Fionna Carlisle and Ian Deary

Portraits of the Lothian Birth Cohort

This is Forward Thinking, I’m Isabella Melking.

Did you know that Scotland is home to the longest study of human cognition in the world?

The Lothian Birth Cohorts of 1921 and 1936 feature data from the Scottish Mental Surveys of 1932 and 1947. The surveys tested the intelligence of almost every child born in 1921 or 1936 attending school in Scotland in the month of June in those years.

Beginning in 1999 and still going, Psychology researchers at Edinburgh traced and re-tested over 1600 people who had taken part in the original surveys, at age 11 – offering a unique opportunity to study the ageing of thinking skills across most of the human life span.

Contemporary Scottish Artist Fionna Carlisle and Lothian Birth Cohorts Director Professor Ian Deary will discuss how they came to collaborate on an exhibition of the Lothian Birth Cohort participants, which is showing at the Edinburgh College of Art later this year.

Ian:
I am Ian Deary, I am Professor of Differential Psychology at the University of Edinburgh and Director of the Medical Research Council’s Centre for Cognitive Ageing and Cognitive Epidemiology and I have with me Fionna Carlisle.

Fionna:
And I am a painter and I have been working with Ian and the team for the past few years on a series of portraits.

Ian, could you explain how you fell into this amazing study?

Ian:
Yeah, thanks Fionna. I work on the Lothian Birth Cohorts of 1921 and 1936 and the point of these studies, which have been running for almost 20 years now is to find out why some people’s brains and thinking skills age better than others. Thinking skills like memory, how quickly people think and how well they reason. And the reason that the Lothian Birth Cohorts are very special is that they all took a mental test, an IQ type test, when they were aged 11. So for the people born in 1921 that was in 1932 and for the people born in 1936 that was 1947. And beginning in 1999 and since, we’ve brought back 1500 of these people. We see them every three years and we give them tests of mental skills, we do brain scans, we take blood for genetic testing and all sorts of other things in the blood, we do health screenings and they fill out lots of questionnaires.
They have been described as the most intensively studied group of people in the world and they’ve told us a great deal about how some people age with regard to their brains and their thinking skills better than others.

So some of the sorts of things that we found is that genetics plays a small part in how well you traverse the life course in terms of successful ageing. People who are fitter tend to do slightly better with regard to their thinking skills in older age than you would expect given how they were in youth. Other positive things are not smoking, being more educated, being healthier, so for example not having things like type 2 diabetes or heart disease. It might even be the case that speaking more than one language or doing, particularly, professional occupations is beneficial for cognitive ageing.

So they have been with us, these individuals, for about 20 years some of them now, but we are still studying them! The Lothian Birth Cohort 1936 are in their 80s and still being seen every 3 years, and the Lothian Birth Cohort of 1921 are in their 90s. We don’t see them regularly but we’re still in touch with several dozen of them and we find out through permission to link to their medical records to find out how they are doing.

So I have team working on the Lothian Birth Cohorts, people who are trained as psychologists, geneticists, brain imagers and other sorts of biological scientists but what we don’t have fulltime, obviously, are artists.

So I am intrigued Fionna, if you can tell us how it was you became interested in the study and got to know all the stuff that we were doing and what you felt you could add with regard to an artistic take on the Lothian Birth Cohorts?

Fionna:
Well, if you remember I had arranged to meet Robin Morton because he was involved in the Beltane programme that I was also an artist in residence in, to with Get Brainy. And long story short, bumped into you with Robin and saw in your office all these portraits and I thought this is an extraordinary find here, and then it turns out that Ian had seen my exhibition in the Scottish National Portrait Gallery which was Energy North Sea Portraits. So the more I found out about what Ian and the team were doing, I felt that they were doing something from a different angle the way that I would approach a portrait. And I think if I remember the 16 points of recognition in the face, various things like that, and I was just absolutely intrigued and wanted to be involved and the more people I met in the team just strengthened this desire, strengthened my desire and curiosity I suppose. And also the Birth Cohort, the people that I met were so fascinating and wonderful and their stories, so I suppose I was like a researcher from another angle because I was very interested in the people and their stories.

