Transcript of Prof Irene McAra-McWilliam's lecture:
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Jennifer Williams
Welcome everyone to a day full of showers. I hope you had one when you got up, you got one while you were travelling here and you're bound to have one when you are going home as well so we are a very clean audience.

It's my great pleasure to introduce Irene McAra-McWilliam. We've met briefly once before and I'm very excited to hear her lecture which you know the title of from the pieces of paper, but it is called 'Creative Communities: Design, Technology and Wellbeing'. Irene.

Professor Irene McAra-McWilliam
Thank you very much. Good evening everybody. My intention tonight is to describe creative communities in relation to technology and wellbeing, through the lens, if you like, of design. So: the subject is design. I'm going to show you my work in that area – and some of the things that are going on in the Glasgow School of Art. The intention is that at the end, we are going to discuss some of the issues that we might take forward in a workshop in January. As you are looking at this you can agree or disagree, you can look at some of the examples, and if you want to discuss something I'll answer questions and points at the end. If you would like to really lock in together to take some of the ideas forward then there will be an opportunity to do so.

My subject matter is design. One of the things that I would like to propose to you is: design makes thinking visible. I take that as a statement of fact. The reason that design is so powerful strategically in business, especially now in the creative economy – we have had the Cox review, we are looking for more integration of design with business – is that design language is visual language. It's highly communicable; it's participatory; it invites feedback so we make our thinking, and thinking in general, visible. That means people can respond to it, they can agree or disagree and so on, but at least it is highly communicative. Design as a tool for thinking, in the presentation of abstract ideas as well as concrete ones, is very strong. For example, this *[referring to slideshow]* logo that's used by Philips to promote connected services and connected technology. You can see the images of the one world with all of the different people in it with different types of technology. It's obvious what the content is but you can see it in a very elegant way in an image. Similarly with this one, here's a picture that could represent different cultures, it could represent networked technology like internet that works down into the local level. So I can use this for a discussion on design for technology and, of course, we can draw these things in many quite different ways; this is just one representation.

Just to give you some background about why I'm talking to you about these subjects... I'm a psychologist by training, but I worked in medical research for a number of years in the fields of biomedical physics and bioengineering and also in medical sociology and then went into computer systems design. I came to design by trying to make those technologies understandable to people: that's what design is about. The design community occupies a ground which synthesises different types of knowledge, technology or cultural knowledge in order to make it understandable for other groups of people: users, consumers, communities, whatever. So that *in retrospect* my career makes sense, I always say *[laughter]*.

I worked in Philips as director of design research and I was in the company for about seventeen years and then came back to the UK three or four years ago to work at the Royal College of Art. Last year I came to Glasgow, back to Scotland after about twenty years. My fields of expertise are in the areas of technology and psychology, folded into design. Today the subject is the imagination and I'm really going to describe that in two ways: the imagination in terms of the mundane, – what I call the *mundane* imagination; and the *creative* imagination. I'm going to show you how to differentiate between the two and why our focus in design or creative synthesis is on the creative imagination. I'm going to go through my definition of these areas together with you.

The mundane imagination is something that we use all the time when we plan. If you are deciding where you want to go for your holiday, what you are going to have to eat tonight, what your shopping list is at Tesco, anything that involves forward planning, you are using the mundane imagination, which is not so mundane – it's actually highly complex – but we use it to imagine the things that we are going to do. Imagine what we'd like to eat, imagine the beer that we are going to drink in the pub, whatever. That's the mundane imagination. The creative imagination is about synthesis of different kinds of knowledge and that has a psychological, if you like, a neurological aspect. It's when we put things together in novel ways, in new ways. Here are a few mundane assumptions that might be provocative, but it's good to start in a very black-and-white way, and we can move into some middle ground later or we can even argue about these different positions. But this is my position: A lot of forecasting and research which is about the future is actually based on the mundane level, and not on the creative level. We make assumptions about the future such that it can be extrapolated from what we know today and there is simply going to be a lot more of it. It's a bit like today, but a bit more of it. Today's trends are known, we can add in and bump them up into a road-map into the future so it's a probability waiting to happen. If we accept that as a starting point there is no creative imagination needed to allow that future to happen; it's going to happen almost in spite of us. In a sense, politically, that may well be true of the big problems that we have in the world such as climate change. It almost feels as if they are being discussed in those terms. They are things waiting to happen. But, of course, our role is intervention in imagining what the world would be like if certain things *did not* happen or if other things were *encouraged*. So here are a few mundane assumptions: globalisation, individualisation, the information society, mass customisation, ageing population. The last one is the one that I personally take most exception to as a phrase, because we are all ageing from the moment we're born and the triumph of medicine that we live a bit longer is now being described as a problem that we have to deal with.

