

## Education Committee

### Oral evidence: [The impact of exiting the European Union on higher education](#), HC 683

Wednesday 11 January 2017, Oxford

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[Watch the meeting](#)

Members present: Neil Carmichael (Chair); Marion Fellows; Lilian Greenwood; Catherine McKinnell; Ian Mearns.

Questions 1-70

#### Witnesses

**I:** Professor Catherine Barnard, Professor of EU Law, University of Cambridge, Professor Alastair Buchan, Head of Brexit Strategy, University of Oxford, Professor Alistair Fitt, Vice-Chancellor, Oxford Brookes University, and Professor John Latham, Vice-Chancellor, Coventry University and Chair, University Alliance.

**II:** Dr Anne Corbett, Associate, LSE Enterprise, Professor Stephanie Haywood, President, Engineering Professors' Council, Dr Georg Krawietz, London Director, German Academic Exchange Service (DAAD), Professor Lyndal Roper, Regius Professor of History, University of Oxford, and Professor Margret Wintermantel, President, German Academic Exchange Service (DAAD).

Written evidence from witnesses:

- [University of Cambridge](#)
- [Coventry University](#)
- [Engineering Professors' Council](#)
- [Dr Anne Corbett and Dr Claire Gordon](#)
- [Professor Lyndal Roper](#)



## Examination of Witnesses

Professor Catherine Barnard, Professor Alastair Buchan, Professor Alistair Fitt and Professor John Latham.

Q1 **Chair:** Good morning and welcome to our session on the implications of Brexit for the university sector. This is our second such event. The first was at London South Bank where we had a more informal process. It is because this is a much more formal process that I am going to make two points. One is that broadcasting is just for the broadcaster, so no videos and no recordings except by the official broadcasters. The second is that only the MPs and the witnesses are allowed to say anything. The public are here and welcome but not to intervene or comment. Thank you very much for coming. It is great to see such a huge number of people here. We are very grateful to Pembroke College for providing this facility and making us feel so very welcome.

The purpose of this inquiry is to see exactly what implications are on the table in terms of Brexit for the university sector but also to see what the university sector might have in mind for the processes and and outcomes ahead. We do want to tease that out today. For the purposes of the viewers beyond this room, can you, first of all, introduce yourselves and say where you are from?

**Professor Fitt:** I am Alistair Fitt. I am the Vice-Chancellor of Oxford Brookes University.

**Professor Barnard:** I am Catherine Barnard. I am Professor of European Union Law and I am also the senior tutor of Trinity College in the other place, Cambridge.

**Professor Latham:** I am John Latham. I am Vice-Chancellor at Coventry University.

**Professor Buchan:** I am Alastair Buchan. I am Dean of Medicine at Oxford. I am soon to be, next week, the Pro Vice-Chancellor for Exiting the EU.

Q2 **Chair:** I think you are taking up that appointment on the same day as President Trump takes up his.

**Professor Buchan:** He may be the main news of the day.

**Chair:** That is possible for a little while, I think, but we hope to hear from you too. What should the Government focus on in the negotiations with the EU to ensure the higher education sector gets the best possible deal?

**Professor Fitt:** I think there is a whole range of things that the Government should focus on but of course, negotiations being what they are, one has to have a list of the top few. My list of the top three is very clear, and I think many people in the sector would agree with this. First of all, we need to have associate country status for research and innovation framework programme 9. That is the framework programme



that will come after Horizon 2020. Secondly, we need an improved visa regime for all international staff. Thirdly, we need an improved visa regime for all international students.

Q3 **Chair:** Does anyone have anything to add to that?

**Professor Barnard:** I would like to say that in an ideal world if the future arrangement involved some sort of European Economic Area plus or minus, there should be maximum freedom of movement for both EEA staff and students. The students are really important to our day-to-day work. They bring excellent quality. Trinity is the largest of the Cambridge colleges and it is also number one in the league tables of the colleges for performance. The reason for that is largely attributable to Trinity's brilliance in maths and that brilliance is much to do with the input of our Hungarian, Polish and Romanian students.

**Professor Latham:** The only other thing I would say is that we need to maintain a good relationship with the rest of the EU member states. The negotiations on how we then interact, either bilaterally or across the whole of the EU, are going to be quite key but we do not want to differentiate that from our other international engagement.

**Professor Buchan:** I agree with my colleagues, but it is a Manchester United problem, isn't it? We absolutely have to understand that the universities in this country from the 1970s have become absolutely top-rated around the world. We need to maintain that. The idea that Manchester United wouldn't recruit players, wouldn't have fans, wouldn't play abroad really means that we have to do three things. We have to be absolutely sure that we keep everything open. Every student, every staff member who comes to Oxford is a benefit to this country because we pick quality. We have people who play in the top league.

Secondly, we need to be leading and we have been leading as universities in the last 10, 20, 30 years. We weren't 30, 40 years ago when we joined the EU. To lose that would be absolutely shooting ourselves in the foot. We must not do that. Thirdly, we will help. We have to go beyond all this mitigation of risk. We have to start figuring out how we turn what is possible in this negotiation into a benefit so that we come out of this with more than we go into it. It is incumbent on the universities in trying to really understand what is going on, understanding why the vote has happened the way it has, and it is absolutely critical now that we are central in the industrial strategy and the globalisation and that we lead.

Q4 **Chair:** You made an interesting point by suggesting that during our time as members of the European Union our universities have improved more than others, so we are up the league table. Do you attribute that, to some extent at least, to our membership of the European Union?

**Professor Buchan:** I think we are quite different. I spent last week in Berlin and it is quite interesting, whether you go to France, Germany,



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Greece, that there are very open universities but what we have in this country is a whole spectrum of universities. The ones that are playing right at the top of the league—Trinity College, Cambridge, the leading college in the world—the high quality is making sure that people come from all over the world without let or hindrance and attract the funding that they need and the staff who teach them—50% of our staff are from outside the UK.

**Professor Latham:** One of the other things I think is important is that the UK has played quite a leading role in things like the previous research framework programmes. It has been very successful, built up collaborations, and is recognised by other EU member states and others internationally for the role that we have played in research and also for our use in the UK of structural funds, which is another key element of EU funding, to support the development of the higher education infrastructure, particularly as anchor institutions. I think it is going to be a very key part of this process that that is not lost and that we mitigate that risk and find a replacement for it.

Q5 **Chair:** We are going to go into a set of negotiations, which effectively means that we are not going to get everything we want. We might be surprised but negotiations are what they are. They are with 27 other nation states and with the European Union structures. Is there anything that you think it is possible for us to accept that we might have to sacrifice?

**Professor Fitt:** I would say two things. I hope that we would not use the word “sacrifice”, and that we would probably use the words “fund ourselves” rather than fund from the EU. European structural funding is very important for the UK but I believe the UK does not get as much out of it as they put in. Structural funding can come with quite a few strings attached, come with quite a few risks and be quite hard to manage. If we were able to replace the amount of structural funding with our funds, that is a real opportunity that we could not only retain all that is best in that system but make it an even better system.

One other thing I would point out is that it is not the same issue as Horizon 2020 and framework 9 funding where the quality of the partners and our European research collaborators is crucial. This is different to ESIF funding; this is something we can do on our own. If we had to sacrifice it, another thing that we could possibly manage on our own is Erasmus+. At the moment Erasmus+ is an extremely valuable way of allowing students and staff to go abroad. I think over 15,000 students went abroad last year with Erasmus+, but again that is something we could consider funding ourselves.

**Professor Buchan:** It worries me that in Switzerland in Erasmus not only are they paying for people to come in, they are also now paying for them to go out. The irony is that 950 years ago Oxford was created because Henry II said they could not go to Paris anymore; 500 years ago Erasmus came and brought the first influx of students from the Lowlands



to establish Corpus. We are giving up 500 and 950 years worth of exchange. I think we need to be very cautious and we need to push the negotiation beyond this management of risk and be imaginative. I mean that in all sincerity. We need to raise money but we need to make sure that we improve the exchange, not become insular. It worries me whether it is research funding or it is capital investment. What we have seen in America—and, as you said just a few minutes ago, we are heading into Trump's administration—over the last five or 10 years has been a reduction in the way in which their NIH funding flows outwith. Their collaborative publications have fallen off; their impact is beginning to drop. I can tell you that our worry is that China and India are in the ascendancy and we have been second only to the US. We need to be very sure that we negotiate the kind of openness that academic is all about.

Q6 **Chair:** Catherine, you have mentioned a bespoke deal. What does that look like in your eyes?

**Professor Barnard:** One possibility is an EEA plus or minus that would cover all sectors. Another possibility is we have sectoral-specific deals and that there is a sector-specific deal for higher education that does guarantee free movement of researchers, students, academics and academic-related staff in much the same way as occurs at present. The advantage is that it would maintain the very open labour market we have in higher education. We have already heard the numbers of non-UK staff who are working in British universities, which is to our benefit, and it is to our comparative advantage because we are net recipients of EU staff coming into the UK. They have been trained and funded elsewhere and we benefit from what they bring to us. We receive more than we send. A possible bespoke deal is instead of having it across all sectors you focus on particular sectors—here we are talking about higher education—and that would be a possibility, much on the same basis that we have at the moment.

The point I would like to stress is that you were talking about opportunities post-Brexit. One of the opportunities is that we don't prioritise EEA nationals as we do at present, but what I think we would all hope is that any visa scheme that is introduced, if there is no bespoke deal, is not like the one we have at the moment. The visa scheme at the moment is extremely cumbersome. It is highly labour intensive for the universities and the colleges that have to administer it. The penalties if we get things wrong are very serious and the costs for individual students and researchers is high. For a tier 4 visa it is £350 or so and for a tier 2 visa, depending on how long they are here for, it is £500 to £1,000, so it is extremely costly. I should say that although there is lots of emphasis on border control and take back control of our borders, in reality it is not border control that manages immigration. It is employers who manage immigration, applying Government requirements. Our great concern is that we have to apply a full visa scheme to both EU and non-EU migrant workers.



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Q7 **Chair:** In a short sentence could each of you say what you think the implications are for the sector if we end up with a hard Brexit? I know that term is controversial itself but I think you know what I mean.

**Professor Buchan:** You risk damaging one of our best industries, which is the knowledge-based economy in this country.

