



Select Committee on Science and Technology

Corrected oral evidence: Ageing: science, technology and healthy living

Tuesday 3 March 2020

11.45 am

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Members present: Lord Patel (The Chair); Lord Borwick; Lord Browne of Ladyton; Baroness Hilton of Eggardon; Lord Hollick; Lord Mair; Baroness Penn; Viscount Ridley; Baroness Rock; Baroness Sheehan; Baroness Walmsley; Baroness Young of Old Scone.

Evidence Session No. 18

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Questions 159 - 169

Witnesses

Dr Anna Dixon, Chief Executive, Centre for Ageing Better; Professor Mariana Mazzucato, Professor in the Economics of Innovation and Public Value, Founding Director, UCL Institute for Innovation & Public Purpose, UCL; Ami Shpiro, Founder, Innovation Warehouse; Luella Trickett, Director of Value and Access, Association of British HealthTech Industries.

USE OF THE TRANSCRIPT

This is a corrected transcript of evidence taken in public and webcast on www.parliamentlive.tv.

Examination of witnesses

Dr Anna Dixon, Professor Mariana Mazzucato, Ami Shpiro and Luella Trickett.

Q159 **The Chair:** Good morning, ladies and gentlemen. Thank you for coming to help us with this inquiry. We look forward to listening to you, because you might be able to fill in the gaps that we have been searching to fill. Before we start, may I ask you to introduce yourselves from my left so we can get it on the record? If you want to say something quickly as an introduction before I start the questions, please feel to do so.

Luella Trickett: I am director of value and access at the Association of British HealthTech Industries. My role is supporting the industry with the adoption and spread of health-tech innovation and the uptake through procurement by the system.

Ami Shpiro: I guess I am an entrepreneur. About 10 years ago I set up a hub for early-stage start-ups to come together with investors. It is called Innovation Warehouse and is very much involved in investing in early-stage tech. More recently, I identified an opportunity in age tech, so we created a focus on age tech and set up a longevity hub. Basically it was just an identification of a lot of opportunity in the ageing sector.

Professor Mariana Mazzucato: I am a professor at University College London, where I founded and direct an institute, which is actually a department, on innovation and public purpose. My expertise is in bringing the whole issue of the direction of economic growth, not just the rate, to the fore of the political economy, and in how to reframe policies like the ones you are talking about today—innovation policy and industrial strategy—on big public goals instead of handouts to sectors or particular sizes of companies. I am not an expert on ageing but more on the design of policies to foster economy-wide growth.

Dr Anna Dixon: I am the chief executive of the Centre for Ageing Better. We are a charity focused on bringing about change in society so that everyone has a good later life. We do that through using evidence to influence both policy and practice. We are funded by the National Lottery Community Fund and are a what works centre.

It is probably appropriate to mention at this point that, as you have already heard, the Centre for Ageing Better has been involved in the Ageing Society Grand Challenge. We work quite closely in a number of ways with the Department of Health and Social Care and BEIS and have helped to shape the Healthy Ageing Grand Challenge. Latterly, we have also been involved with UKRI in the Healthy Ageing Challenge Fund, where we sit on both the programme board and the advisory group, which have been mentioned. We produced the framework that shaped the challenge fund and were commissioned to do a piece of work, as was mentioned, on the innovation landscape with Big Society Capital. I wanted to declare those things up front.

In our strategy we share the ambitious goal, or mission as the Government have called it, for five more years of preventable disability and closing the gap between the richest and poorest.

Q160 The Chair: That leads me to my first question about the Government's mission to increase healthy lifespan by five years by 2035. Do you think it is achievable?

Dr Anna Dixon: We put it out there as an ambitious goal. Whether it is achieved or not is not necessarily something that we as an organisation would hold ourselves to account for; rather, it is to galvanise action. I see the Government's mission in much the same way, rather than having an old-fashioned target with a very clear delivery plan and everybody is called in to account for whether we are on target.

Having a background in the NHS, I know very well how those sorts of targets on waiting times would be held up. This is a very different mission—I am sure we will hear more from Professor Mazzucato in a moment about that—to catalyse action by a range of actors. We think it needs government action and cross-government action from many departments. It also needs business and the third sector to play their parts. As an organisation we see our role as providing the evidence and stimulating action by others to achieve it.

It is very ambitious. If it is to be achievable in the timescales, the focus must be on people who are already in mid-life onwards. This is why it cannot be only a primary prevention strategy. To reduce disability it has to focus on changing the environment. We were very influenced by the World Health Organization's healthy ageing framework and took that as the basis.