These things are obviously there and they're happening, but the point is that the actual local context is always very nuanced, very complex. We need to contextualise all of these trends into our local situation and perhaps even employ some alternatives. If you say 'globalisation and individualisation', I say: where is community? If businesses mass- customise for the individual, — what has become known as the 'market of one' — then it is highly individualised targeted marketing right down to the individual customer. Now some people may claim that this is a very good thing because we satisfy all our needs and desires, but the question then becomes a value-based one on what kind of society you want to create in the future if our job is to satisfy individual needs and desires on the fly, as it were. Or are looking at different values?

Here are some of the trends that all of you will be familiar with, and I'm just saying that we should stop and question some of these because there is always a value behind them. What about the values: the value of experience rather than ageing? How can people make a contribution, and in what ways, as they change career, or retire, or develop as they get older? How can we imagine people having multiple lifetimes and not just one? We can use these new kinds of facts or trends much more creatively than tends to be the case.

Here are some of the things I think that you in this audience might identify with. We have concern about our material culture, the value of experience, creativity, craft and the arts – the form that things take in our societies, depreciation of the environment. So if we are going to design a future, we can design that vision based on values and so the values, it seems to me, are the starting point of the articulation of the design process. If we want to improve communities, regenerate parts of a city, improve our health services, then we are setting up first and foremost a subscription within a team to a set of values, which will be articulated.

Now let's look at the creative imagination, which in turn has two aspects. This was first of all defined very clearly by Samuel Taylor Coleridge, the Romantic poet. In his philosophical writings, Coleridge describes imagination which he defines in two ways which I think are quite interesting. One is the involvement of imagination in perception, which he called the *primary imagination* and then the *secondary imagination* involves synthesis, the creative leap into novelty. What he was saying with perception is that you as a person, your interest, your experience, your motivation, your intentions help define the world that you see. You are not a passive receptor of 'data' which somehow gets processed in the place that we call the mind or the brain; you actively see the world. If I were to say to you, look round the room and see who is wearing red shoes I'm basically programming your perception to be able to do that. If we all walked down Sauchiehall Street with a different motivation, we would see different things. A homeless person would see Sauchiehall Street in a different way from a policeman, from a shopper, from a student, from a single mum and so on. Perception is active, that's really what I'm saying. That's quite interesting because in teaching students and designers, one of the things we teach is: how well can you see the world? And, most importantly, can you see it or feel it through somebody else's eyes? That's called empathy. I think we all feel it if we are involved with somebody who is going through a hard time or suffering, we can feel empathy for other people. It's imaginatively putting ourselves in somebody else's shoes. That is a sensibility, let's say, that can be developed in design.

So primary imagination: perception and empathy. Secondary imagination: inspiration, the creative leap and synthesising knowledge and experience together. If we put them in a diagram – past and present; mundane and creative – we can start to play with it. This is usually where most people are keen to explore the creative future: what's going to be happening; what can we do; what can we make as a company, as a university; how can we project into the future and design for a circumstance that is not here yet? This is usually what happens and again I'm simplifying perhaps the story, but in order to make the point. People start with the mundane imagination, the mundane trends which have been proposed, not much reflection on the past (which is a huge store of inspiration in my experience) and project it bigger into the future. I'll show you some examples of that, of where I think I've seen it happening. So we end up with a bigger future that's much like today, the global trends, but more worrying, *bigger*, you know, we should be scared, something like this, but it's going to happen anyway, whatever we do. Surveillance society. It's happening. I don't disagree. There are more CCTV cameras than ever before and we have reasons to be worried about surveillance. I think we all know about how information is tracked and so on, but we don't have to extrapolate it unless we accept that we are passive in responding to these things, that this is going to be the kind of place we are going to be living in. There's the country house with all of the CCTV cameras around it *[referring to slideshow]*.

