

Gendered cultures of science

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Dick Laws at Signy Island, Antarctica, late 1940s.

Until very recently, most British meteorologists, oceanographers, geologists, geophysicists, geographers, glaciologists and atmospheric physicists were male. Glaciers were walked and measured by men. Rocks were sampled, drilled and dated by men. Instruments used to inspect the atmosphere, whether looking up from the ground or down from satellites, were designed and used by men. Oceanographic research ships tended to leave port with all male crews. The hole in the ozone layer was spotted by men. Plate tectonics is a theory developed in part by British scientists – all male. If the globe has warmed, it has done so under a largely male scientific gaze.

How should the 'A Changing Planet' strand of **An Oral History of British Science** (OHBS) proceed through this highly gendered material? We have three strategies. The first is to record the experiences of 'pioneering' female scientists, such as geologist Janet Thomson, the first female scientist allowed 'south' with the British Antarctic Survey (in 1983!). Second, to investigate the role of female technicians, such as Barbara Bowen, who scanned atmospheric data for the team of scientists who found the ozone hole. And third, to examine the particular kinds of masculinity and femininity bound up with the pursuit of knowledge in what are now known as the 'Earth sciences'.

The life story approach in oral history has the great advantage of taking us very close to cultures of scientific practice and to the subjectivities of the scientists involved. It is possible to examine, for example, particular kinds of masculine scientific culture. The British Antarctic Survey (BAS) was certainly one such culture. Geologist Janet Thomson remembers a visit to the Geology Section from BAS Director Vivian Fuchs in the 1960s:

"There was one occasion when [Fuchs] had come up and he invited the geologists to have a beer with him in the local pub... and Sue West and I went and we sauntered in and sat down and he was already in there and he said, 'Oh, I didn't know BAS employed women' [laughs]. And strictly speaking BAS didn't ... I think we rather...cramped his style by being there. ... He was very sunburnt, had a pipe which he used for pointing [laughs] and really was quite a charming man... it was obvious that the – the men enjoyed his company, they responded to him very well and there was quite a lot of laughter, so I think he was one of those men who could talk to the troops very easily...so there was a good bonhomie and he was a leader of men I think." C1379/20 track 4



Janet Thomson at the American McMurdo base, Ross Island, Antarctica, 1985.

What 'the men' might get up to on over wintering bases in Antarctica is suggested by technician Barbara Bowen's memories of stories told back in England, in BAS's tea room:

"They would sort of tell you tales, you know, sort of

about raucous parties and they'd had strange names for undergarments and things like this... some people never washed [laughs]...I think the shreddies was their underpants after [laughs] – after 'n' months of being down there and one wondered whether they ever changed them at all... it just seemed typically boyish lavatorial jokes [laughs], you know, just stupid really". C1379/18 Track 6

It is this institutionalised, jokey, 'boyish' culture of scientific masculinity that Janet Thomson found herself up against. Denied access to Antarctica by BAS rules, maintained by successive Directors including Vivian Fuchs and Dick Laws (pictured), Janet was limited to working on geological samples brought back by male geologists:

"I thought it was daft that somebody...should be expected to work on samples that hadn't been collected by that person. ...And I was also cross because there was the gender issue that was sort of dawning on me really [laughs] and I thought that was stupid too, so I wanted to go for the reason of seeing it for myself, that particular location, but also going because they shouldn't stop me [laughs] because I'm a woman, you know, I think that was the start of feeling that it was a rather improper segregation of scientists, because [being] male or female depended, you know, whether they could go to the Antarctic or not." C1379/20 Track 5

In 1983, after many years of asking, Janet was allowed to join a BAS geological cruise along the Antarctic Peninsula to collect her own samples. It would be easy to imagine that she was a strident pioneer – the first to overturn a sexist scientific culture. In fact, BAS was changing. Janet was greatly assisted by her immediate boss, OHBS interviewee Charles Swithinbank (see C1379/03 track 13), and we ought to acknowledge that Dick Laws was still Director when Janet set sail. If Janet was involved in a struggle or battle to get to the Antarctic, it was quietly fought:

"Paul: To what extent were you aware of and – or even involved with sort of popular feminist movements of – of the time?"