**Professor Latham:** It would make us extremely uncompetitive in terms of way in which people would view us. I think there is a short term and a long term impact on that.

**Professor Barnard:** The personal implication for the EU staff who are already here is lots of uncertainty, their lives are turned upside down, and it promptly cuts off the flow of excellent people who are coming at the moment.

**Professor Fitt:** It would probably be the biggest disaster for the university sector in many years.

Q8 **Chair:** Alastair, you are going to be in charge of Brexit for Oxford. Can you quickly tell us what that looks like in terms of your plans ahead?

**Professor Buchan:** It is a big challenge. It is not something that you go into lightly. I think there are opportunities and I worry, as I said earlier, that we are spending our whole time mitigating the risks that we all identify and we are not thinking in a strategic way as to how we really do what universities in this country do well, which is to be multidisciplinary, be quite global in the outreach. The medical school in Oxford has done pretty well in the last six years. It has been top rated and there are reasons for that. The three reasons are that the quality of our students is second to none; the quality of the staff is absolutely second to none and they come from all over the world; and increasingly we are doing things in a distributed way, not colonial but with people in Kenya, in Thailand on the Thai-Burmese border, in Vietnam, and we are doing things that make this university quite global in its reach. One of the advantages of going through Brexit is that we start doing things in a much more creative way around the world.

Q9 **Ian Mearns:** United Kingdom universities have a reputation as being respected worldwide as top rated, as you said Professor Buchan. I must admit I am not a great fan of Manchester United so I won't necessarily agree with that analogy. To what degree has the success of UK universities been dependent on membership of the European Union for the last 40 years?

**Professor Buchan:** The universities have been members of the European Union for, as I said earlier, 950 years. What has happened in the last 30, 40 years is that freedom of movement, freedom of students. It is not just the money coming into the academic environment. It is actually the collaboration. It is being able to lead studies that involve 600 million people. Why would you go from 600 million people when you are trying to set up big data cohorts for clinical epidemiology to suddenly



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being reduced to 50, 60 million people? You would not do that. Why would you draw talent from 50, 60 million people when you can draw talent from 600 million people? I think that being part of Europe has given the UK universities a huge advantage. It is quite interesting when you go to Germany or France, or even the US or Australia, where they are desperately trying to do what we have done, which is to keep the research institute activity, the Max Plancks, the Helmholtzes, the core science, and bringing it back into universities.

We risk doing the opposite in this country and that would be a risk going forward. How do we keep the very strong science absolutely base paired with the teaching? It is not just the quality; it is the fact that our teaching is absolutely coupled, yoked to research, and that is quite different in most places. Part of that is to do with the fact that we have kept our universities relatively small compared to big public universities in Europe or the US.

**Professor Latham:** I think exactly the same. There are two elements here. One is the opportunity that Europe has given us to have this freedom of movement of individuals from the UK out in Europe, working in networks of European universities and then coming back. There is scale, which is very important, as Alastair said, access to a much bigger market but the ability, currently under the way in which the EU works, to bring people together and work in collaborations that we will find it very difficult to do, perhaps, afterwards or certainly not as easy from a legislative or regulative point of view. That has been a big scale.

The other thing is that being recognised as part of a significant economic grouping globally has given us some advantage in the international market. We have to make sure that we protect all of those elements, or at least replace them, as we go through a Brexit process.

**Professor Barnard:** I would like to add that the UK system is an open and meritocratic system. It is also quite a flat system in comparison to our continental counterparts. For that reason, young researchers, if they are good, do very well. They don't have to spend years bag carrying for a senior professor before they can make progress. That is deeply appealing to those from other states and we have benefited very much from having an open system. Of course, we do benefit from our inherent advantage of having English as our mother tongue and it is such a widely spoken language.

**Professor Fitt:** Your question was: why have we been able to advance with our European partners? Let me give you some statistics on that. Just under 50% of UK research involves overseas partners. That is higher than for the US or Japan or Canada. Does that matter? Does that contribute to the quality of your research? Most people will tell you that the best indicator of research quality is field-weighted citation impact. In 2013 the UK overtook the USA to rank first in the world in that key research metric. Why does Europe matter? Five of the UK's top 10



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partners for international research are EU partner states with full access to Horizon 2020: France, Germany, Italy, the Netherlands and Spain. The evidence is absolutely clear that that has been a crucial part in the advancement of our country's research.

**Q10 Ian Mearns:** Is it necessarily the case, though, that changes to freedom of movement rules will halt the flow of talented academics in and out of the United Kingdom?

**Professor Barnard:** It touches on the point I raised earlier about visas. The visa regime is problematic. It is expensive in terms of cost to the individual. A tier 2 visa for an academic is £575 if you apply outside the EU for a three-year visa and £575 for each family member. It is over £1,000 if you apply—

**Q11 Ian Mearns:** In terms of managing the Brexit process, would you, as academics, be looking for finessing over the visa system in order to allow a freer flow of academia to and from Europe after Brexit?

**Professor Barnard:** Absolutely and you will remember there is a cap on the number of tier 2 visas that are on offer. I think it is about 20,700 and the numbers of EU nationals who are working within the UK at the moment means we hit very quickly against that nationwide cap. There is the bureaucracy of managing the visas and the individual departments or colleges or universities have to comply with that. They need a compliance department to ensure they do comply because the sanctions are very serious if they don't. It is a major issue if there is a full visa regime being applied to all of these EU staff and students.

**Professor Latham:** It is very important also to recognise that around the world there are many countries, and particularly countries who are seen as either fast developers or innovative in their own way, that have a graded visa system. There are certain countries where I can turn up with my UK passport and I am straight in; I don't have a problem and it is much easier for me to get through. There are certain countries where I can't. We need to make sure that we have in place the appropriate system that allows us to gain access. Certainly EU member states for me would be quite a key element because 9% of my staff at the moment are European. That is quite a significant proportion of the staff at Coventry coming through and 2,000 of our students are European. The whole process of how we maintain the very good relationship that we have at the moment and a key element of our current operation is focusing around Europe.

**Q12 Ian Mearns:** How can the UK Government promote the idea that the UK and academia, the higher education sector in this country, remains open for business post Brexit?

**Professor Latham:** Part of the problem we have now is that we are going into a negotiation and we don't necessarily want to show our hands immediately, but of course one of the nice things to do is to give surety. One of the issues that we are facing here is a short term and long term



impact. While there is not surety, people are uncomfortable to commit themselves to either come or go. Until you have a system in place that people understand how it is going to operate, it is going to be very difficult for people to have all of the comfort. You can broadcast as much as you want that we are open for business and remain extremely competitive. There is the short-term issue of the negotiation and what that ends up with and there is the regime that exists afterwards and how open do we appear to be and remain to be open in the way in which we operate.

**Q13 Ian Mearns:** Professor Barnard, you mentioned about us being an English-speaking nation and that English is commonly used as a second language across the European Union. Are you aware of any disadvantages that the UK would have, say as opposed to other English-speaking nations, in attracting European academics post Brexit?

**Professor Barnard:** I think the answer is that Ireland in particular is already seeing Brexit as an opportunity for expanding Irish universities because they share a lot of the common traits that we have: English of course and also a meritocratic system. In their most recent budget they had a budget line for what they called "Brexit refugees" to try to attract good staff from British universities. Germany is also working very hard to see if they can attract British academics or academics in British universities to Germany, offering positions that have no teaching connected, research-based posts. In Germany a lot of the academic work is now done in English so Germany is snapping at our heels. Particularly in the field of maths, the German universities are looking to tap into the pool of talent that we are getting from Hungary and Poland in order to come to their universities.

Universities in other member states see Brexit as an opportunity to undercut. At the moment we are the tall poppy. We get more European Research Council funding than any other member state. We are seen as the best; Germany is number two in attracting European funding but significantly behind and they want some of that action.

**Professor Latham:** I was talking to some vice-chancellors from Dutch universities the other day. The Netherlands see Brexit as a real opportunity for them to grow their higher education sector. I think also Scandinavia does to a certain extent, again because of the high level use of English and delivery of education in English.

**Professor Buchan:** We could easily lose our best players, not just academics but in the healthcare system. One of the bigger risks we are having to grasp is the way that education comes together with health professional training and the revalidation of qualification. It is absolutely essential that our doctors are able to be qualified not just in the UK but have a passport and a qualification that works across Europe.

**Q14 Lilian Greenwood:** Before we move on from this question, I am sure Government Ministers will be looking carefully at the answers that you



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have given today and I know individual institutions and groups of institutions have put forward their views. Have Government come to you and sought your advice on what things we need to do to protect our higher education sector within these negotiations?

**Professor Fitt:** I would say largely no, but UUK has been very active in trying to get a message out there and trying to engage Ministers. I would also say that the Minister for Higher Education, Jo Johnson, has been welcoming towards our ideas in general. We feel he is a supporter of these ideas.

**Professor Barnard:** To be fair, I should say that David Davis has been to Cambridge quite recently.

**Professor Latham:** I think there is a lot of discussion going on, particularly with Jo Johnson and a number of individuals, about what are the areas that we need to look at and what kind of systems we need to put in place.

**Professor Buchan:** One message you could give back in your evidence is that there is no structure within the Department for Exiting the EU, DExEU, that we can talk to. There is no base pairing; there is nobody responsible for research, for education, for the universities. Likewise in the Department for Education there is nobody responsible for leaving the EU. There is a real need to see who is the channel, the portal for giving the information to. They are very hungry for information. I spent a lot of time explaining to them how it works and the education of Ministers and civil servants could be greatly helped by having a better communication system.

**Chair:** That is a very important point. Thank you very much.

Q15 **Marion Fellows:** I think I am going to be Pollyanna this morning. I am going to be looking at what opportunities you believe Brexit could offer higher education.

**Professor Buchan:** It allows higher education to get involved and stuck into the industrial strategy and I feel very strongly about that. As we change regulations, we need to make sure that the regulatory changes benefit the way we work, particularly in areas like the pharmaceutical industry in clinical trials, management of data, patient data. The NHS is another of our crown jewels in this country. We have national treasures and the NHS and the universities are but two. How do we make sure that they really help us with the industrial strategy?

Q16 **Chair:** Just before Marion asks her next question, could you tell us what you think the industrial strategy is?