We set up 'gated villages', very expensive, of course, which are beautifully landscaped, with a lot of surveillance cameras round them. You could pay to have this kind of future and some of it is in the present now. But again I say, if we work on a values-based vision, here is design asking a question and the question is, is this where you want to live? Is this the future we want to create? Is this going to be the suburbs of Glasgow? Is it going to be like *this*? *[referring to slideshow]*. And this is research undertaken by government into context of this kind of thinking that says: if more people move to the suburbs because the centre gets more deprived or violent or unpleasant in certain ways, then the animals take over. I'm parodying it slightly, of course, but then we move to the country and the animals move into the city! Again if this is even a possibility the question remains: is it what we want?

The smart home, the 'home of the future': is this what it looks like? *[referring to slideshow]*. Can you imagine that your home, if it's not already, will be this *clean? [laughter]*. There are no pets, there's no shoeboxes under the bed, there's no newspaper lying around. There's actually nothing very much apart from some screens and somebody with a remote control – the kind of image we are all familiar with. The smart home, the intelligent home, that looks like nobody's home. I sometimes wonder how much research goes on to look at *real* homes, *real* people, when this can be extrapolated, that everybody is going to become very tidy suddenly *[laughter]* five years from now, or whenever.

That's why, when we look at this, we can say: do we accept it? This looks like a laboratory to me, except that it's pink and not white. But do we accept this kind of technocratic vision of the future, or do we question the values here? If we use design as a 'tool for thinking and imagining' and letting people narrate their own lives, then we also, as designers, design tools to do so. I've talked about design as visualisation, design as asking questions and now I'm going to be talking about design-tools that help us see the world from other peoples' points of view.

We are looking at perception and the creative imagination for the place where we want to be and I would propose to you that the place we start is today. All design is located in the present, obviously, and what we need to do, I propose, is look at the present very, very carefully; that fresh vision that Coleridge talked about. I ask a student, if you walk along Sauchiehall Street what do you see? How well do we see our world and how well are we interpreting it? So we start with the present, develop it, project it as possibilities into the future – not one big future, but multiple options. This is not the root of the probable but, in a sense, the art of the possible. There is a big difference between these, because they are optional futures, if you like: people can choose, they can respond, they can be value-based; and if design and creativity makes things visible and discussable, people can say what they feel about it, they can participate in that creation and include the past. This is a much more generous take on time, if you like, it's focused in the present, it accommodates the past and it gives roots or possibilities into the future. And if you look at design as envisionment, there will always be more than one scenario. You will always have more than one idea; you will have a number of ideas. What criteria do you apply to judge the best?

I'd like to propose, instead of 'creative futures', creative *presents*. How many different ways can you see what is going on around you? And what can you do yourself, or in working with others, that helps you see our world, our context and situation from multiple and different points of view; scientific, technological, sociological, business, creative, arts-based, community-based? How well can that be articulated so that we have a very *rich* sense – and not a mundane sense – of how wealthy in creative terms the present is? In my own work – whether it's in industry or in research - I would say that what I have to try and do for myself and with others is to really *see* the problem that is being described, or the opportunity that is given, and from there we will get our inspiration.

Here we start looking at the tools that I described earlier. Real people. We don't need to create 'user personas' or fictional people or market segments; we don't need to do that exclusively. We can look at what goes on in people's homes if we are studying the smart home or the home of the future. These pictures were taken by people in their own homes, having been given design-tools to narrate their own life. So this is a tool developed at the Royal College of Art by Tony Dunne and Bill Gaver and there can be multiple versions, different types of tools, but it's basically simple things given to people to allow them to document, to describe their own life and to give that back to whoever the design team is to use that as input. So these photographs that you are seeing here are what was developed, people having been given disposable cameras. This is what we got back. And this is what an actual home looks like for somebody and it doesn't look much like the smart home I showed you earlier. Lots of animals in the pictures we got back, many photographs of pets in homes. It's fantastic, isn't it? Collections – that's the other thing. The Economist published an article in praise of clutter. It supported some research that was going on to say we spatially organise our lives: we organise our kitchen; we organise our desks; we are 'pilers' or 'filers', we need the stuff around us. We need it there. It's how we psychologically locate and organise what we are doing. So here in the home it works in exactly the same way, There are collections of things for all kinds of reasons that we have in the attic, in the cellar, under the bed, in the shed, all around the house in every cupboard, and so on.

India! I took this photograph when I was in India doing cultural research because what I was interested in was that in a market like this – the numbers of people and the elegance of the women with these pyramids of lemons in their hand and a basket of lemons on their heads. Really trying to look and see behavioural patterns and how shopping is done. It's not a stall, it's people moving around offering fruit in this kind of way. And in India: religious iconography. These are in the rickshaws locally, the pictures of the gods for example. Bollywood: it's now an international phenomenon: it's not just Indian. How does this affect our society? These are real people in real places.