This is not only about our intrinsic capacity or our own abilities; we are disabled by our environment, by the homes and communities we live in, and by our workplaces. There is big opportunity to tackle inequalities. We know that people with the same level of disability, or intrinsic capacity, experience more limitations in their lives if they are poorer. They are much less likely to be working than people with the same level of intrinsic capacity in a wealthier area.

It is critical that we look at the environments where these people are working, the job opportunities they have, and the homes and communities they live in. We can make changes quickly in those things. That is where the big opportunity to make a difference lies, as well as working hard on trying to reverse some of the disability that people experience as a result of ill-health that they may have accumulated over their life course.

Professor Mariana Mazzucato: I would comment on the positive, hopeful part of it. We have been putting forth this idea of challenge-led and mission-oriented policies across Europe. One of the reports we wrote was on mission-oriented innovation¹ and how to focus on very concrete targets like the one you just mentioned on ageing, to change how industry currently interrelates with policy—the public-private relationship. Currently there is plenty of money going to the pharmaceutical industry,

¹ Mazzucato, M. (2018) *Missions: Mission-Oriented Research & Innovation in the European Union*. European Commission. Available online at https://ec.europa.eu/info/sites/info/files/mazzucatoreport_2018.pdf

for example, or in this country to life sciences; there has been a whole life sciences strategy review in different years.

The idea of having healthy ageing policies is to fundamentally change how current funds, both private and public, are steered. You will remember that the industrial strategy in the coalition Government was focused on sectors—life sciences, automotive, aerospace, creative industries and financial services. The whole point of having these four challenges now around clean growth, future mobility, healthy ageing and AI is to say, “Stop worrying about just one sector, get all the different sectors to work together”, and make the policies, the procurement contracts, the grants and loans conditional—“conditional” is a key word—on how industry also benefits from these massive amounts of public subsidies and investments.

To give you an example, in the US, the National Institutes of Health spend close to \$40 billion a year of taxpayers’ money to help industry innovate. Whether we should design the system to achieve public goals is the question we should be asking. It is not really about whether this particular mission is achievable or not; of course it is. The question is: can we take it seriously and redesign our current policies away from simple subsidies, guarantees and handouts towards really interesting symbiotic public/private partnerships to achieve really important public goals?

The Chair: In your view, is it being taken seriously?

Professor Mariana Mazzucato: At the request of Greg Clark, we hosted the Commission for Mission-Oriented Innovation and Industrial Strategy which I co-chaired with Lord David Willetts.² We worked very closely with the civil servants in BEIS and specifically those leading the challenge-oriented areas. The hard bit—it is not so much they were not taking it seriously—is that it is very difficult to get government departments to work outside their silos.

To give you an example, on a completely different mission, but one that is a bit more concrete, when you think about ‘Future of Mobility’ and look at the funds that are currently available, the whole innovation budget in the UK is not even £10 billion, yet the procurement budget of the Department for Transport alone is between £30 billion and £40 billion. If you can catalyse those funds and redesign how we do procurement to fuel bottom-up experimentation, not because we mythologise start-ups, entrepreneurship or small companies but because we really want to solve important public problems, whether they be internationally getting plastic out of the ocean or specifically in our country to do with ageing, it is of course possible, but we have to work between departments, between sectors, and redesign current instruments.

Lord Borwick: There is often a tendency for people to redefine their mission and abolish the objective tests. I know we can always objectively

² UCL Commission on Mission-Oriented Innovation and Industrial Strategy (MOIIS): <https://www.ucl.ac.uk/bartlett/public-purpose/commission-mission-orientated-innovation-and-industrial-strategy-moiis>

test the amount of money that goes in, but will we be able to objectively test the outcomes of the Grand Challenge and the mission? Will you believe those figures when they are produced?

Professor Mariana Mazzucato: One of the key things with missions is that they have to be concrete, so you can ask, "Yes or no, did you get there?" If you think of the moon landing that we have been celebrating the 50th anniversary of over the last year, the challenge was the space race and Sputnik; the mission was getting to the moon and back again in one generation. Whether that was achieved or not could be answered yes or no.

Lord Borwick: Absolutely.

Professor Mariana Mazzucato: Even if they had not gotten to the moon, what happened along the way—the dynamic spillovers across many different sectors—is almost as interesting. Most of the things that today make our smart products smart and not stupid came about along the way to solving that particular mission. You could say the whole software industry in some ways was a spillover of that mission.