So some of the things I found out the team at George Square hadn’t heard before and I felt I was able to add something also. And then the more researchers I met and the team, I just was intrigued by Ian and what an amazing group of people he had formed around
him and now I’ll embarrass him by mentioning that I thought he was a modern day Shackleton figure with such a great team.

**Ian:**
Well, that’s a bit unforced because Shackleton is one of my heroes so that’s too embarrassing to dwell on.

I’m interested in why you chose to make images of some of the researchers as well as the participants in the study?

**Fionna:**
Because I thought, as I said, that the team itself was also very interesting and I had worked in various offices and other places and I don’t think I’d met such a group of such interesting and committed people. And that obviously they brought their own skills to it but you encouraged that and I think that was part of the story. For example I know that I wouldn’t have probably managed to paint the people born in 1921 if it hadn’t been for Alison Pattie, one of the researchers who dealt with the people born in 1921, who introduced me so I felt that was part of the chain.

**Ian:**
Yeah, that’s one of the rather interesting things about the study insofar as it runs like most research studies with funding that often runs, you know, 2, 3, 4, 5 years at a time that I have to seek from various bodies but I have managed to keep Alison Pattie going since 1999 so it’s got the great advantage that some of the participants have been tested by the same person for about 20 years and that gives the study a lot of validity when you know that the same thing is being done each time.

I was also interested, Fionna, you mentioned the points of recognition in the face. I think one of the first things we talked about was one small study that we had done by looking at facial symmetry and we found, I think we found tentative evidence, I won’t say string evidence, that men, especially, born in 1921 who had more symmetrical faces when they were older had had slightly better cognitive ageing – I’m stressing how small these effects are, as in most of the effects that we find, but that was an initial thing that we could talk about and then, you know, talk about the more artistic side of things.

I think also, before that, I had been somewhat sensitised to the idea that artists could be interested in the study, because prior to that we had a book written about some of the participants and scientists in the study, we had a play performed at the Edinburgh Festival Fringe about the study, a video and photo exhibition had been held and we had a film maker make a film about the study but of course it was such a delight when one of Scotland’s top portrait artists showed an interest in the study and wanted to document it in that way and do something complementary to the science.
I’ve got some ideas about what the artistic transformation of the images, that is the faces sitting in front of you, do, as well as size but I’d be interested to hear what you think you can do that is complementary to what we are doing.

**Fionna:**
Well, I suppose in the beginning you wanted me to write something about what I might do and I suggested that I do a drawing of you and then you would see my working methods and we could compare directly how it worked. And I think the fact that I don’t use a camera was less scary for the older people and also meant I spent a lot of time with them and looking and very much encouraged, as you’ll remember Ian, people to see the drawing develop from the very beginning so that there were no surprises and once they saw the colour come on I could tell that they were becoming more interested in the project because they could see it build up week by week and of course I began to get to know them after all that time and some of the people were baking me scones and Mr Scott was meeting me at the bus stop and I just met these wonderful, wonderful people so I feel very, very lucky.

**Ian:**
I think that’s what’s come out from the other artistic interactions with the cohort is that there are these new types, and let’s call it data, these new stories and things that come out to do with people’s lives and that’s what we’re interested in. We are aware of the responsibility we have in running the longest follow up study of healthy ageing in the world that we do need to learn about these individuals and use their time carefully because they provide this window of time that we can learn these things, people that were tested in youth, and that isn’t largely going to happen again. I’d say it was good to hear what you were saying about what you were adding or doing that was a complement because I don’t think the point of interacting in a scientific project with artists is about explaining the research, what I think the artist does is transform the material, if we can call it that, and create something independent, that is I think to a large extent this portrait of individuals, this series of pictures, paintings and drawings, should stand independently of the project and be a thing of value in itself albeit that of course it’s interesting to put it alongside it, but I think that, as I say, a good artist brings a transformation to the material they are working with and creates something that’s not just an explanation or even a reflection of the project, it’s something that stands on its own and I’ve seen that in other artistic takes on projects so I’m pleased to see it happen here.