**Professor Buchan:** The industrial strategy is the industrial strategy.

**Chair:** It is a bit like Brexit means Brexit. Carry on, Marion.

Q17 **Marion Fellows:** I could go on further about industrial strategy in



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relation to steel but I won't. Could all of you take a reach at this one? Do you think Brexit could give universities opportunities to redirect students and mobilise them going towards academic co-operation in other parts of the world and sending students on exchanges to other parts of the world?

**Professor Buchan:** I think it does both. It allows you to strengthen what we do in Germany, France, the Netherlands, Sweden. It now is forcing us to build up those links in the way that many universities have built around the world. There are two things. One is it does push us to doing things right across the world and, secondly, I think it motivates us to strengthen our European links.

**Professor Latham:** I agree with that. I think there are many things. We are all global institutions these days anyhow and Europe is an element of what we deliver. What Brexit is doing, fundamentally, is taking a part of our operation and moving it from being home to being international. We need to recognise that for a lot of us that is quite a significant part of our operation, so how do we maintain the strength that exists from those key collaborations that we have? We have already heard a lot of the really good maths and engineering students that come to the UK to study at our institutions are from eastern Europe, for example. What do we do with our focus on supporting those relationships directly with eastern Europe? Other countries in western Europe are our key research collaborators. What do we do in those areas to promote and retain that relationship?

Also it does give us an opportunity, as everyone is, to go more global more quickly, I suppose, and we will drive through some of those changes that we are having. We are already seeing universities, from the UK in particular, setting up more and more operations on a global scale. To a certain extent we would look at those European collaborators in the same way as we would look at our other international collaborators. The key element for universities is networks of individuals or networks of research competence or networks of education providers, of which some are European at the moment and many are international. It is just the way in which you have the ability to maintain that growth. There is a way of mitigating it. One of the ways I would look at it is that Brexit is not giving us particularly more advantage to do things and it is not particularly taking things away. It is just the way in which you do things is probably going to be different.

**Professor Barnard:** I share what has already been said but I would add that it would also give us an opportunity to review our visa system, which does not work effectively at the moment and works significantly to the detriment of Indian and Chinese students. It would give us the opportunity to look much more globally but also to have a rethink about how we welcome those students and academics into our system. I would, however, sound a note of caution that students coming from, for example, India often do not have the resources to pay overseas fees and so there will be a cost involved because if we want to get the best



students from India and China we will have to give far more in terms of bursaries and scholarships. The same will apply to eastern European students. If I just look at my own students at Trinity, the best eastern European students we have, who at the moment pay home fees not overseas fees, already get bursaries from the college to support them because their family income is so low. If the fees go from the current £9,000 a year to £17,000, £18,000 or more, depending on what subjects they are doing, of course they will be demanding of more money because otherwise they just cannot come. There will be a cost to the institutions in being more global in attracting these excellent people.

**Professor Fitt:** Let me give you a specific example of how we could make an opportunity out of a problem. We mentioned Erasmus+ funding before as something that I absolutely agree with Alastair we would be loath to lose, but if we had to sacrifice something we could use the money that we put into Erasmus+ and end up with perhaps Erasmus++, which has all the advantages of Erasmus+ but reaches all round the world instead of just to Europe. That is an imaginative way of turning Brexit to our advantage and I think there are many more possibilities.

Q18 **Marion Fellows:** I have to recalibrate every time I hear about student fees because we don't pay any in Scotland. Do you think it may be that Brexit would offer the opportunity for the Government and universities to ensure that research investment is spread more evenly across the country? There is a perception at the moment that it is very much here and in larger centres. Oxford and Cambridge, maybe because of their kudos, get more research funding from Europe or wherever, but the Government and the universities could perhaps then spread it out to other areas.

**Professor Fitt:** Can I say something about that? There is a perception that there is great concentration of research funding but we need to be fair and factual about this. Roughly a third of Government research funding is given out in QR, quality-related research. That is an exercise carried out by peer review where anybody can enter and if you are good enough you will get the funding. The other two thirds is given out by the research councils, roughly, and pretty much the rules are the same there. The view that there is some plot that concentrates research funding is not largely backed by evidence. Our system is very much a meritocracy, which is if you are good enough in the judgment of your peers you will get the research funding. I have faith in that system.

**Professor Buchan:** Quality is everything. The research investment has to be of the highest possible quality. There is a need to collaborate and in fact within Europe there has been a big problem getting research funding out to eastern Europe and it is now incumbent upon us, in working with Europe, to partner and to help bring up that quality. You can never sacrifice absolute quality in terms of research funding or you will not get the investment.



**Professor Latham:** I would totally agree with Alistair's comments as well. All of our institutions have elements of quality research and receive funding from Europe, non-Europe and internationally. My own institution currently runs at about 25% of our research funding comes from Europe either through Horizon 2020 or other programmes. But a reasonable percentage of that funding also comes internationally from foundations that we work with around the world and increasing levels of funding come from the research councils in the UK and directly from industry. We have to protect the issue that you will fund research where there is the expertise and the quality to enable that to continue to take place. One of the elements that we have to ensure is that we still retain the opportunity for the academics and the research centres to work collaboratively with the best partners wherever they happen to be.

**Professor Buchan:** If I can add that the quality of that then attracts money from all over the world—the Gates Foundation, Li Ka Shing or wherever—and critically philanthropy. The fact that we are working in Europe and we have access to 600 million people has brought enormous worldwide revenues into the UK that we are putting at risk if we don't get this right.

Q19 **Chair:** There is another opportunity, isn't there, which is universities working with business in the pursuit of export opportunities and innovation opportunities beyond? Is that something that you have in mind?

**Professor Fitt:** That is something that we always have in mind and there are lots of mechanisms already in our system, such as HIF funding, Innovate UK, that help us to do that. We already work a lot with companies. Oxford Brookes is one of the few universities that makes over £2 million a year from just one licence. We always have that on our radar.

**Professor Buchan:** We have seen a big investment. It was announced this week that OSI in Oxford is putting in £500 million because OUI, Oxford University Innovation, is leading innovations for Europe. That is really helping the UK economy in a European world.

**Chair:** Yes, but that means in the context of Brexit we have to be more global in our ambitions there.

**Professor Buchan:** Absolutely.

Q20 **Catherine McKinnell:** I wanted to go into slightly more depth on the movement of students within Europe currently and post Brexit. How likely do you think it is that there can be a reciprocal deal entered into to ensure that EU students will be able to have that freedom of movement to come and study here in the UK and UK students overseas as well?

**Professor Latham:** Being a student many, many, many years ago who took advantage of an Erasmus programme and did some of my time overseas, I think that the whole concept of international student



mobility—let’s start from there; never mind whether it is into Europe or not into Europe—is a key element of developing global citizens. The ability for students who are studying in other countries to come and study in the UK adds fundamentally to any education development process of individuals. We start from a freedom of movement of students to be able to come and study and go and study as being quite key. Alistair made a key point about Erasmus+ and it really has put a framework in place that has made that very easy to do.

Now we have the expertise in that programme and we can see the undeniable benefit of an Erasmus type programme, we could go to a global programme where we can look to support movement of individuals, wherever they wish to go and study. Many of the students at Coventry spend a lot of their time now studying outside of Europe as much as they do inside of Europe. I think the Erasmus+ opportunities are significant. If we can retain a position within the Erasmus+ programme, pay our contribution and enable free movement, I think that would definitely be a benefit. It would be something I would vote for rather than vote against, but for me it is about now we need global programmes of which a European programme is part. Fundamentally, a lot of the markets that we are operating in, both UK plc but also the university sector, are all round the world.

**Q21 Catherine McKinnell:** Professor Barnard, you have spoken quite clearly about some of the challenges that currently face movement of international students in terms of the visa system. I am detecting that you identify this as a risk but also an opportunity to improve the movement of students right across the board. Taking on board your appreciation that we can’t show our hands in the negotiations, what can the Government do now and what would you like to see them do post Brexit to make sure that we do maximise that opportunity?

**Professor Barnard:** In answer to your specific question of what can the Government do now, for me the most important thing is to have a commitment as soon as possible for the next round of student entry in 2018 that EU students will be still subject to the home and EU rate. It is so crucial for England; I realise not for Scotland. The Government, very late in the day, made that guarantee for 2017 but only three days before the closing date for Cambridge applications.

**Catherine McKinnell:** Until the completion of their studies.

**Professor Barnard:** Until the completion of their studies, absolutely crucial, and that they get the student loan finance to support them. This year at Cambridge we have seen a 14% reduction in the number of applications from the European Union at undergraduate level, although the number of applications from EU students at postgraduate level has gone up. In respect of those who have declined an offer from Cambridge at postgraduate level, we have put a question in the so-called decliners survey to say, “What was it that dissuaded you from coming?” Those who answered the question offered a range of factors from a concern about



anti-immigrant sentiment to devaluation of the pound and the fact that their scholarships would be worth less, although obviously not in the UK, and uncertainty over future research collaboration. That is really important and feeds into what we have been saying now. If the Government could give some longer-term commitments about carrying on supporting higher education through either replacement of the European Research Council funding or other funding and to say that we are absolutely open for business, I think those sorts of messages would be really important going forward.

**Professor Fitt:** Could I say something about the numbers? Interestingly, there was some polling done by Hobsons after the referendum and the result of that was that 43% of prospective international students from all over the world felt that Brexit had affected their decision to study in the UK and, of those students, 83% said it made them less likely to study in the UK. It is an international problem. What we would like right now is for the Government to publicly affirm the value that they place on the EU and international students and staff as well. I believe, if you just look at it in the cold, hard, economic light of exports, international students is our country's third biggest export.

We understand that there are conversations about immigration. We understand many people have strong views about immigration, but the two statistics I would give you is that in other polls we have shown that only a very small percentage of the population regards international students as immigrants and we also believe there is evidence that only 1% of international students overstay. Even if you wanted to reduce immigration hugely, you can't do that by reducing the number of international students.

**Professor Latham:** The ability to lose market share of students coming is something that would happen very quickly. To regain it can take many years. There is a definite issue here about how we manage the process through so that people understand we are remaining open for business, it is a good place to come and study. Don't forget, if you are an 18 year-old, you are travelling halfway round the world and you are not too sure what fees you are going to pay in two or three years' time against an exchange rate that may or may not continue to go in the direction that it is going, you are going to be very unsettled about making a commitment.