That is why the design of the innovation system is just as important as the design of the mission itself. Having a mission that is targeted but also really cross-sectoral is key. There is a lot of confusion in different countries with the different levels of abstraction. You should start with the challenge—personally, I think it should be the 17 sustainable development goals, because they have been agreed on internationally. You turn those into missions, but they have to be concrete yet broad enough to involve lots of different sectors. Even a cancer mission can be defined in particular ways. If we can define it in such a way that it includes as many preventive areas as possible, that would immediately bring that mission out of just a healthcare mission into all sorts of things like nutrition and healthy living, et cetera.

Underneath that are the projects. For example, quantum computing is not a mission. It is a project around potentially a different mission, and AI and big data would be critical as a sector across almost any mission that you can think of currently in the UK Government. Ensuring we do not confuse projects with sectors and missions is one of the first things that is required, so we do not confuse the vocabulary.

Dr Anna Dixon: As you have been hearing from the previous panel, at the high level the mission is trackable. We have the data on disability-free life expectancy, we have it by socioeconomic group, and we can break that down and track it. In that sense, we can hold ourselves to account as to whether we are going to make the mission.

The critical thing is that that is a long way into the future and the question is how we are going to capture and evaluate the other impacts that we think are so important to the mission that we should be generating along the way. That is where there is a need for us to look at the policy actions that are needed. It would be great if those policy actions were all set out, as I think you have been discussing, in a cross-government strategy so it was really clear what each department was

going to contribute to those policies, and then we could evaluate the extent to which those policies were having the impacts they specifically wanted.

Regarding the industrial policy, the Challenge Funds and other activity, it is critical that we do not just measure the financial and economic—for example, how many new businesses there are. There is a risk that the current evaluation framework that is being set across all the Grand Challenges is very focused on those probably slightly old-fashioned sectoral measures of industrial success.

If this is mission-related, we must ensure the social impacts are sitting alongside these broader economic impacts and capture both those together. The evaluation is not sophisticated enough, and at that level—we are probably talking project level, in your language—we need better evaluation and more funding to be put into that evaluation so that we know what the additional benefits are, both social and economic, as we work towards the mission.

Q161 Baroness Penn: You have broadly covered my question. It was about how well the UK Government in their approach have taken on the idea of challenge-based and mission-based policy-making. It was contrasted with sector-based policy-making, but after the industrial strategy came out we had a series of sector deals, from ceramics to tourism to whatever. Has it been followed through or are we trying to do a bit of sector-based policy-making and a bit of mission-based policy-making, and can that work?

Professor Mariana Mazzucato: We need to define what we mean by deals. There are backroom deals; there are plenty of deals that are not necessarily the deals we want. Deals should be reframed—and I do not think this is necessarily happening—in a conditional way. When, for example, a sector comes to the Government and asks for a bailout, which recently in the UK Government has happened quite often, those bailouts should be conditional on transformation of the sectors to achieve public goals.

This happened recently in Germany with the Energiewende mission for energy transformation. When steel (as here) asked to be bailed out, the condition was, “As long as you lower your material content”—your carbon footprint, basically. That happened, and the steel sector had to innovate and transform, not just to mythologise innovation but to achieve that public goal. There is a lot to learn from that example on how we do deals in the UK.

Q162 Lord Browne of Ladyton: In the previous evidence session Mr MacGinnis encouraged us to look at the recently published annual report of the Industrial Strategy Council. To some extent he succeeded, because I have had a quick look at it. I have not had a chance to read it, but I hope one of you may have. This is set up, apparently, to have an independent evaluation of the Government’s progress in delivering the aims—“aims” is a very good word—of the industrial strategy. What does that tell us about progress in relation to the aspects of this that we are interested in, which is the Ageing Society Grand Challenge?

Professor Mariana Mazzucato: My knowledge of the Industrial Strategy Council is that it is much more focused on the horizontal measures, areas like productivity and skills, and it has not focused very much on the challenges itself, at least from its existing work to date. In fact, the chair of the council Andy Haldane said recently that he wanted to transform the council to start looking at those areas.

What the challenges are about is reframing what “vertical” means. The horizontal policies look at infrastructure, business environment, research and skills. The vertical policies in the past, as part of the industrial strategy, were sector or technology focused. Having the vertical redefined as challenges requires us, as the earlier question mentioned, to have different types of evaluation criteria for how we decide whether we have achieved these missions or challenges. It could do something concrete and look at something we started to talk about with the Treasury—re-look at the Green Book itself—because it is not just the *ex-post* evaluation, it is also the *ex-ante* evaluation. The net present value/cost-benefit analysis type of metrics do not serve you very well with really ambitious challenges like the ones you were talking about.