**Fionna:**
I would agree with Ian that it’s my job to turn the person or what I’ve got in front of me into poetry, in a sense, there’s no point in just doing a photograph because that doesn’t give anybody any extra information.
Ian:
Mhm.

Fionna:
And it’s the collaboration, I mean it’s me and the person, it’s a joint effort.

Talking of portraits, Ian, could you explain how you managed to salvage the portrait that’s in your office that so intrigued me in the beginning, from Godfrey Thomson’s house?

Ian:
I see that you’ve got your aesthetic sense working there, because as we draw to a close I think that ties things up extremely nicely.

The man who invented the IQ type test, it was actually called the Moray House Test Number 12, which these individuals took back in the 1930s and 1940s, was Professor Sir Godfrey Thomson, Professor of Education at the University of Edinburgh from 1925 until 1951. In addition to the empirical work we do on the Lothian Birth Cohorts I’m interested in him being a relatively forgotten, unfairly, historical figure. And one of the amazing things we did was find out as his house was about to be sold that some key artefacts were still in his house many, many decades later and one thing that was given to me by his great niece was a portrait by [Robert Heriot] Westwater of Godfrey Thomson and so we’ve got that hanging in my office and so Godfrey Thomson looks down on me every day making sure that I am using his data valuably, and properly [laughs], and usefully as much as possible. The thing comes full circle, the chap who devised these tests, that these individuals took, is captured in a, I think, a very good portrait that looks down and sees that everything is being done properly, I think probably these pictures as well as the scientific material.

Fionna:
Perhaps we should put the portrait in the exhibition, actually.

Ian:
Yeah that’s interesting isn’t it because we are supposed to be talking about it and here we are deciding what’s going to be in it, I think that’s good as well.

Another intriguing aspect of the exhibition is that it will feature a new portrait of Peter Higgs, the theoretical physicist and Nobel Prize winner for his work on the intermediate vector boson, a very important particle. Now, he’s there because he took part in a cognitive ageing project that was running just prior to the Lothian Birth Cohort studies that I was involved in with another scientist that was one of my centre, and so that’s a nice connection.

But also, it’s because you are also the painter of Peter Higgs, Fionna, so how did that come about?
**Fionna:**
I met Peter at Michael Atiya’s 80th birthday celebration and I was asked to do drawings of all the mathematicians, and I was introduced to Peter who said that he didn’t understand anything because it was mathematics, so we had a lot in common there and I began to meet him over the years and have coffee and then eventually, someone that I had painted, Alan Walker, who helps Peter a lot, contacted me to say that Peter said that would I be still interested in drawing him because I was very big on his conscience, so I was absolutely thrilled to be big on his conscience and also thrilled that once again another coincidence with this project and Peter happily sat for about a year or so and I think he is going to open the exhibition for us.

**Ian:**
Well my general impression is that he gives a great example of healthy cognitive ageing, as well as being another lovely, aesthetically pleasing image to have in the exhibition.

The exhibition is The Art of Intelligent Ageing: Portraits of the Lothian Birth Cohort Studies. It runs from Friday the 26th of October to Saturday the 24th November 2018. It’s at the Fire Station Gallery on Lauriston Place, Edinburgh

**Fionna:**
...College of Art

**Ian:**
Fionna! Thanks very much for popping along to talk about the exhibition and thanks so much for doing those pictures of the Lothian Birth Cohorts participants and some of the scientists.

**Fionna:**
Well, Ian, thanks for your support and encouragement over the years and it’s just been a real pleasure and honour and thank you for your time today too.

**Ian:**
Yeah, you’re welcome, thanks.

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