Q22 **Chair:** One of the things we find is that quite a lot of the commentary about movement of people in connection with this whole sector is, at this point, too anecdotal, too speculative. We need hard evidence to inform our thinking and our deliberations. If you have that evidence, not necessarily now, please send it to us.

**Professor Buchan:** If I can speak to that. I am a clinician, so I worry that we need to make a diagnosis here and I worry that we have not really understood the cause of what has been going on. From my point of view, two absolutely iconic, world-class offerings from the UK—the NHS and the universities—are somehow being criticised by the population in a



way that is probably unhelpful to the UK, to our society. You are right, the evidence of the criticism is a worry. Oxford is setting up a Brexit observatory to try to collect systematic data, but beyond that I think the problem with both healthcare provision and the university sector is that we have not convinced people. We have not adduced the evidence of how good we are in a way that, through the media, through the politicians, has put us where we need to be, which is to be considered a treasure. It worries me that the reproducibility of our science, our clinical interventions, have not always been faithful. I think one of the causes of Brexit is our own fault. We have not been on top of the whole business of reproducibility.

**Q23 Catherine McKinnell:** From a very current, immediate, practical perspective, to put an evidence base for some of the very immediate effects that you are potentially seeing would be very valuable. Many universities, including my home town, Newcastle University, have raised concern about the decline in the number of EU students and the impact that would have on university finances and income. It would be helpful if you could also comment, and if possible provide evidence to follow, on the impact that that could potentially already be having and will have in the future in terms of the issue that you outlined, Professor Buchan, of maintaining our position as a global leader.

**Professor Buchan:** But the evidence needs to be properly collected.

**Professor Latham:** It does, and consistently collected against a number of key indicators.

**Q24 Catherine McKinnell:** Is it something that you are seeing already?

**Professor Barnard:** We have the data and we have seen a 14.1%—to be absolutely accurate—reduction in the number of EU applicants to Cambridge in this current round that we are completing at the moment, but at postgraduate level the numbers have gone up. The numbers of UK students wanting to do postgraduate work in the EU have gone up, possibly because they recognise there may be a relatively small window when they currently enjoy the same treatment.

**Q25 Catherine McKinnell:** Why do you think there has been an increase in postgraduate applications as opposed to undergraduate? Is it that the risk factors are slightly less intimidating?

**Professor Latham:** Part of the issue is the long-term risk. If you are doing a course that is three or four years in duration compared to one that is a year, possibly 15 months, in duration, then the risk factor is very different. At the moment we are still in, let's be perfectly honest. If you start within this September coming, the chances are you will still be part of that process as you go through. The real issue, which I think we highlighted earlier, is what happens the year after, what happens the year after that. I think we need to concentrate. I think most universities have one or two strategies running at the moment. One is to maximise



the opportunities that remain while we remain in and then what do you do as part of the process after we have left the EU.

Q26 **Catherine McKinnell:** I know some universities are already modelling a reduction in EU student applications. In the spirit of maximising opportunities, are universities already looking at ways of making up the loss of numbers and loss of income?

**Professor Fitt:** We have some sector figures because we had UCAS, at least for undergraduates. The sector figures at the moment are that the number of EU applicants applying to enter in September 2017 is just under 10% lower than last year. Remember that is with the guarantee. They know that they are going to be entering and keeping their status as EU students. That is a worrying figure. Let me say as well that, in answer to your question, you might think that universities would have two strategies in the face of declining EU students. One would be to recruit more UK students and another would be to recruit more international students. We have already talked about how increasingly difficult it is to recruit more international students and I should remind you as well that as far as UK students are concerned, we are going through a demographic dip. There are fewer 18 to 20 year-olds now and I believe that will continue for another two years before it picks up again. In answer to your question, it is quite hard to formulate strategies.

**Professor Buchan:** The quality of the postgraduate research students is absolutely paramount for driving the research activity in the country and that is where the largest proportion is coming from Europe. That is a three, four, five-year plus post doc. That is a big worry to me.

**Professor Barnard:** Can I pick up on a point that was made earlier about the fact that perhaps we as a sector have failed to make the case for the value of having international global universities? There was a poll commissioned by Universities UK by ComRes about public attitudes towards international students and 75% of the respondents said they would like to see the same number of international students in the UK and that figure jumped to 87% once the information on the economic benefits of international students was provided. This is where there is a tension in public policy terms because the Government are committed to getting the numbers of immigrants down to the tens of thousands.

We feel very strongly that students should not be included in the immigration figures because international students are here for a short period of time. There is public support from the same research that suggests that international students should be allowed to work for a number of years in the UK after they have finished their studies. There is high level public support for those sorts of students to stay and we do think they should be coming out of the immigration figures because they skew the immigration figures and they are not truly representative. Most of them are only here for three or four years and then go and, of course, they are young and they are not a burden on the system in a way that others might become.



**Professor Latham:** To add to that, the really sad thing for me is the fact that you get a really good student coming to study in the UK who might come and study initially to improve their English so they can go on to a university undergraduate course. They do very well and move on to postgraduate course and maybe then stay on and become a researcher. At the moment they are four immigrations but they are only one person.

**Professor Buchan:** In going back to wherever they go they create a lifelong collaboration, which is how we network.

Q27 **Ian Mearns:** We have skirted around the issue of Erasmus and Erasmus+ and Professor Fitt has talked about the potential opportunity of an Erasmus++ that would potentially attract students and allow us to send students all around the world. At the moment, Erasmus++ is a hope and aspiration. How likely is it that if the UK limits freedom of movement we could retain access to the current Erasmus+ programme?

**Professor Fitt:** I think that is rather unclear and it depends on the Brexit negotiations and how they turn out. Of course we would encourage the Government to prioritise the retention of access to Erasmus+ in whatever settlement they reach. I am not sure how much money we spend on Erasmus+ at the moment. I am not sure what value it would be to divert—I am sure that we are spending more money on ESIF than we get back, so that is an easy sum. I am not sure how it works for Erasmus+.

**Professor Latham:** I am not sure either. I do know we are a big player within the Erasmus+ network. One of the other things that is key here is to remember that there will be an impact on all of these European networks by not having the UK as part of their delivery profile. A lot of European students want to come and spend time in the UK. A lot of UK students do go out and want to spend time in Europe, and get that first international experience that might be the first step to them going much more global. It is a key part of the portfolio that we should argue to retain but, as Alistair said, the other benefit would be if we could also have a global equivalent.

**Professor Fitt:** We can look at the example of Switzerland because they have been through some similar things. They were forced, essentially, to set up their own version of Erasmus+ following their decision to limit freedom of movement and in 2016 it cost them about £20 million and I think 90% of that was for use on mobility. The Swiss Government obviously decided to fund both outbound and inbound students as well. Although I don't know exactly how much it would cost, the Swiss figure of £20 million is not a huge amount.

Q28 **Ian Mearns:** I am going to go slightly off-piste here. In my earlier questions I asked you to talk about the advantages of our membership of the European Union over the last 40 years for higher education. Can any of you think of any particular disadvantages of our membership of the European Union for higher education over that period?



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**Professor Buchan:** For me, one of the things that we did lose was that nice and easy flow of clinicians and clinician science from Canada, the US, Australia, New Zealand and South Africa. We had really good collaborations that hopefully in this Brexit climate might be reinvented, because that movement of English-speaking medicine was a casualty of joining Europe.

**Professor Latham:** I would extend it beyond just medicine. In some ways being part of Europe has made doing certain things easier—because you are in Europe the collaborations exist, the agreements exist, the legal costs have been simplified in some ways—but there is the opportunity now to go out and globally sell activity that we probably would have done if we had not found it easier to do it within Europe.

**Professor Barnard:** I would just add that some of the EU programmes, while we have been great beneficiaries of them, come with quite significant bureaucratic strings attached, which is one of the downsides of any collaboration with anything to do with the European Union.

In terms of an earlier question of you asking about Erasmus and that the EU might still want to have the UK as partners because our universities are so excellent, I would go a bit further than that. My colleagues who sit on the European Research Council board say that the ERC is very keen to retain British input because we are the leaders in the field and we set the standards. They are very keen to have both British scientists and social scientists on board to ensure the quality of the research output being done in the name of the European Union. There may be incentives from the EU side to say, “We want the UK still in some of these programmes”.

Q29 **Lilian Greenwood:** That leads very nicely on to my question. All of you have talked about the vital importance of research and the way it is inextricably linked with teaching. Switzerland lost access to Horizon 2020 after it limited freedom of movement, and I was going to ask how likely it is that the UK would suffer the same fate if freedom of movement was altered in the course of Brexit negotiations. Catherine, maybe you started to touch on that and say you think that may be not the case.

**Professor Barnard:** Of course this is more a political question than a legal question because the political question is: to what extent does the EU want to send a message that you cannot have your cake and eat it? It may be that individual bits of the EU—for example, the European Research Council—say, “We really want the British universities, British input, because they add significant value to what we do”, but the political imperatives might be operating at a different level. I am not in a position to comment on that; I am a lawyer.

**Professor Fitt:** There has been a recent decision to readmit Switzerland as an associated country of Horizon 2020, which essentially has been the result of a decision by the country not to fully implement its referendum result, known in some circles as the Boaty McBoatface option. They are back in Horizon 2020.



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**Professor Latham:** They are, I think because they saw the overall benefit of being an associate member and being able to more easily play within the environment.

Q30 **Lillian Greenwood:** If we are unable to continue in Horizon 2020 or its successor, what should the Government be doing now to determine what type of—

**Professor Latham:** The industrial strategy is the biggest opportunity for the whole market, in terms of what we are doing. I also think the negotiations that will need to take place outside of Europe with individual countries for collaborations and setting up agreements, whether they are bilateral or regional agreements, to take activity forward are going to be key mitigators.

Horizon 2020 was a document published in 2011 that basically went to the European Council and explained why Horizon 2020 was important. In there were things like scale, opportunity to operate and take things forward you could not do in a single moment. There were opportunities around access to expertise. Really what the Government need to do is look at what those reasons were for having Horizon 2020 in the first place and make sure we have an equivalence in our approach to maintain the benefits that are seen by having a Horizon 2020-type programme in our own way. If you look at the formation of UKRI in the UK, the development of the industrial strategy, both of those need to take cognisance of why Horizon 2020 was put in place in the first place.