The Chair: May I suggest that if we drift too far from the questions we will cover a lot of interesting aspects but we will not get through all of them?

Q163 **Lord Hollick:** We heard in the previous session that progress towards the objectives that have been set by the Government is well behind where it needs to be. In previous sessions, witnesses have been less kind and said that these objectives are completely unachievable. How do the Government get out of this rather awkward position? They have set themselves some objectives, which are laudable. They apparently set them without any consideration of a detailed road map, without any consideration of how they are to be measured, and they involve many different departments of government.

Is there an organisation or a consultancy, maybe in academia, that can help the Government to re-set this project so that they can have goals that are achievable and a route map to achieving those goals that is clear? In your joint work with David Willetts you talked about an ecosystem that will deliver. How do the Government now take a step back, reframe this, refocus this and give themselves a reasonable prospect of achieving the targets that they set originally?

Dr Anna Dixon: The first thing to say is that they have recommitted to it. Given recent changes, it is really important that those goals are long and enduring. We really do not want them to suddenly say, “That Ageing Grand Challenge is not that important any more”, or, “We have rethought this mission”. We need to have long-term persistence with this goal.

The second concerns the thinking that has been done in government. We have helped with this in the sense that the Centre for Ageing Better has its own theory of change or logic model about the changes that are needed in society, including in policy across government. The first thing they need to do is commit and publish a cross-government strategy on

ageing. Many other countries have had and do have ageing strategies. Given the huge demographic challenges we face in this country, along with many others, it seems surprising that we have no cross-government strategy on this issue, despite the fact that some of your colleagues some time ago had called for this in previous Lords Committees. It would be a great opportunity for the new Government to publish in effect the road map that you were calling for.

However, this will not be achieved just through policy action, as we have all said. It needs also to contain within it clarity on how the Government are going to use their role and their funding—the Innovate UK point—to stimulate industry. There is no ageing sector, as the previous questioner said. The issue here is how we make this a mainstream market and how we get existing businesses to see this market as a market, and these consumers as consumers who they want to serve better than they are being served with current products and services.

That is the big challenge here, and why I think the Challenge Fund has found it more difficult, because when you put a call out to say, “Who wants to play in this mission on healthy ageing?” the people who identify, unfortunately, are people who are framing this still as high need, social care and frailty. They are not seeing the opportunity of a 50-plus market of people who, with the right products and services, can live a full and healthy independent life. That is the big shift we have to see and I would really love the Government to commit to using not only their funding but their leadership, and to see how they will do that.

Lord Hollick: Which country has a gold-standard ageing strategy?

Dr Anna Dixon: Singapore has a productive healthy ageing strategy and there are other successful ageing strategies. Different countries call it different things. There are a number out there, including Australia and New Zealand. The ones I know are those available in English. I am afraid my languages do not stretch to having read other national strategies that are not available in English.

The Chair: Mr Shpiro, did you want to say something?

Ami Shpiro: My colleagues over here can articulate this a lot better. As an entrepreneur my perspective is very narrow.

The Chair: We will come to that.

Ami Shpiro: In my opinion, there definitely needs to be an overarching systemic, holistic strategy—you call it a strategy—that will create lots of opportunities so we know what problems we are solving. If this is a way of making that happen, that is great.

The Chair: We will come to your involvement in later questions.

Q164 **Baroness Young of Old Scone:** My question has really been asked and answered, so I would like to ask our two witnesses from the sector whether any of this sounds sensible or not, in your terms.

Luella Trickett: Mariana’s point about conditional challenges is really helpful. One of the biggest issues with a lot of the funding initiatives is

that they are for the research end of it. They are not about the adoption, spread and actual uptake of the products and services that deliver what you are aiming to deliver.

It is therefore really helpful if the challenges come with conditions that are understandable and transparent from the beginning. We often struggle with the problem that there is no procurement mechanism at the end of it. If that can be built in so that there is a commissioning of the services at the end, we are more likely to see industry willing to come to the table and participate.

Ami Shpiro: A lot of what I see is driven by capital investment and venture capital investment that is looking for a very high return, so it is driven by equity investment. That has also been my experience with the Innovate UK grants and investments. A lot of this will not be driven by equity return. It will be driven by linear growth rather than exponential growth and valuation, but linear growth in the sense of employing more people.

Again, I am not an expert and I have a very narrow view, but I see a lot of older people who have tremendous skills who could be part of the solution rather than part of the problem. We need to find some kind of systemic way of bringing them in as part of the solution and not just seeing them as a problem that needs to be solved. What I am saying is very narrow and not based on research.

