a lovely family. And my son, who Saffron knows a bit about, is going through a nasty divorce.

DW: Ah dear.

JW: But he's very successful. He's in the Cabinet Office.

DW: Oh right.

JW: So if we try to influence Brown...

DW: No, I think not...

JW: So of the five, three are very happy, one – the eldest – is successful but not all that happy. Of the grandchildren, I've got five and they're all magnificent, obviously.

DW: Yes, the best in the world, I should think...

JW: And we've always had dogs.

SW: Oh, there you go.

DW: Do you know it's an appropriate time to stop?

JW: I think it must be; it's been over 2 hours.

SW: I just want to ask you one more question about your – we all have perceptions of how academia change, and I remember coming into academia and MRC would throw money at you, and the Wellcome, no problem about getting grants and you could play squash and you could, you could sort of be successful without pressures. And I just wondered if, over your period of time, when [you] started to when you retired, how you perceive changes in academic life?

JW: I think there were changes over that period which have got worse since, mainly the burden of administration, the lack of freedom to do what you wanted to do, which I told you a little bit about in the early 50s, and although I'm very happy at the career I've had, I would think a bit more about going back to have it in the present circumstances. I mean, what I always valued in research was the freedom to do what I wanted to do. A lot of it didn't work out. I don't think you can do that now. Not so easily.

SW: It's certainly more difficult. Certainly more constrained about it.

JW: So I wouldn't hesitate to suggest to any of my children to take up a medical career as a clinician, but if they said, 'What about academic life?' I would seriously think about it carefully and ask them the kind of questions you've been asking me and see what they say to that.

DW: Thank you.

SW: No, it was lovely, lovely.

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