**Professor Buchan:** What would be critical is having a transitional arrangement immediately, and the Government must be held to deliver what will not be a solution straight away. They will need transitional arrangements, and for Horizon 2020 there will need to be a plan that transitions us into whatever it is going to end up being.

**Professor Latham:** The biggest waste, if we are not careful, is that some of these research programmes have been going now for 15 or 20 years and they are getting to a point where you are seeing large benefits coming from some of those joint collaborations. What you do not want to do is walk away from the party at that point because that going backwards would be a significant waste of investment.

**Professor Fitt:** Can I make a point about funding? If you were to say, “We have had the negotiations. You cannot be in Horizon 2020 or Framework Programme 9. What are we going to do instead?” obviously we could try to do something. We could self-fund a programme that would try to replicate Horizon 2020’s benefits. We could do something as part of an industrial strategy, a wider international research and education strategy. We could look at promoting research collaboration opportunities—for example through the new Department for International Trade—but you would not be able to get away from the fact that currently we get more out of Horizon 2020 than we put in. That is not the same as European structural funding. I think the figure at the moment is we get



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only about 30% of what we put into European structural funding. If European structural funding was the issue and you wanted to establish a British growth fund or something like that, then that should be possible to act as a replacement and we would maybe save some money there.

**Professor Buchan:** Immediately, we need an inventory. Things like the Crick have been set up; it opened last month and 66% of people will be coming from Europe to work there. There is Culham where the nuclear physics are and the whole need to decommission the nuclear reactor there. Harwell, synchrotron; Sanger, major genomic centre for Europe. Our interactions with this infrastructure mean that there has to be a transitional plan to keep that all moving forward for the world, if we are not just going to be part of Europe.

Q31 **Lilian Greenwood:** If that funding is still there, will those people still come?

**Professor Buchan:** I think I am right in thinking 60% to 70% of the people at Culham are from Europe, and certainly for the projection at the Crick and at the Royce Institute for Materials near Manchester the expectation is two-thirds will be from Europe.

**Professor Latham:** We have to have the ability. It goes back to the whole freedom of movement for people. It goes back to the way in which funding is accessed and is brought together and the ease with which it happens.

**Professor Buchan:** Again, whether it is the students or the staff, we wish to see the best people coming here without let or hindrance.

Q32 **Lilian Greenwood:** I think you might have already answered this question. Should the Government reevaluate how domestic funding is allocated if the UK loses access to Horizon 2020? Is there anything you want to add to what you said earlier?

**Professor Buchan:** It has to keep with the highest quality as the determinant of funding.

Q33 **Lilian Greenwood:** Looking at one final question, are you concerned about the financial sustainability of any universities as a result of Brexit?

**Professor Latham:** I think that each university is going to have to look at its model. I am sure institutions will reduce in size and scale in terms of where they are. Others will probably grow. That is the market as the market is. Some universities are already very global in terms of their operations and probably already have the networks in place to enable them to continue that growth quite easily. Others will have to revisit their models of operation. As Alistair said, the issue is not just for universities at the moment about whether it reduces the number of EU students. Demographically, UK student numbers are in decline also. It is important for universities per se just to look at where their model customer base comes from.



**Professor Buchan:** Seven of the top 10 universities in Europe are in the UK, and they do that because of the quality of the students that come from all over the world. We must not lose that advantage.

**Professor Fitt:** Can I make one other point? I think it is often forgotten that when now Lord Willetts introduced £9,000 fees for UK students, a key part of that calculation about what the level of fee should be was based on the supposition that the number of international and European students did not change. I think people forget that sometimes.

Q34 **Chair:** It would be very interesting if there were specific examples of research programmes that have been going on for a decade or more through the connections we have been talking about, which have also had some connections with what we would term the industrial strategy or business opportunities. That would help us to get a handle on some of the advantages.

**Professor Fitt:** I was just going to say the examples that Alastair has already mentioned. Particularly in this area here and south of here—Harwell, JET, Culham, synchrotron, Diamond—we have possibly the greatest concentration of world class research institutes that are largely staffed by European staff as in the country.

Q35 **Chair:** A bit more detail and context would be really helpful, by letter, if that is helpful.

**Professor Latham:** No problem. One of the big areas that we should be looking at is around automotive research, of which there has been masses coming out from framework programmes. That is again a key element for us and a huge part of any industrial strategy as it moves forward.

**Chair:** Yes. Evidence will be really helpful.

**Professor Latham:** Fine.

**Chair:** Thank you very much. I want to thank all four of you for a very informative and constructive session. Thank you.

## Examination of Witnesses

Dr Anne Corbett, Professor Stephanie Haywood, Dr Georg Krawietz, Professor Lyndal Roper and Professor Margret Wintermantel.

Q36 **Chair:** Good morning and welcome to our second session of this inquiry. We are exploring the implications that Brexit might have for the university sector. The first session was primarily institutions. This session is primarily academic disciplines, but we are basically asking the same kinds of questions. Could you, from my left, say who you are and from where you hail from?



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**Dr Corbett:** I am Dr Anne Corbett. I am a political scientist, currently an associate of LSE Enterprise, former Visiting Fellow of LSE's European Institute, and active rapporteur on LSE's Commission on the Future of Britain in Europe.

**Professor Haywood:** I am Stephanie Haywood. My day job is Head of Electrical and Electronic Engineering at the University of Hull, but I am here representing the Engineering Professors' Council, of which I am the current president. We represent 81 higher education institutions that run engineering courses across the whole discipline spectrum.

**Professor Roper:** My name is Lyndal Roper. I am Regius Professor of History here at the University of Oxford, so I am a jobbing historian.

**Professor Wintermantel:** My name is Margret Wintermantel. I am a psychologist, professor of psychology, and at the moment the President of the German Academic Exchange Service. Perhaps you know this organisation. It is a member organisation of the German universities and student bodies, and we support about 120,000 scholars per year with governmental money. We are interested in all this academic exchange business.

**Dr Krawietz:** My name is Georg Krawietz. I am from the same institution, the DAAD, and I have represented the DAAD here in London since September 2014.

Q37 **Chair:** Thank you all very much indeed for coming along. I want to kick off with the question: as academics, where do you think Brexit will have the biggest impact on your work?

**Professor Haywood:** It depends on the outcome of the negotiations, but the two biggest areas of concern for us are membership of the framework programme, of Horizon 2020 and its successors. Engineering education underpins the engineering industry in this country, which is 50% of our exports, £280 billion a year to the GVA of the country. That research supports the delivery of high quality, research-informed programmes. It is a virtuous circle because these programmes attract overseas students to study. As well as the economic value, I think it brings us influence in the world. We educate people who we then collaborate with and who become political leaders outside as well.

Q38 **Chair:** Do you see a direct connection between Brexit and engineering through this process?

**Professor Haywood:** There is a very direct connection from the second strand, which is to do with mobility. Currently, Engineering UK is reporting 40,000 gaps in people going into the engineering industry. That is at the graduate level at level 4-plus, so that is not counting technician level and below that. This is a very big gap and it appears to be growing; it has gone up this year compared to last year. I do not see how we are going to fill that gap from our own resources entirely. We are doing lots of things to try to encourage more people to take up physics and STEM



subjects, we are trying to get more women into engineering, but I do not see these things as being very quick fixes, and I think it is going to be very difficult to fill the gap other than by recruiting engineers from overseas, and that includes the EU.

Q39 **Chair:** With the rest of your disciplines in mind, what thoughts do you have that are in addition to Stephanie's?

**Professor Roper:** In history and in the humanities generally, I am worried about research collaboration. Research collaboration is an abstract thing. What it actually means is relationships between researchers and different kinds of ideas and different research projects, and they do not happen overnight. They have to be built up very gradually, and over the past generation that is what has happened. It has led to a lot of originality, innovation and learning from people who have been formed in different intellectual contexts. My concern is that unless we are very careful—and I am sure there are positive things that we can do—that whole research ecology could be damaged. That is my concern.

**Dr Corbett:** I am going to give a two-part answer. I am a researcher with a particular interest in policy change over history. I have looked at how higher education has been an issue in European politics. I have a slightly laidback view that this is another very interesting example of what is happening, how ideas and institutions will match, how they are affected by events, and the way the issues are framed. My colleague, Claire Gordon, with whom I produced evidence, I think would back this very strongly. She is a director of LSE's Teaching and Learning Centre. This framing and this issue of values, which is at stake in whatever Brexit outcome we are going to see, is crucial.

**Professor Wintermantel:** With such intensive institutions, for instance in the Russell Group, you have 20% EU researchers who are very happy to be here because they have good conditions, they have good co-operation, and it is very important. In the STEM subjects, like biology, physics and mathematics, you have 23% of EU nationals. We would say, from the German perspective, the British Government should guarantee the current status of EU national academics at United Kingdom universities. Furthermore, the freedom of movement for academics from EU nationality who wish to join UK universities in the future should be secured and obstacles should be avoided. This is really a question of quality. We heard it in the last session. This would benefit all parties involved, the UK's higher education institutions and their reputation as well as academics of every nationality, including the British and their respective international careers. It is important to stay attractive for the young researchers.

Q40 **Chair:** What is the view of HE institutions in Germany about the potential effect of Brexit?

**Professor Wintermantel:** I do not know at which point I should begin, but the networks of researchers that were developed in the last 30 years



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are very important. With regard to the European Research Council, with regard to Horizon 2020, we have a lot of publications in co-operation between German and British researchers and other researchers. We fear that the quality of research conducted with institutions such as the Max Planck Institute and DAAD will— schaden nehmen

**Professor Haywood:** Decrease from the current.

**Professor Wintermantel:** —because of this psychological situation of very good teamwork, very good teams, and a very coherent scene of young researchers, especially in these fields that are very much dependent upon certain infrastructure of laboratory instruments and all this.

**Professor Roper:** I wonder if I could just pick up the collaboration idea. I did try to put a value on collaboration because we talk about it as being a useful thing, and it is a great addition. If you just take something like the framework 7 programme, the last programme, the UK got £8.8 billion from that, of which the majority went to universities. If you wanted to look at what the value to the UK of that was, 47% of that was collaborative programmes with typically six partners. If you multiply that and just say we got all of the intellectual property, we got all that research, and we did not just get the research that was done by the UK institutions, it is worth £29.5 billion, and then we have not paid for the training of those staff. We have not paid for the equipment that they have used. Then there is the added value of the research ecosystem that you talk about. If you wanted to try to put a value on it, it is many times what we receive in income.