Professor Mariana Mazzucato: May I address the question by Lord Hollick about how the Government here have approached it? My experience is that there was a strong will to work with a challenge-oriented agenda, but it quickly became rushed. Missions were coming up on a weekly basis. On the one hand, that is great, again because of the willingness, but the problem is the design question. We found ourselves as a commission having to say constantly, "Wait, hold on. Can you re-think it in a bit more of an inspirational and bold way, for example, thinking about a 100% fully accessible public transport system within the future mobility mission?" That would better nurture that bottom-up experimentation to fulfilling that public goal.

This is a great moment, especially now with all the talk about a new UK ARPA (Advanced Research Projects Agency), to pause and to think about the design of the innovation system and the design of the missions themselves, and about who chooses the missions. Is it a top-down leaders thing of a bunch of academics and some industry leaders and the Government? How do you bring citizens to the fore?

There are really interesting examples across the world. We have been working recently in the Basque region of Spain, which has a history of co-operative movements, on how you might bring different voices to the table that will inspire and hold the Government and the different actors accountable to ensure it is serving citizens and not just increasing profits.

Baroness Sheehan: To pick up on your point, Mr Shpiro, and yours also, Ms Trickett, you talked about venture capital and it needing money to invest in new ideas, cutting-edge technology and innovation, but when

that is done it needs to move out and hand the baton on to someone else. Time after time, we hear there is a real gap in that follow through and that the growth capital is not there. Do you feel there is something lacking in the design of the ASGC, and ought we to address that?

Ami Shpiro: That is not a problem limited to this particular area, but in a sense I do not think that is the place to start. The place to start, and I could not agree more with what I have heard here, is on a higher level, with a whole systemic view of how all this is going to come together. You really need to be brave to come up with quite drastic changes and how older people are going to work with younger people. If you are employed, you are going to be healthy. I think that is part of the solution.

Luella Trickett: When it comes to funding, I often hear SMEs in particular say that it is easier to get big sums of money than it is to get the smaller sums of money. Probably some of the technologies we are looking for to solve some of the problems are not at the big end of the investment. They are taking what we already have and repurposing it for a different use. That could be where more of the funding issue sits.

Q165 **Lord Mair:** That leads on to the question I wanted to ask. Are you convinced that the Healthy Ageing Challenge Fund is targeting funding to where it is needed most? My question might also be for Mr Shpiro. What about the smaller entrepreneurial companies? Are these funds being directed in the right direction?

Ami Shpiro: I am a technologist, and again this is very narrow and I am not knowledgeable like all the people around me, but I do not think that technology is the right place to start. It is people and society: if people breathe, if people eat well, if people eat the right food, you will have a massive impact. It is employment. There are technologies that have effected massive change, like smartphones and so forth. They have changed our lives. We have 15 years to hit these targets. If we look back 15 years, I think that is when the iPhone came out.

Technology can effect massive change, but we should start with the people. How do you engage these people to be relevant as they get older and to have a contribution they can make, and to be paid for it? Then they will be able to afford the services that are perhaps more difficult to get. We are talking about all this stuff creating services, but somebody has to buy it and pay for it. A lot of people are not going to have the money to pay for it.

Professor Mariana Mazzucato: Another way to frame that is that it is not so much the people but the problem. That is what we are talking about here: what is the problem that can be solved that is targeted enough? The internet was a solution to a problem because the satellites had to communicate. GPS was a solution to a problem. The question is how we can frame these problems, not just defence and cold war problems but the social and social care problems you were talking about.

On the subject of venture capital, we should remember that the structure of finance matters. Finance is not neutral. Exit-driven venture capital that wants to exit in three years through an IPO or buy-out has severely

damaged the biotechnology industry, so we should be learning the mistakes that occurred there and admit that the kind of finance we need is patient, committed long-term finance.

In fact, the best VC companies, like Kleiner Perkins, have been very smart about this. They come in after the public sector in the US has provided that patient finance. The real problem in the UK is not the lack of VC; it is the lack of patient long-term finance on top of which the venture capital funds can piggy-back. Even if they piggy-back, there should be conditionalities so that the public, the citizens, actually benefit from that early-stage high-risk capital-intensive investment which they often put in before the venture capital sector comes in.

Dr Anna Dixon: We did the review of the innovation landscape. That was ageing specific and it backs up many of the things that have been said. The issue is funding to enable organisations to grow from that early stage, to be investment-ready ventures that can go to that scale of maturity. That is exactly what we found in our review. I would be happy to share that with the Committee afterwards.