Here is a design studio, no students in it at this point. This is typically what a studio would look like. A workplace, a real workplace for doing interaction design, design for technology, and in that there would be clutter, there would be electronics, there would be toys, there would be soldering irons, there would be all kinds of stuff as part of the process of making. It's not just a computer with a clean desktop. These pictures are of the interaction design studio at the Royal College of Art when I was there. These are the props, things that are used to make new things, the synthesis that I talked about earlier, the creative synthesis. Real places and real time. Cultures are not only multicultural, they are multi-historical: there are different rates of change in different places for different reasons. Again: the mundane imagination says our society is speeding up, it's 24/7, it's an information society and so on and so on, but the answer to that is: No, not all the time for everybody. Even for all of us that might have technology in the workplace or in our home and mobile phones, we are not literally doing that twenty-four hours a day. Sometimes you sleep, sometimes you're out for a walk, and sometimes you're doing other things. You're also living, you could say in different time zones, almost different histories and I think it's quite important that when we are designing for the future, we know which 'history' we are addressing. We look at the cultures and we look at the histories and we look at the passage of time in the day when you want to answer all of the e-mails in your inbox, when you want to answer your mobile phone and the other times that *you don't* because you are doing something else and you don't want to be distracted, and that's how we can design our days.

This is from where my parents live in the Highlands, *[referring to slideshow]*. This is today. There are slower cycles of transportation, there are slower cycles of technological implementation for very good reasons.

A student project. Murat Kunar designed this tool to again ask people to narrate their own lives. He gave them red and green stickers and said: put in your history of significant things, in any way that you like and I think it was very, very clever because what he did was to allow them, on the time line, to decide where today was. Where are we in our lives? How could they possibly put a dot in that line that said 'now'. It's quite interesting. How big a past do they have? How generous a future do they give themselves? So this in fact opened up really a lot of questions about how we visualise and interpret and see and feel and experience our own lives.

You can see the patterning of time in this; it's almost like a choreography. It's like a musical score – time is being designed like a musical score using these tools. Imagine if your diary looked like this, there is no reason why it looks the way it is today with our visualisations of time. This is a different kind of diary. This one has been filled in Hungarian. I think one of his parents filled this one in. And here you can just see narration of a lifeline or a lifetime. Today and tomorrow, somebody said – two divisions. And if you line them all up (there were many more than I've shown you here) you see a kind of choreography of days and how people use and interpret time. I'm simply showing you this to say: this is a design tool that helps us look at how people spend time, how they experience time so that we can actually design for that, rather than the linear, progressive model that our diaries seem to use.

In terms of perception and ways of seeing, tools can be designed to help us see. The primary imagination: we need to be able to see and we can design tools for ourselves or others to help us see. Two narratives. Cultural probes we talked about. Photography: the minute you use a camera and put it in front of your eye you are actively seeing: you are literally switched on to looking at the world in a different way. Design process itself is designed to fit the context, so that although we have, and can describe, generic stages – observation and understanding, conceptual design, detailed design, prototyping, implementation – it is frequently the case that these phases overlap. You might need to front-load more on one aspect or another and balance them out in different ways, but the thing that I'm interested in with those processes is the development of a collective intelligence among the people that are working together as a team, including the users, the community as participants, to develop a collective intelligence about the present and the potential futures, the possible futures that could be created. My interest is: information technology, mapped onto the physical. The virtual onto the physical, the intangible onto the intangible, the mobile phone, you can't see the system, but it's in the air. Internet: we all use it, but we can't see it. How do we design systems for things that we can't see? That's my question as a designer.

Here's an example. Indri Tulisan who I worked with at Philips and who, as a student, won a prize at the RCA for a community project on 'objects lost and found'. She proposed a system where objects that were being thrown out onto the street could be tagged and found and used by other people so that sustainability was built in. If you were looking for something you could find it through a connected system that used quite simple technologies to do this. This is her proposal for tagging objects as you walk around in the environment and putting them into a circulation of potentially reusable objects. She added to this: *narratives*. The person that was throwing out would say why they were getting rid of it, so there was a little narrative attached to each object. There was a kind of playfulness, in fact, in investigating what all of this stuff was that was being thrown out and why it was being thrown out. It's quite intriguing to look at these things and find out the history, the biography, if you like, of the object was being tagged onto the object. So this is quite a simple system that could implement that.