Q41 **Chair:** The multiplier effect is what you are really talking about there.

**Professor Wintermantel:** From our perspective, the most important thing is that we fear the number of German students who would love to go the United Kingdom will have problems. We listen to these discussions. What will happen when we do not have the opportunity to go to these British universities? This is a question you should have in mind.

Q42 **Chair:** Georg, do you have any thoughts?

**Dr Krawietz:** There was an international student body, although this term was not used. I would like to have a closer look at it. We now have roughly close to 30% EU students within the international study body, so they contribute academically highly. If you talk to academics, they say you cannot replace these people with students from other countries, not time-wise and possibly not quality-wise, because they may pay less fees but they contribute intellectually and academically on a very high level. It is this balance to the student body from all over the world, including the EU, that makes the quality of international education at UK universities so respected and so valued. If you have too many people from one certain cultural, language, cognitive background, most academics would argue that academic work cannot be done as easily as it can be with a balanced



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group of UK students, European students and students from other parts of the world. This term of an internationally balanced classroom, which is quite frequently used by academics themselves, is something that could be added to the discussion happening so far.

**Q43 Chair:** Stephanie, you have talked, rightly, about the importance of STEM subjects and the relationships across the European Union, but do you think there are opportunities globally with Brexit for engineering and manufacturing?

**Professor Haywood:** Opportunities is a difficult word. I do not think there are new opportunities. I think there will be new drivers, because if you take away some of the opportunities that are in the EU then we will automatically turn to different areas. Those opportunities largely exist already, many of them, so you could have an extension of things like the Newton programme, which I have been involved in with Malaysia. You could have similar programmes with other countries more broadly, not just developing countries. It is an opportunity. We could do it anyway, but it is definitely something that could happen.

If we were to leave the framework, it would be very important to get more involved with UK industry and business. One of the things that the EU funds more deeply and more widely than the research councils is applied research, and that is one of the reasons I think that it is more widely spread regionally. Oxford and Cambridge and London get a lot of European funding as well, but if you look at a regional map of where the EU funding goes, it is spread more widely across the regions. I think some of that is to do with the fact that it does applied research with local companies, and I think that would be a very important route that we had to take if we were to leave the framework programme.

**Q44 Chair:** Is there a case for arguing that because we are in the European Union that gives our universities a bigger reach globally?

**Professor Haywood:** Yes, I think there is. A colleague of mine has funding under the Marie Curie programmes for bringing Chinese researchers into the UK.

**Q45 Chair:** Lyndal, you nodded. Is that something you think?

**Professor Roper:** Yes. I think it has been hugely helpful to us, and it has made us much more important globally because of all the connections that it creates. The possibilities of co-authoring and of linking up with other research institutions globally have been hugely important, and it has been important for the way in which people think. It has been important cognitively. The point that was made about the importance of working with people with other languages is very important too, because of the different ways that that then helps you organise knowledge conceptually.

**Q46 Chair:** Anne, you are a political scientist and presumably all of the political activity is of fascination to you and quite, in some respects, a



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base of opportunity for more research work because you are going to have an awful lot to look at and to think about. Do you think that there is a case for attempting to replicate the sorts of structures we heard about in the first section in connection with Erasmus? I am not talking about the programme itself but the networks and the relationships.

**Dr Corbett:** In terms of a more global picture?

**Chair:** Yes. To deal with the impact of Brexit.

**Dr Corbett:** I echo what has been said before, that it is extraordinarily important to have these networks. Europe has benefited by proximity, shared culture and the 40 years of work together, so I do not think anything is impossible, but what I think we should never underestimate is how institutional resources, financial resources, match an idea and the political will. What one is seeing already, the Anglosphere co-operation and others, are things that can be built up but they do not have anything like the facilities that underpin European co-operation.

Could I make a slightly more conceptual point about the opportunities of Brexit? One of the things is that it offers an opportunity to sync the fundamental ideas of why the UK, as indeed our European neighbours, engage in European international co-operation and why students, faculty and researchers want the freedom to study and work in another country, and we have emphasised how fortunate that is. What that is saying is this cannot be measured simply in cost-benefit terms, and for two reasons we should be thinking, therefore, about the values of what is happening in education and the relationship between teaching and research. There is a big social point as well. Brexit offers or demands efforts now to reconcile a significant part of the public with its universities as institutions of which the British should be proud, and not simply elite or experts or ivory towers that have very little connection with the real world. I think also that we should be thinking about our youth in this, who, as we know, are very internationally-minded and European-minded.

Q47 **Marion Fellows:** I think I am going to be further probing on potential benefits for academia post Brexit. Do you have any further thoughts, anything else you would like to add to what has already been touched on?

**Professor Wintermantel:** I would like to add to the comments with regard to the social perspective. You may know that there is the European University Association, and the British universities play a major role in this association. These discussions with regard to the further development of the higher education system profit very much from the discussions in this European University Association. It would be a loss for British universities, and for the other European universities too, when these discussions with regard to the further development of research and teaching and education become more difficult. This would be really damaging.



**Professor Haywood:** It is quite difficult to give an answer because we do not really know what the shape of the negotiations and the outcome is going to be. What I would like the Government to do would be to try to encourage greater industry involvement, particularly in engineering research. Of course, that is my side of things. We would also need to put in place some programmes in collaboration with Europe and the wider world. I worry about the word “opportunities”. Again, I think they would be drivers. We would have to do these things if we wish to maintain our universities with their current global standing.

**Professor Roper:** We need to think about opportunities, yes, and we also need to think about conservation. I do not think it is a zero-sum game. I do not think it is a choice of either Europe or the global world. We want both, and to maintain what we have achieved with Europe is essential so that we can build and reach out globally, which is something that we already do. As we do that, the challenge that this offers is that we as a nation have to think about how much money we put into research. Effectively, we are going to be losing research money that we now have, and that is a challenge. We need to think about our national priorities.

Even in humanities, which is where I work, you might think that all these European connections might not be that important, that research projects might not be so important, but they are absolutely crucial to us, and they come out in the way that we teach our students as well. It is about our whole intellectual culture. Very much so in humanities, we need to be able to replace the money that we are losing. Just in Oxford alone it is going to be £17 million that we will lose for humanities in European funding, and that is a challenge that we need to think about creatively so that we can conserve this research ecology that we have created and reach out. That will require thinking about how we are going to create new possibilities for research funding.

Q48 **Marion Fellows:** When Brexit happens, do you think there is a possibility for more collaboration and links beyond Europe? We are very focused on Europe at the moment. Do you think it will encourage that and it will be possible to move further into Australasia, the Far East, wherever, India?

**Professor Roper:** I think we already have. We already do that. We already have very strong networks. If resources are made available so that it is easier—one of those things I like very much is the idea of creating an Erasmus++ that would be global, because I think that is something that our students and our young academics really need. It is the personal connections and it is the personal experience of spending time outside Britain, working with people in very different intellectual cultures, that gives people new creativity. For that to happen, we would have to have a really vibrant Erasmus++ scheme, and that I think would be a real possibility, but it has to be done with conserving those links with Europe that we already have and not replacing one with another.



**Dr Corbett:** I would come in on that and say it is not just a question of Erasmus+ and expanding that. One of the things we know about why European co-operation has worked is that it has matched the idea of collaboration with institutional frameworks and political deals that are acceptable. There has been a long route from intergovernmental co-operation that was not very effective, which needed a kind of infrastructure behind it. Of course, as we also know, education is treated as a subsidiary<sup>1</sup> area, so again that is encouraging co-operation.

I think that what we have seen is a very positive thing, which I do not see replicated in any other part of the world, which is the establishment of the European Higher Education Area and the European Research Area, the Europe of knowledge. What that is doing has produced in Europe a common language about quality assurance, the importance of staff involvement and external review, a language about recognition. For example, the Asian ASEAN countries talk about but cannot do; the Latin American countries collaborate in a ministerial way but they cannot do either. That is something one needs to assess very seriously, and that is why one does not want to lose the European links. One wants to be able to use them to extend into these other areas.

Q49 **Marion Fellows:** When you say Latin America and other areas “cannot do”, can you be more specific, please?

**Dr Corbett:** It is absolutely a political decision. Some European Ministers were more enthusiastic than others about the need for commissions that would support. This was a huge row in the 1960s and 1970s, and really came to a more consensual state in the 1990s when it was becoming obvious education was becoming much more globalised. There is a balance, and we have to thank the British Government for the idea of the open method of co-ordination, which is sort of voluntary, and that deflated a great political tension.

**Professor Haywood:** You also have to look at the practicalities. It is much easier to collaborate with your immediate neighbours. Even from Hull, I can get on a train and I can be in Paris very quickly. There are a lot of infrastructure facilities: the European Synchrotron Facility, CERN, the laser facilities at Harwell, the whole range of joint infrastructure that has been built up over very many years.

I would just make one other point about that, which is that we pay into that not through the EU but we get to use it through EU funding. One thing we really need to consider is we may be paying for some of these facilities as a nation but not through the EU, because they are not supported by the EU, but then have a restricted access to them because much of our access has been through projects funded by the EU. There are a lot of things like this that need consideration.

Q50 **Lilian Greenwood:** Universities’ success—not just British universities—

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<sup>1</sup> The witness later clarified that she intended to say ‘subsidiarity’ rather than ‘subsidiary’.



depends on being able to attract the brightest and the best students and researchers, and you talked, Georg, about the importance of building diverse teams and how that adds value. The Government have said that they want to win the global battle for talent. Following Brexit, is that still possible?

**Dr Corbett:** I would like to come in on that. Of course it is a very attractive idea, and you look at the league tables and you see how well Britain does. There is no other country, though Germany and the Netherlands have very high-ranking universities. When you look at what is produced, you do have to ask whether Cambridge is doing what it is doing or Oxford is doing what it is doing on its own, and the answer is it is not. The research results, the figures were collated this morning. The very high rankings come from collaborative work. It is Cambridge and it is Strasbourg, or it is Oxford and it is Nice. So much of it is collaborative work. We have to look slightly sceptically about going it alone.

Q51 **Lilian Greenwood:** Are you suggesting it is not just about attracting students and staff, but it is actually about the quality of the connections and collaborations that they have?