The Challenge Fund has listened to some of what was in that review in the design, so it is looking to fund throughout the different life stages of innovation, through for example the investment partnerships; I think you focused a lot on the trailblazers, which are the near to market. There is also some small joint funding with the National Academy of Medicine in the US for some very early-stage ideas, but there are also going to be these investment partnerships.

We need to ensure they are designed in a way to bring that patient capital, and to recognise that some of these ventures are going to have a slower return, and because of the desire for social impact they might not achieve commercial viability as quickly. We need to recognise some of the general points about venture capital and so on in this country, but specifically what is needed to get some of these ventures that are seeking to address the social impacts regarding ageing population to become scalable, viable, long-term sustainable businesses.

Lord Mair: Is there a danger that some types of businesses or some sizes of businesses are going to miss out on this kind of funding?

Luella Trickett: Signposting is really important, because if you cannot signpost, then yes, the SMEs will miss out. They are sometimes the hardest to reach. I was at one of the Accelerated Access Collaborative's innovation surgeries the other day and I lost count of the number of questions I was asked about where entrepreneurs and SMEs can go to find out what funding initiatives are out there.

Lord Mair: Who should do the signposting?

Luella Trickett: There are some existing players in the landscape that could do it, but I think that if everyone does their part and raises the noise level we will get there, but the Government have to stand behind it.

Professor Mariana Mazzucato: I know that what I am about to say will be very unpopular, but I think the Government in the UK have stood

almost too much behind SMEs. They spend a lot on SMEs. They just do not differentiate between SMEs that really want to transform and innovate and those that do not. Only about 6% of SMEs want to do that,³ and by the time they get the benefits of generic SME policy, it is not enough money.

To really help, nurture and steward the ability of small and medium enterprises that are willing and want to innovate towards achieving these public goals needs special help. That means, again, focusing not just on sectors but on problems, and not focusing on the size of the company but the problem, and having different mechanisms to crowd in as many SMEs as are willing to try to play that game, and help them do it.

Dr Anna Dixon: It is really important that we do not overlook some of the established big players. There are things out there already that we potentially need to repurpose for this market. Unfortunately, we have seen some quite high-profile exits, including Centrica Hive and its product recently. We need to understand why some of the bigger players are not in this market or not seeing it as an opportunity.

There are some successful examples from the past. The Ford Focus is quite widely cited. It was designed with people in age suits to make that car inclusively designed to work for people with mobility issues potentially. They did not market it in that way at all, but it became one of the best-selling cars.

We need this to be a mass market and we need to engage some of the bigger players. That is about making it inclusive so that these are not specialist niche products but inclusive products, and we see some great design. The mass market will also address the concern that you raised earlier about affordability.

Ami Shpiro: I see a lot of companies applying for investment, and I have seen this over and over again over the years; if there is no hockey stick, as they call it—a potential exponential return—they will not get funded. I do not know whether it is because the people have a perfectly good business model but it is what you might call a linear business model. Often you see them distorting their businesses to try to attract equity investment.

At the moment, there definitely is a gap, and not just in this sector. There are businesses that can make contributions to society, but there is no way for them to get funding because investors will not touch them because they cannot get 20 or 30 times their return.

Q166 **Baroness Rock:** I would like to come on to the second part of the Government's mission on the Grand Challenge, which is to narrow the gap between the experiences of the richest and the poorest. Is this approach likely to achieve this? Is there a risk that new technologies and services will widen the gap rather than narrow it?

³ The vital 6 per cent. NESTA Research Summary, October 2009.
<https://media.nesta.org.uk/documents/vital-six-per-cent.pdf>

Luella Trickett: I think that risk is very real. It was touched on in the previous session as well. What is really important is the way the services that are wrapped around the technologies are established. That can help that mitigation. The Manchester Local Care Organisation has really focused on reducing inequalities. It is not just the technologies themselves; it is how we deploy the technologies and what access is made available for those who perhaps are not in the self-pay bracket.

Professor Mariana Mazzucato: That is why it is also important to highlight the fact that finance is not neutral, as I said, and different types of actors in the system are not necessarily neutral. You mentioned Centrica, and we can look at Serco and G4S and all sorts of problems that have arisen recently in care for prisoners and care for people in hospitals. Is it a coincidence that companies run for profit are not necessarily caring in the right way?

The question is not whether we allow private sector activity in a care area. It is whether those actions are being directed. Again, is there a mission? Are there conditionalities? It is quite striking that even in transport when the railways were allowed to be privatised there were a few conditionalities there, let alone in these really important places like prisons and hospitals.