‘Living Memory’ is the next project I’m going to show you. I mentioned earlier that I coordinated the European Commission’s ‘Connected Community’ Programme, which ran for about three or four years. This is in Dutch, but of course cats also get lost in Scotland. *[Laughter]* I collected in the area that I lived in Utrecht in Holland informal publications, anything that anybody had put up in the local supermarket, little cards that were handwritten or the things like this that came through my door that had been created informally. Most computer systems are set up to deal with formal communications and I was interested in how they could deal with informal communications, stuff like this. I looked at how people communicated between themselves. So if a page describing a lost cat came through my door or a neighbours’, if I had seen it, I would phone that number and tell them I saw the cat at 5 o’clock, it was in my back garden. I analysed the media that had been used to make these things possible. So, of course, the photocopying machine, the fact that people circulate them round the environment, the phone calls, the answering machine messages, and so on. And I wondered what could happen if we used or designed technologies, so that as soon as the cat was lost we could more effectively communicate in the *local* community. Not internet only as ‘worldwide’ phenomenon, but also locally, in local communities. Why can’t we do that?

If you ask a simple question like that it poses quite a big technological challenge to actually realise it. I call this the ‘cat as catalyst’. *[Laughter]* The cat became the catalyst for people to be able to talk to one another and if you study communication you will come across the term social navigation and you will find that people need reasons to talk to one another. If you go to your local park, and somebody has got a dog like your dog, you might start to speak to them. You’ve got a reason to talk, but it’s very difficult to walk up and start talking to a complete stranger. It’s probably going to be perceived as threatening. We need to mediate relationships between people in ways that they find appealing, interesting and attractive and these are the kinds of things that help that process.

Social navigation. Another example that I would use would be this: I mentioned to you that I lived in Utrecht for many years. If you wanted to come to Utrecht to have – let’s say – an Italian meal, you could look up Digital City Utrecht, you could go onto the web, or if you knew me you could phone me and I would give you the best information about Italian restaurants in Utrecht. If you know me you would be able to say to yourself: if Irene likes it, I will probably also like it, (or if Irene likes it I probably won’t like it!) That’s how we socially navigate, and make up our minds about things, depending on who we hear it from. And, of course, newspapers and publishing work on the same thing – you buy into a trusted opinion.

I’ve been discussing local needs, informal communication and shared memory and experience. Some of these terms I’ve already defined: participatory design: bringing technology into the physical space, making it understandable and usable; community as database. I would use a different expression now. I would say: everybody is an expert. If we knew the people that lived in the local community, if we could access the full potential of human resources in the workplace or in the community we would be very ‘wealthy’ in terms of resources, but we can’t because of communication problems and because we don’t know the potential that’s around about us.

I was not interested in accessing data; I was interested in accessing people. Territory-as-interface just means we could use any spot in the territory. So here it was, this is what went to the European Commission *[referring to slideshow]*. The lost cat generated all of this and it started a programme that ran across Europe with about thirty institutions for three years, running different projects, looking at some of these challenges which all came out of that perception, that seeing, of how things were and possibly how they could be improved. I set up a reference group, if you like, a cultural board that would help us think about memory, community and communications and then — this is a very fast cut to three years later — these are some of the prototypes that were placed in pubs, shopping malls, schools in Edinburgh. I was in Holland at Philips Design and we worked with Philips Technology Research Labs, Domus Academy in Milan, the Paris Sorbonne University and Imperial College in London; and the user research, the ethnography research, went on in Edinburgh: so the prototypes came to Edinburgh. What you see here is a screen-display and inside it are all of the little cards that you might have seen in the newsagents shop and you could simply whirl them round at any speed you liked and if you were interested in one of them you pushed it forward and it opened up. If you were really interested in it you pushed it further forward and it went into that tray and you took one of the tokens and it had that information on it. This is 'physical computing', tangible computing: you only need to have what you need at any point in time. These are very simple examples of how technology can be developed from using those first ideas about a lost cat, and these are just some of the visuals, the user research and the feedback that went on in Edinburgh.

Here's a similar project, cross cultural, with children in Italy and in Belgium, again using tools to communicate with each other because, of course, they are speaking different languages so they are doing it visually. They are creating a little virtual world to tell stories. The same principles are involved: working on a *community* level and not an individual level.