**Dr Corbett:** I am saying that what we know is that the most effective and highly cited research is very largely collaborative work and, what is more, it is across national collaborative work. The merit ought to be shared. Perhaps it is fair to look at Europe in terms of if you look at the first 200 universities as opposed to the first 10, Europe scores better than anywhere else in the world.

**Professor Haywood:** To continue the Manchester United analogy from this morning, you can have a very good team member like Wayne Rooney but you need the rest of the team. That is very important. Research is a team sport. But to pick up what you were saying about freedom of movement, although European staff are only 15% of academic staff, 15% are very talented staff. Only 30% of our PhD students in engineering are UK students. We are very heavily reliant on postgraduates going into the high end of engineering.

It is important that the Government give out—some of the problems at the moment are not to do with things that have happened but to do with attitudes. For example, while some of my colleagues report problems with being excluded from new collaborations, what I personally have heard most is colleagues coming to me and saying, “I am thinking of leaving the country because my wife is German, Spanish, French. Our children do not have a UK passport. We need to sort this out one way or the other”. So it is not just the staff that we employ that are affected by freedom of movement, it is their partners and their families. Again, this is an amplifying factor that we have not considered.

Q52 **Lilian Greenwood:** Have you modelled in any way what you expect—particularly given those very stark figures about how many non-UK students are needed in engineering—the impact will be in different



scenarios?

**Professor Haywood:** We have not as an organisation. I know that the Royal Society is working on that. It does have some preliminary data but it is at a relatively early stage at the moment. I do not have any hard numbers. But I can look at areas, for example—I do not think it will affect our undergraduate courses too much—you can say that Imperial College and Cranfield have typically about 30% postgraduate students from the non-UK EU. That has to make a big difference to their income from those courses. Will those students come if they have to pay international fees? I do not know.

**Professor Wintermantel:** I have some hard numbers. It is a fact sheet from the EUA, European University Association, and they write, “The UK is the most productive country in Europe in terms of scientific output and one in four UK publications is done in collaboration with a European partner. Over 330,000 publications were produced from collaborations between UK and European researchers between 2003 and 2011.” This gives a good impression with regard to the qualification.

**Professor Roper:** I would echo absolutely what Stephanie says. I am hearing the same kinds of things. Immediately what we need is some kind of reassurance. In Russell Group it is 20% of the staff who come from the EU and this is important because we do not want to lose these internationally leading people and it does have this amplifying effect. It is a real worry and clarity on that issue would be very helpful at this point.

Collaborative work, we talk a lot about it, but just to give you an example of what that might mean. In history where you might think that collaboration is not so important, one of the projects we have here is a Global Cultures of Knowledge project. What that does is it looks at the 17th century, it is a period of intellectual change in innovation, and it involves scholars from 33 countries. It is a way of understanding how an intellectual culture works. It is using network analysis and it is raising new questions about how intellectual change happens and how that happens through contacts and networks. That is possible because of European funding. Even in history, this is changing how we think about historical change.

**Dr Corbett:** Could I underline what was said about the position of academics and how this relates to families? At LSE a third of the staff are European citizens, other non-UK European citizens I should stress. The issue we are talking about here is one that requires Government intervention and it requires it before the negotiations start. I would say that were the Government to come out of its purdah, or whatever it is called, and to say that from the start it would be creating a much more positive climate to assure that EU citizens here were safe, which in the end is helpful all round because there is not a single European country that wants to see a zero-sum game. What one is looking for in the end are solutions to this, not to collapse before the problem.



**Q53 Ian Mearns:** In terms of trying to gain the advantage of the global battle for talent, I am particularly concerned about provincial universities because a lot of provincial universities have developed links with European countries based on easy transport links. For instance, Newcastle University or Northumbria University might be able to use the transport links that exist at Newcastle Airport, which means that people to fly to Germany or eastern Europe or anywhere in western Europe quite easily. But those links are not as easily developed from provincial universities via the hub airport in the south-east of England. Have you any particular concerns about that?

**Professor Roper:** You are absolutely right. The whole ease of European co-operation has been immensely helpful and these are the things that we have to conserve and it needs hard thought to make sure that it is clear that European co-operation will continue. What happens is it is incremental. People worry about the immigration position. Then people start not to use us as collaborators in research project applications because they are unclear whether funding will continue or not and what our status will be in relation to all these European research programmes. It is very damaging.

**Q54 Ian Mearns:** The problem is, even if you are on the other side of the argument in terms of if you are looking at what are the potential opportunities, possibly some people might read it that the ease of those opportunities that have existed in the past have been the lazy options that have existed in the past. It is maybe a bit harsh but it might be we have taken the easy options and might be the lazy options in terms of what could have been done in the past. Do you think there is any truth in that?

**Professor Roper:** No, I do not think so because what is important is the making of those links and the intellectual diversity that comes as a result of that. One of the important things is linguistic diversity that is involved in all this co-operation. It is not that easy to co-operate with Europe because it requires openness to new ideas, different ways of doing things and, in some aspects, a culture that is not like British culture. It is a very diverse range of different cultures.

Co-operation with the US is easier in some ways because it is the same language but there are all kinds of challenges and it is not a zero-sum game. It is not that you have to choose between Europe and outside Europe. You want to do both.

**Professor Haywood:** The point you make about the provincial universities is very important. Just before the referendum EPC produced a document with some maps of where the EU funding went across Britain. Coming from Hull, we have quite strong links with the Netherlands and my experience is generally people in Holland have a better idea of where Hull is than most people in the rest of the UK. They usually put it about where Newcastle is.



**Ian Mearns:** Where is that then?

**Professor Haywood:** I know people like saying “benefit” in either of the distribution of the funding or the value of the funding if the Government were to replace that £9 billion. That is what I was trying to explain earlier. I think it would cost a lot more than that to get the same value that we get from the EU framework project.

**Dr Krawietz:** To our experience, the competition for putting academic staff on certain positions as a professor, reader, or whatever, is competition based, so you are looking for quality. The EU citizenship comes as a benefit but I do not experience processes that we are aware of to be decisively done because of the fact that somebody is coming from the EU. You are looking for the best and brightest people. If you have two people of the same quality it is of course then easier to put somebody from Europe on such a post because there may be fewer visa relations, and so on, but it is not a crucial point of giving a certain job to a certain individual because they are from the Netherlands than from Thailand or China.

Q55 **Lilian Greenwood:** You have all touched on the issues around free movement. Margret, you said previously that it would be disastrous for British and European academia if mobility of students and staff was restricted. What clarity is needed before negotiations start? Is it just about the position of people who are already here or is it much more than that?

**Professor Wintermantel:** I do not know if I understood you right. You want to know what we think about the future of student mobility?

**Lilian Greenwood:** What clarity do you think is needed before the Brexit negotiations start?

**Professor Wintermantel:** One should start the negotiation to show the people or to bring in the negotiation at this point that the mobility is, that is what we were talking all together. That mobility is important for the quality of research and education. For creativity, the diversity is important and we know this. We have experienced this. Perhaps we should produce or we should show more hard numbers, more figures that can show this effect of mobility.

For us in the DAAD we have this experience from 90 years of our work, with our supporting of people from everywhere, we have good friends all over the world. It is a sustainable effect but it is not so easy to bring hard numbers with regard to the quality. But I thought these hard numbers of publication of co-operations of the European Research Council and the representation of the British researchers there, shows that it is in the past very important that you had this mobility chances. For the future it has to be important and you have to show that, that this mobility will not—

Q56 **Lilian Greenwood:** It is clear from what the panel have already said



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about what the importance is and the benefits of having collaboration and mobility. The question is, as we approach the negotiations: what is it that the potential academic staff and students need to hear from our Government?

**Dr Corbett:** I have a sound bite for the Government and that is they should be going for an intelligent Brexit in higher education. We do not want to get stuck on hard Brexit or soft Brexit because that takes us into legal arguments in institutional things. But the idea of an intelligent Brexit is trying to keep open opportunities to suggest the kind of buttons that can be pressed in this new atmosphere.

Q57 **Lilian Greenwood:** Do you mean on sector specific with a specific deal for the higher education sector?

**Dr Corbett:** The ideas have to come from somewhere. What sector is better placed to put forward ideas in the higher education sector? That is the starting point that the Government need to think more broadly, to listen to what academics are saying about what universities are for, what teaching and learning is achieving and how we best preserve that. We may have to do it in different institutional structures. We may be looking to academics to take more initiatives. The mention of provincial university. There are lots of buttons to press, for example, the academic own disciplinary organisations.

There have been hard times in Europe before. You think of the Cold War and you think of how university associations made those links between all sides of Europe. One is needing to revise some of that spirit, some of that initiative now.

**Professor Haywood:** There are some short-term things that we do need. It goes without saying almost that existing staff need to know they have the right to remain and work in the UK, and their families as well. That is very important. Looking a bit further ahead, I would like to see the HE sector, and definitely engineering, removed from any limitations on freedom of movement because it is essential to the UK economy. Perhaps a very specific thing is if EU students become international students then they are going to count towards migration targets. It is absolutely vital that students are removed from the migration targets, if not from the data.

**Chair:** We have that point. We are just running up against time at the moment.

**Professor Roper:** Just three things: making the visa situation clear and we need freedom of movement in the academic sector and if it can be separated out that would be important. We need to remove students from immigration targets. The other thing is in the negotiations around how we go on funding research. It is very important that we can negotiate the best possible deal in relation to the European Research Council and European funding streams so what we have is preserved. I



do not know whether that means associated country status, but we need to be in there and we need to retain as much of a role in that as we can.

**Dr Krawietz:** Referring to the Erasmus scheme, or anything similar that might look like in the future, there is evidence by Universities UK, who did a study about one year ago, that students with international experience are less likely to be unemployed for a longer time than the ones that do not have international experience. The UK can provide this study if you are looking for it.

We very often hear from the FCO or the Council of British Industry that they say our students need to have access to international exchange programmes. We are already now suffering of international experience, young people who we want to send abroad and for some reason or other are lacking intercultural or language skills. Being part of the Erasmus scheme and providing this opportunity to gain this experience in the future is in the interests of British students as well as institutions like the British industry or the FCO.

**Q58 Lilian Greenwood:** It is very clear from the panel that you all think that freedom of movement is vital possibly for everything but certainly for the higher education sector. If there are increased restrictions—and this is particularly a question for you two—is could these problems be offset by the establishment of a system of funding for academic mobility similar to what you have through DAAD? How would that help?