One example that is really interesting in the UK is when the Government Digital Service was set up to form a public website for citizens to access. The first thing the team did was to question the non-neutrality of some of the concepts. Seeing citizens as clients or customers—an unfortunate trend—is very different from seeing citizens as users and participators in these innovations. That will affect the design of the system, which then affects who benefits and how they benefit.

Dr Anna Dixon: In terms of the inequalities, this is also where we need to go beyond the industrial strategy and look at wider policies. I think more needs to be done on prevention. There was talk earlier of obesity, alcohol and smoking. That needs regulatory action, and it should be bold regulatory action from the Government. We also need a greater focus on physical activity. That means a redesign of our environment, investment in public transport, and active travel. We could come on to housing conditions. We will publish data on the lack of homes that even meet the Government's basic Decent Homes standards.

To address inequalities, we have to go after some of those wider determinants. We need social policy alongside industrial policy, as colleagues have said, delivering products and services that meet the needs of a wide diversity of people—products that are co-produced with them and which, as I have suggested, have been designed frugally to be affordable. There should not be this idea that you have a trickle down from a highly elite niche product that will somehow reach down. There is no evidence that that happens.

Q167 **Baroness Walmsley:** My question is about co-ordination. Is there sufficient co-ordination between the various cross-government initiatives about ageing and the various organisations involved? Should there be

more? Is there sufficient alignment, or perhaps any alignment at all, with other plans, policies and objectives—for example, the NHS long-term plan, plans about social integration or social mobility, policy or climate change, or anything at all? Is there any alignment going on between the challenge and any of those policies, plans and objectives?

Luella Trickett: The digital initiatives and the AI and Data Grand Challenge are definitely linked and important. One of the misses potentially is the Accelerated Access Collaborative, which is designed to try to speed up the adoption and spread of technology. If it is to be given a brief to deliver some of these outputs, it will need to be funded to an even greater extent. But there are definitely other mechanisms out there that could be utilised.

Dr Anna Dixon: I spend quite a lot of time going round different government departments, and I would say that there is a growing awareness. The Ageing Society Grand Challenge has helped with that, and the policies it is pursuing could contribute. We have published something on the intersection between the mobility grand challenge and the ageing grand challenge, and I think the DfT is committed to taking forward some aspects of that.

Clearly, there is the aspect of people remaining in work for longer, which is a DWP policy to extend working lives, but they are not joined up. That is the issue: there is no clear road map, as you call it—I would call it a cross-government strategy—that really makes clear where these alignments are. Active travel is good for climate change and good for keeping people physically active and healthy ageing. There are lots of synergies, but the challenges are not front of mind and they are not committed to and they are not co-ordinated. There is a need for a strategy, and with a strategy comes some responsibility for cross-government co-ordination. It could sit in the Cabinet Office. We know there are different ways in which cross-government strategies get co-ordinated, but a starting point would be to have that.

Professor Mariana Mazzucato: It is not just what you said, which I completely agree with when it comes to getting different departments to work together. As I mentioned at the beginning, we also need to transform the tools. By engaging with BEIS on the missions, the Treasury started to ask what it would look like to have this impact on the Green Book or what outcomes-based budgeting would look like. If you had a zero knife crime mission for London, which I think would be fantastic—we can solve that one; these are 13 to 17 year-old children killing each other, basically—that would require all sorts of investment across many different sectors. However, you would not approach it on a budgetary framing—“Here’s a little bit of money for youth centres, here’s a little bit of money for health and here’s a little bit of money for the schools”; you would really think of a budget to solve that mission. That requires changing how we look at budgets and potentially deficits.

Q168 Lord Browne of Ladyton: This is very much a last question. It has probably been answered to a large extent, but if you have another thing on your mind, this is your opportunity. What recommendations would you

make to the Government to improve the likelihood of them achieving both parts of the Ageing Society Grand Challenge mission? Do you have anything more to add to what you have already told us?

Luella Trickett: I would go back to what I said before about some really clear signposting about the problem statement that you want to solve and bringing the system players together to deliver that.

Ami Shpiro: If you take what is going on at the moment, for example, with all the talk about virus and washing hands, I would not be surprised if the net effect of that on health is that lives will be saved compared to the normal situation without coronavirus, just because there will be less contact and so on. There is a lot more that could be done by communicating to the public whatever it is—breathing, eating, smoking, all that kind of stuff—and making massive campaigns to make people aware of very simple ways to improve their life expectancy and the quality of their life.