Janet: I was aware of them and I ... I wasn't particularly happy because they tended to be rather strident ... it wasn't a way that I wanted to behave and ... there was an awful lot of shouting on the radio that I remember hearing by very articulate ladies ... I can't quite put my finger on it, I just didn't want to be branded as one of them, you know, a sort of stropky female who sort of shouted the whole time [laughs] and didn't do anything.' C1379/20 Track 5

Quiet persistence. Not making a fuss. Getting on with the job. Avoiding the dramatic. These are features of a particular way of being female in a male scientific culture. They are qualities

that recur throughout Janet's life story. For example, of childhood dancing classes she remembers:

"I could tolerate these things [the classes] but what I did not like was the Christmas performances or the – the summer carnivals when...you went on a float, you know, and you were parading around in the streets and I don't like being the focus of attention, and there was one Christmas concert that I remember where my sister was part of a trio of girls doing the can-can and for some reason I was a small white rabbit ...and I think I probably was only about five...and I was asked to sit on the stage...but I turned my back on the audience... throughout the performance." C1379/20 track 2

Quiet and undemonstrative as a child. Similar as an adult. It is tempting to claim that Janet's subjectivity (or 'self' or 'personality') was formed early in life, that it is an internal quality, and that it is fairly stable. However, life stories, including Janet's, are full of evidence that subjectivity is not an internal quality found inside us, but instead is constantly formed and reformed in relation to objects, places, things. For example, physicist John Nye tells us that female students in the Cavendish Laboratory in the 1940s experienced their femaleness in relation to clothes and pieces of magnetic equipment:

"Well of course, experimentally it was a hands-on thing, and, it was just not considered so ladylike to be doing science. I mean there's a story about Searle. I witnessed some pretty bad bullying by Searle of women. But there was one woman who couldn't get the magnetism experiment to work at all, and she was sent out to take off her [corset] stays, which were upsetting the experiment. ...That sort of thing would happen." C1379/22 track 3

Similarly, Barbara Bowen remembers deciding not to pursue laboratory science in a story that focuses on clothes and chemicals, not abstract concepts of an inner self:

"We were then wearing tights and I ruined so many pairs and plus the odd skirt, because you had lab coats but [laughs] they were the old-fashioned variety...and they got holes in them and then they penetrated – if you got...another chemical on it, it went through that hole and onto your clothes [laughs] so I thought, oh, I don't think I want a job where I have to work in a lab all the time and so that was it in a nutshell really...I'd just decided that I didn't want to do lab work." C1379/18 track 4

Like the lab, the field offered particular ways of being female. Janet remembers becoming a geologist through relations with snow, corduroy trousers and the complaints of others on an undergraduate field excursion to the Pentland Hills, near Edinburgh:

"We got out of the coach and we were walking over the moor to where there was an outcrop and it began to snow, and it was very wet snow and it...got so much that we had to stomp to the coach...it was actually quite a long walk and the snow was pretty thick and a lot of people were getting quite distressed about it because they were getting cold, but I – I didn't mind, I had got corduroy trousers on and they

were just absorbing the moisture and whilst I kept walking, you know, it was pretty good insulation, I wasn't getting cold and I remember Grace saying when we got back to the coach, 'Well I can see you're going to be a geologist Janet,' [laughs] 'cause I wasn't moaning, I was just sort of enjoying the challenge of – of getting out in the elements.'" C1379/20 track 3

Stories of science in **An Oral History of British Science** are accumulating like layers of snow on the Pentland Hills. Inspection of these layers of memories, whether during a quick listen on Archival Sound Recordings or through more detailed study, promises further insight into relations between science, subjectivity and gender.



Interviewees Richard West (background – middle) and Dick Grove (foreground) taking a core sample of Kentmere diatomite deposits, Lake District, early 1950s. For detailed explanation of photograph, see C1379/34, Track 12.