**Professor Wintermantel:** You mean to have an organisation like this?

**Lilian Greenwood:** To have the funding open to non-British academics.

**Professor Wintermantel:** Yes, of course. I told you that the DAAD has existed since 1925 and it was in a time when German science was not accepted worldwide because of the World War I and there were five young students in Heidelberg who made this organisation. Since this time we see that it is a success story with regard to research, quality with regard to the personality development of our young, of the students who come to us and who go out. We support students who go out and students who come.

**Q59 Lilian Greenwood:** What would be the challenges of trying to replicate it?

**Dr Krawietz:** To replicate it is easier said than done. It will need time. It will need structures that take—

**Professor Wintermantel:** And money.

**Dr Krawietz:** Money as well. Take the best and avoid the least. If you are talking to the British Council, for instance—we are in close touch with them—they are still happy with the programmes that enable them to do exchange and they will certainly be happy to do it on a larger scale. If this were one option, the British Council is in a position to be in charge of



any kind of a large amount of international exchange. We do a lot of co-operation together with them and they can make an even stronger case for international exchange than we can, at least from the British perspective.

**Q60 Lilian Greenwood:** Lyndal, you are obviously Australian originally. Australia and Canada have point-based immigration systems. They are still able to attract people to work in higher educational institutions. Do you think changes in the UK freedom of movement, if we moved to that sort of system, would still have a significant impact on our ability to attract talent?

**Professor Roper:** That is a question that I cannot answer but my feeling is what we absolutely must do at the moment is make sure that the staff who are here are not demoralised and do not leave because the risk that we face is enormous. We are a global leader and we would lose some of our best talent.

**Dr Corbett:** The answer to your question is the Government needs to be told that there should be significant amounts of money put aside, somehow perhaps that £350 million that was going to come a week or whatever—

**Lilian Greenwood:** It is going to the NHS.

**Dr Corbett:** That is the thing, competition everywhere. You will not achieve what is being talked about without a commitment to serious funding. It is well beyond the British Council. It goes to the Chancellor of the Exchequer, the Prime Minister and the Cabinet.

**Q61 Catherine McKinnell:** We have talked a lot about the freedom of movement of academics. I know that you all very much believe in the value of the freedom of movement of students as well. What do you think are the key challenges if we do not have that freedom of movement going forward? It is interesting, Stephanie, that you are looking to reply because I am aware that the Engineering Professors' Council has said that it could ultimately result in positive benefits for the UK skill shortage. If you could comment on that, if you are able to, that would be helpful. Would you like me to explain the concept?

**Professor Haywood:** Yes, if you would.

**Catherine McKinnell:** In the sense that if we have fewer students moving from the UK to the EU, fewer students coming in from the EU to the UK, that is a driver to addressing the UK skill shortage and investing in UK skills in order to make up that shortfall.

**Professor Haywood:** It is very difficult to predict exactly what will happen. At undergraduate level we are talking about 10% of the overall population, maybe slightly bigger in engineering. I do not think there are places that EU students are taking that would otherwise be available to



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your home students or to international students. I do not see a positive benefit of removing those EU students.

**Catherine McKinnell:** Or even an alternative driver?

**Professor Haywood:** Most engineering departments are very heavily dependent on non-UK students anyway.

**Catherine McKinnell:** Non-UK or non-EU or EU?

**Professor Haywood:** I use it to mean both. Non-UK EU and international students. They are dependent on them financially because overall the cost of educating engineering is in general significantly more than £9,000 even plus the £1,500 that we get from the Government. It is a possible driver. We are always looking overseas, both over the Channel and further afield, for engineering students because generally it is difficult for the university sector as a whole to recruit enough good engineering students.

Q62 **Catherine McKinnell:** On the downside, are you foreseeing, if we do have a reduction in the number of EU students who are able to come, that that will potentially lead to financial challenges for universities producing those courses?

**Professor Haywood:** It could affect some courses. I do not think it will close whole engineering departments generally because, generally speaking, EU students are a small but growing percentage of our undergraduate population. We had some statistics this year that showed that in general the numbers are still holding up across the piece. It is not going to affect whole engineering departments but it could affect specific courses, particularly postgraduate courses that tend to be rather specific directions and are often very dependent on non-UK students both from the EU and from further afield.

Q63 **Catherine McKinnell:** On the point that these courses are dependent on non-EU students, why do you think that is? Why do we not have enough UK students undertaking engineering to meet our requirements?

**Professor Haywood:** That is the million dollar question, isn't it? If I knew that we would have solved the problem. It is very difficult to know. It is a whole story in itself, the leaky pipeline: why not enough people take physics A levels; why many of them drop out; why we lose probably 30% of engineers to other careers. It is quite a complicated story.

I am sure there are ways in which we could increase the number of UK people going into engineering. Some of it probably involves paying higher salaries to new engineering graduates, I don't know. But it is a very complex problem and it is not one that we are going to solve from our own resources in the short term. Of course we need to do all those things. We need to increase our pool of UK engineers but for quite a while we are going to be dependent on recruiting engineers from outside the UK. I know of highly skilled, talented engineers who struggle to find jobs



in some countries like Greece and Spain, and it would be sensible for us to use those talents and to keep them here.

**Dr Corbett:** It is a slightly different point but it is to say that you are politicians, you are MPs, you are very concerned about public opinion. I wonder whether you do have the opportunity to push the idea that underpinning international collaboration, and the history we have had of Europe in collaboration, are the values of openness, tolerance and the universities' role in this, in evidence-based critique and precirculation of ideas. Do we want to lose that?

There is a difficult message, a message that perhaps in the past universities have not been too good at getting across to the public that something that could change the atmosphere, to contribute to making the Government a bit more daring on the negotiations that are to take place.

Q64 **Catherine McKinnell:** Have the Government sought your input in terms of its Brexit?

**Dr Corbett:** Me personally?

**Catherine McKinnell:** Or any of you?

**Professor Haywood:** Not directly but there are definitely other organisations that we work with, the Royal Academy of Engineering and Royal Society, these people have definitely been putting forward—

**Catherine McKinnell:** Do you feel it has been received?

**Professor Haywood:** I have not had very much feedback on that yet so I do not know. I am hoping that today will be one way.

Q65 **Catherine McKinnell:** I have one further very practical question about languages, because we know that one of the challenges is modern foreign languages. The entrances at GCSE and A level are already stagnating or declining so there is potentially an impact from Brexit in terms of the freedom of movement of language students and non-language students. But also that flow of language teachers where we know there is already a challenging environment to ensure that we have sufficient modern foreign language teachers in UK schools and that perhaps we are going to continue in a declining direction and Brexit is going to further compound that. Professor Roper, you had—

**Professor Roper:** Yes, that is a subject that is very dear to my heart. You are absolutely right. In a country where it is increasingly monoglot, one of the practical implications of the kind of the thing Anne is talking about is that where you have European students mixing with the rest of your undergraduate population they are creating friendships and they are understanding one another. That creates links and ways of thinking that then go on and help the economy in all kinds of intangible ways. The issue here is if you raise the fees to international levels you are likely to lose a lot of that group overseas and we are very concerned about that.



Secondly, it is not just at undergraduate level, it is at postgraduate level too. That is where it is just as important and in some ways even more so because the people who come and who move then are the ones who become the early researchers and that impacts directly on to our intellectual culture. In the last generation what that has meant is that it is at graduate level that people start learning languages and we get over some of this deficit that we have through the lack of good language teaching. I see a real concern there as well.

**Q66 Ian Mearns:** Crystal ball gazing to a certain extent but what do you feel are the likely impacts of Brexit on the quality of teaching in our universities? Do you think that any risks can be mitigated by movement in terms of thinking about how to manage the process?

**Professor Haywood:** In terms of the quality of teaching, we will lose high quality staff. We have said already that we are looking for reassurance. Clarity is also important on what the rules are and what they are likely to be.

**Q67 Ian Mearns:** I am interested in clarifying. This morning I heard a couple of stats. There had been a survey done, I think by the UCU, which showed 42% of academics and 76% of non-UK EU academics within British universities were already considering their future in terms of leaving the UK.

**Professor Haywood:** I think all non-UK EU citizens and people who are married to or have partners are considering that whereas perhaps they had not thought about it. That does not mean all of them will go but it automatically made them consider their position.

Just from my colleagues, I could name four or five people who are thinking of going not because they are necessarily UK citizens but because they have partners who are, so there is a big knock-on effect there that we have not considered.

**Dr Corbett:** At the same time there is the context, of course, of huge competition. There is not just a global labour market in academics but there is a European competition and we know of universities in France and Germany who are extremely keen to have these academics back.

**Q68 Ian Mearns:** Would you all agree that the diversity of teaching staff is important for the quality of teaching in the UK higher education sector?

**Professor Haywood:** It is very important. In engineering we tend to have a lot of overseas lecturers anyway and not just from the rest of the EU but from China and Russia. That diversity is absolutely great. I would not like to lose the people from the EU because they bring a different perspective and they bring a perspective in some ways that is closer to ours. To some extent we sometimes have problems with colleagues who come from further afield just in delivery of their teaching.

**Q69 Ian Mearns:** Would any of you know of any specific examples of people



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from outside of the EU who would have been attracted to institutions that you work with because they have an opportunity to work here in the UK in collaboration with other European institutions?

**Professor Roper:** I am an example. I am an Australian and I came to this country. I have worked in Germany quite a lot. The ability that I have to work in Europe is immensely important to me and has been hugely important intellectually. I am very grateful to have had that opportunity made possible in part through organisations like the DAAD and also through British organisations.

I was attracted to come to the UK in part because of the culture of intellectual openness and what was talked about in the first session about the flatness of the UK, the possibility of being independent intellectually and of having access to this very diverse intellectual culture early on.

Q70 **Chair:** You asked for an example and you got one. One last point.

**Professor Wintermantel:** I just want to say in Germany we try to get more intercultural and non-German teachers and professors. We try because we know this is true that in the British universities, this openness, this diversity, this creativity, this kind of dialogue between the researchers is very important for the quality.

**Chair:** I want to thank you all very much for coming before us today. It has been interesting. This is an ongoing inquiry so we will not be reporting any time soon but we will be obviously conducting more sessions and our interest in this subject is obviously as intense as yours. Thank you all very much indeed.