And now I'd like to show you some of the work going on at the Glasgow School of Art with one of my colleagues. This is looking at design intervention in terms of the health service and medical practice. Here you see the pathway, the complete pathway as seen from a clinician's point of view, of someone who has had a stroke. You will see in this the division into independent or dependent living. Now the first interesting thing about this as a visual is that it is connecting up the whole process of what happens to someone when they have had a stroke. It's not the single view, the single instance, the single place, as an outpatient, an inpatient, an operation, . . . but the complete story of that. You can add in, as part of that story, what we could call the design interventions. So here are the design interventions that could improve that pathway, that could improve the experience. And then working with the clinicians, the health service management of patients, different interpretations and pathways can be viewed and created. So here is visual modelling based on: how do you see the health service working and from whose point of view? This is the work of Professor Alastair Macdonald at the Glasgow School of Art who is an expert in 'inclusive design' and has conducted this research together with clinicians at Glasgow University: the head of womens' health, the head of geriatrics, the head of undergraduate medicine and a human factor specialist looking at these mappings in order to improve the quality of the experience.

To round up, these are the things I've talked about tonight: design as visual language, making ideas and thinking visible; that's what I started off with tonight – tangible, visible thinking. There is a design process involved and there is a high value placed on communication and participation: action based research. We act and we intervene. The choreography: we look at people, we look at cultural context, we look at technology as an enabler and we look at design. When I say design in this way I mean the full spectrum of the design profession: graphic design, product design, product design engineering, interaction design, interior and environmental design, — this is the professional level of design training and education and its practitioners.

You do a project and somebody expects at some point to have 100% result: you're going to design a new car, whatever it is, it has to be realised. The 100% is implicit - we have to finish what we start. But the approach I'd like to propose is: 1% design ! What I mean is: you start with all of this on day one immediately, in the present and you start designing with action-based research. So even if you only have 1% information, it is possible to do 1% design. If you have a 1% inkling of what your technology direction is, you can accommodate that, you can use it, because as soon as you do that 1% and make it visible you get feedback. The quality improves and the risk decreases. At any point we can stop and say it's 10% it's 20%, we iterate and we go back and we look at it, we prototype, we get feedback and so on.

Here's the 1% design. *[referring to slideshow]* This band shows that designers are increasingly used in processes in which they are the facilitators of creative thinking. On one level, they are a profession; on another level, they are very good at bringing different kinds of knowledge together: technology, cultural research, form, interaction and behaviour. But you have to make something, you have to synthesise and put all of that together and make something that looks attractive enough for somebody to want to have, for example. So this is synthesis across a whole process and we pull it together in workshops. Typically there are phases in a design process where you really pull it all together, pull everyone round the table and create an output, create something that is visible even if it's 1%. So the model that I use is DNA, I sometimes talk about the DNA model of design so it looks a bit like that. Divergence, convergence – looks a bit like this. In all of the disciplines we need to research and then we need to apply. And here's another visual metaphor for it, a little bit closer to home. *[Forth Rail Bridge]* Here is the design process. If you apply that principle all the way through there can be outputs all the way through and there can be iteration; choreography you could say. Scoring, like my timelines, is a visual metaphor for this.

I've presented the difference, I hope, between mundane futures researching the probable, what everybody agrees about, creating more information, doing more and more research. And in distinction to that I say: no, we act *in the present* by observing the present and acting within it to *do* something and to *create* something that others can respond to and share. Creative *presents*, in summary, the art of the possible. Lets get cracking on!

The Glasgow School of Art is collaborating at the moment with Glasgow University and Strathclyde University and Scottish Enterprise and other partners to set up a centre for what has been called social innovation. I've called it *sociable* innovation, in order to apply some of this thinking and to share it between business, technology, philosophy, psychology, art and design and to say: Right! in Glasgow, in Scotland, we can do these kinds of things and many of us already are. Again respecting what's being done in the past, and including what is going on in the present, but starting with the 1%. We are starting this now and so for anybody that wants to be included in this you can talk to me afterwards if you like or you can e-mail me. My colleague Alastair Macdonald is here, — I've mentioned his work earlier — and Amanda Cockcroft is also here, and you can talk to one of us about it. This is a way for all of us to collaborate and explore.

I'll stop there and I hope you have enjoyed it and thank you very much for your attention. *[Applause]*

Jennifer Williams:
Thank you very much for such a generous bunch of language to think with, I loved it. Thank you very much indeed.