

hearmanchester.com/  
**INSPIRED**

*John Robb: I'm John Robb and you're listening to hearmanchester.com, a series of 10 audio portraits exploring the rich and varied history of Manchester from the towpath of the Rochdale Canal that cuts through the heart of one of the greatest cities in the world.*

*Just off the canal and up a few steps near the Castlefield basin is the hugely impressive MOSI, Museum of Science and Industry. The thing is that the city has an amazing scientific pedigree, Joule, Bohr, Rutherford, Geiger – they all changed the world, and it all happened here in Manchester. It's not something we shout about, and we should.*

*I'm going to step into the café first of all to find out how much people don't know about Manchester's brightest sparks*

*JR: Did you know that Manchester had twenty three Nobel Prize winners?*

*VOX: No*

*JR: What none of you? Who's the brains here?*

*JR: Did you know that Manchester had twenty three Nobel Prize winners?*

*VOX: No*

*JR: Do you know that Manchester's got a big contribution to science at all?*

*VOX: No*

*JR: Did you know that Manchester had twenty three Nobel Prize winners?*

*VOX: No*

*JR: Do you know anything about Manchester's science at all?*

*VOX: No*

*JR: Have you had a good day here?*

*KIDS: YES*

*JR: So I'm with Pauline Webb here in the Manchester Science section of the science and industry museum. You're the collections manager Pauline. We've just been down the café talking to people, they don't seem to know very much about Manchester science, I don't think it's something that's very treasured that much, but for me Manchester's the first modern city, it invented so much stuff we take for granted nowadays; the world's first railway station is over there – can you explain that a little bit?*

**Pauline Webb:** The universities of Oxford and Cambridge were interested in the classics, not very much interested in the science, so a whole group of people known as the dissenters, the non-conformist Christians, they had to set up their own academies, and one of those was set up in Manchester in 1786, and it was that academy that drew one of Manchester's first great scientists, John Dalton.

**JR:** *Are there any ground-breaking discoveries that were made by people from Manchester or passing through Manchester?*

**PW:** Dalton produced the first atomic table as a result of which he's known as the father of modern chemistry. James Joule basically worked out that there were different forms of energy; his theory was something called the mechanic equivalent of heat so he worked out that you could find a way of saying what a certain amount of heat was.

**JR:** *So the fact it's now a post-industrial city, does that mean there's a different focus to the sciences?*

**PW:** What it's changed is, for example in the nineteenth century when John Dalton and James Joule were working in the sciences, science was very much a private pursuit, the gentleman scientist with their own laboratory. As more universities came into being in the nineteenth

century with science departments, what you get is a professionalisation of science, because you've got labs with teams of scientists because they've got more expensive equipment. And so for example Ernest Rutherford, who split the atom – the atom was first split in Manchester – he worked with a huge team of really gifted scientists, Niels Bohr, Hans Geiger, Henry Mosley. It was work he probably couldn't have done on his own, so that kind of changed the way science works.

**JR:** *Would you say Alan Turing making the computer was that the last great scientific breakthrough in Manchester?*

**PW:** It's a very sad and very interesting story, because Alan Turing spent such a brief time in Manchester before he committed suicide, and he came to Manchester linked to one of Manchester's important scientific and engineering developments of the late twentieth century, which was the world's first computer which was the Baby, which we have a replica of downstairs. Turing, during his work at Bletchley Park during the war – on Colossus, the code breaking computer – was really interested in computers and he'd heard about Manchester building a computer through an ex-colleague from Cambridge, Max Newman. He was kind of drawn to Manchester, but he didn't really have that much have that much direct involvement, it

was engineers that were building the computer, so it was only at the point when a commercial development of that computer was delivered to the University in 1951 that he could then use it to do calculations.

**JR:** *Nowadays is there a scientific thing going on in Manchester, or is it kind of a museum culture?*

**PW:** No absolutely not, the university is still one of the leading universities in terms of science – in the gallery we look at science today and look at a whole lot of work being done in Manchester in a variety of areas, bio-medical areas very important, material science areas. In terms of computer technology the school of computer science still does work at the forefront of computer science, so it's very much alive and kicking.

**JR:** *Manchester has links with so many great names that have helped to change the world, it's something I think we should be proud of, and with the help of the science museum more and more people will get to know the pivotal role the city has played.*

**Alistair Rawsthorne:** I'm Alistair Rawsthorne, a member of staff at the university, now a professor in computer science. I think there's something in the air or something in the water here. Manchester people tend to be disruptive people, we're awkward sometimes, we're never

content with the world exactly as it is, we'd like to change it, move it through a few degrees to fit our own particular tastes, and we're not afraid to start doing that,

It's been a well kept secret that Manchester has links with so many great names who've helped changed the world. It's something I think we should be proud of though and with the help of the Museum of Science and Industry, more will get to know the pivotal role the city has played.

*JR: If you've enjoyed this programme, why not venture further along the Rochdale Canal and discover more portraits of our magnificent city at [hearmanchester.com](http://hearmanchester.com).*