Professor Mariana Mazzucato: Something that we have not talked about which I would like to end with, because it is hugely important, both internationally and locally, is where citizen movements fit into this. Some of the biggest advances that we had, whether it is birth control or AIDS drugs, came from movements pushing for change. This is not just a top-down process. In this area of social care and ageing, there are movements, there are NHS doctors and caring professionals who have been asking for change. Bringing those voices to the table to frame these missions in really ambitious ways is very important.

That was one of the three pillars that we brought to Europe in a second report we wrote called *Governing Missions in the European Union*.⁴ The second one was on public sector capabilities and the third one was on citizen engagement. We need the likes of Centrica because there has been a loss of public sector capabilities in some of these spaces.

The first topic we talked about was financing. How do you restructure the financing tools to crowd in as many other types of finances? The money we are talking about, even for this particular challenge, let us be frank, is not much. It is not even £100 million for a four-year period. That is pennies. However, if you design it well, it can crowd in, inspire, catalyse and create additionality, and make investments happen that would not have happened anyway. The design of the missions and of the challenges to excite and to catalyse other forms of investment is key, and if you do not do that, you fail.

Dr Anna Dixon: To add to what has been said, and what I have already said, the one area we have not touched on is how we see ageing and the ageist attitudes that are portrayed in marketing and in advertising that associate this period of life with decline and disengagement. Until we change wider societal attitudes, it will not be an attractive business proposition and we will not get the changes that we need in society,

⁴ Mazzucato, M. (2019). *Governing Missions in the European Union*.
https://ec.europa.eu/info/publications/governing-missions-governing-missions-european-union_en

whether that be in policy or in individual behaviour change that we need to see if we are going to achieve this mission of a longer, healthier and independent life. I would just add that as a broader necessary condition for us to succeed in delivering on these changes.

Q169 Baroness Sheehan: When we are talking about silos and cross-government working, it struck me that over the weekend we have seen a demonstration of the tensions between civil servants and politicians. To what extent can we overcome the issue of government departments being able to work together? Is the problem within the Civil Service or is the problem the politicians? I want to try to get to the bottom of this, because we come across this in so many different spheres. For example, in delivering the sustainable development goals or the transformational change we need in climate change, we always come up against this need for better working across government. Where does the root of the problem lie?

Dr Anna Dixon: It might not address the question directly, but we have seen really great traction at the local level. One of our strategic partners is the Greater Manchester Combined Authority, another is Leeds City Council, and we are about to have a third rural strategic partner. They are committed to creating what we would call an age-friendly city or community, and that means taking a strategic long-term cross-sectoral approach to ageing in a place.

That is not to say that there are not still some silos, but I think it has been much easier to work across housing, employment and skills, health and care at that level to do something different and to look at starting to reallocate. We are about to start a pilot looking at a different model of employment support for over 50s, for example. Greater Manchester can do that investment, because it will also benefit from the economic gains if it can get some of those people back into work. Some of it is bringing the locus of benefit and investment closer together, and I think you can do that with devolution.

Professor Mariana Mazzucato: What I have experienced from living in the UK for the last 20 years is that, on the one hand, there is a very able Civil Service—in fact, it is admired in many parts of the globe—but, on the other hand, there is a very insecure Government. The questions are asked, “What is government for, what is the private sector for, and how do they work together to solve problems?” Partly that is ideology, but there have also been quite a bit of Civil Service bashing attempts or movements. That is evidenced by the fact that the current department called BEIS—Business, Energy and Industrial Strategy—has changed names three or four times since I have lived here. I remember the TSB (later Innovate UK) asking these “What are we for?” questions. This exudes insecurity, and a lot of what we are talking about is the need for confident, equally able actors in the public sector, the private sector and the third sector. It would be really useful if this country re-energised the public sector.

The current discussions about ARPA can make us start going there, but it is interesting how that conversation is being had without really asking

what ARPA would do. What is this Government's strategy beyond Brexit? What are the big challenges, whether they be to do with ageing or inequality? The more you can frame those to drive innovation, the more you will have an ARPA that can deliver. DARPA, which funded the internet, did not fund it because it wanted to fund technology, SMEs or start-ups but because it had huge public problems which its ministries were setting for it. It would be great if the next 10 years could revitalise that discussion here.

The Chair: Thank you very much. If any of you feel that you might want to write in with some other information, please feel free to do so. Anna, you said that you would send in some more information.

Dr Anna Dixon: Yes, I will ensure that the various background publications that I mentioned are sent through to the clerks.

Professor Mariana Mazzucato: And I will send the two European documents that have now become law in Europe as legal instruments.

The Chair: Thank you very much for coming today to help us.