



HOUSE OF LORDS

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The Select Committee on Science and Technology

Inquiry on

**THE RELATIONSHIP BETWEEN EU MEMBERSHIP AND THE EFFECTIVENESS OF
SCIENCE, RESEARCH AND INNOVATION IN THE UK**

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Witness: Professor Robin Grimes

USE OF THE TRANSCRIPT

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Members present

Earl of Selborne (Chairman)
 Lord Hennessy of Nympsfield
 Lord Hunt of Chesterton
 Lord Kakkar
 Lord Maxton
 Baroness Neville-Jones
 Lord Peston

Examination of Witness

Professor Robin Grimes, Chief Scientific Adviser, Foreign and Commonwealth Office

Q117 The Chairman: Welcome back, Professor Grimes. It is splendid to have you back in our midst, particularly to help us in our inquiry on matters concerning the European Union and science in this country. We are particularly glad that you are able to help us today. We are being broadcast in the normal way, so to start proceedings please introduce yourself for the record, and if you would like to make any opening statement, please do so.

Professor Robin Grimes: I am very grateful to have the opportunity to give evidence to the Committee as the FCO Chief Scientific Adviser, following permission from appropriate Ministers in the FCO. My remarks are also going to be informed by my experience of working with EU and non-EU partner countries through my role as a professor at Imperial College. As the FCO Chief Scientific Adviser, I work very closely with the UK Science and Innovation Network, which I know you are familiar with. It has about 90 officers in a variety of different countries, but 15 of those officers are based in eight EU countries, and they are co-ordinated by a lead based in Berlin. That network promotes policy exchange as well as partnerships in science and innovation with traditional scientific powers, but also in key emerging economies, which is very important.

I have been in the FCO for three years. My other day job, as it were, is as Professor of Materials Physics in the materials department of the Faculty of Engineering at Imperial College. I run a research group using advanced computing techniques to predict materials' performance. As an academic, I have published work with colleagues in France, Germany, Spain and Sweden as well as with other people from countries outside the EU.

The Chairman: Thank you very much, Professor Grimes. That is a very helpful start. I would like to start our questions by touching on what one might describe as science diplomacy, particularly whether as a country we are making the most of the international scientific diplomatic opportunities afforded by our membership of the EU, and in particular the opportunities we have from the European Union's involvement in the UN agencies. Perhaps I should declare an interest, because at one time I served on one of the UNESCO committees, the Commission on Ethics of Science and Technology. But it is really wider than that. We are now members of UNESCO, the World Health Organization, the Food and Agriculture Organization, the World Meteorological Organization and such like. Would you say that we

are making the best use of our membership of these organisations, and how does our membership of the EU impact on this?

Professor Robin Grimes: We have excellent scientific connections with all the countries in the EU. I have already mentioned the Science and Innovation Network as being at the fore in promoting these. Of course, there is also our involvement in the research councils and other agencies, and you have mentioned some. While it is always possible to do more, and clearly we are always looking for new opportunities, I think we are taking opportunities and using robust evidence to underpin our science diplomacy efforts.

You asked about science diplomacy specifically, and it is useful to try to define what we mean by science diplomacy, because it is a bit of moveable feast at the moment, as I will explain. A didactic definition would be science in diplomacy, which is evidence-based policy-making where the science informs policy objectives. Then there is diplomacy for science, which is making sure that we in the FCO in particular are taking action to support scientists so that they can achieve their goals. Finally, there is science for diplomacy, which is the idea that scientists get on with their collaborations across borders. That can give confidence to negotiations and relationships between countries. It is a sort of beachhead, particularly in more politically difficult circumstances. That is one way of looking at it.

I want to get on to an idea of a less prescriptive definition, because we are in the process, with our colleagues in the EU countries, of getting a much richer definition of what science diplomacy means. This is going to emerge, particularly in the way science diplomacy and, for example, international development diplomacy start to overlap. That relationship with our colleagues in other EU countries is very important in allowing us to do that.

The Chairman: Thank you for that. I suppose the matter of the greatest interest to the Committee is the extent to which our membership of the European Union helps in our interactions in these areas of science diplomacy. Clearly, whether we are in or out, we are going to be members of the WHO and of UNESCO, one imagines, but in your perception is there anything added by our membership of the European Union? Are we more effective as a contributor? How do we compare with other member states in impact?

Professor Robin Grimes: From my perspective as FCO Chief Scientific Adviser, I think we capitalise very well on these activities. I do not know of any other state that I would say capitalises more than we do. There is no formal EU programme called EU Science Diplomacy at the moment, but there are areas where our science evidence will underpin diplomacy that we have carried out bilaterally and as part of the EU, and we are more powerful as a result. A good example of that would be climate diplomacy. Key to this is the fact that we work hard to ensure that the scope of framework programmes is in line with UK priorities; and because the UK has many world-recognised scientists, UK scientists occupy key positions in a range of EU research and advisory bodies. An example is Dame Julia Slingo from the Met Office, who is one of the seven members of the new EC Scientific Advice Mechanism's High-Level Group, which is a bit of a mouthful. Of course, we also lobby bilaterally, such as through our overseas network, which I just mentioned, and which helped recently to secure the headquarters of the Square Kilometre Array, so we have both these activities.

Q118 The Chairman: This Committee has wrestled recently with the issues of genetic modification and the failure, quite frankly, of the Commission to persuade the Council of Ministers, and certainly the European Parliament, to take the line that it would have

preferred. We saw evidence therefore that there was disinvestment in Europe, particularly in this country, where, not unnaturally, some of the companies involved in this area decided it would be preferable to make their investment elsewhere. It was clear from the Ministers that we were making common cause with some but by no means with all countries. A number of countries clearly adopted a policy that did not appear to be evidence-based. In these circumstances, how do we make common cause within the European Union with countries that might be more likely to follow an evidence-based policy?

Professor Robin Grimes: We are not obliged to follow a relationship with all the countries in the EU. We can follow bilateral agreements as we wish to, so there is nothing stopping us from separating out certain issues, such as the one you have mentioned, to discuss with specific bilateral countries.

Lord Hunt of Chesterton: I used to represent the UK at the WMO, and we always had observers at those meetings who came from the EU or European institutions. Clearly, the European Commission has observer status sometimes and the European Centre for Medium-Range Weather Forecasts would come and so on. My impression then and now is that that needs to be thought about. Do you have a view about that? In another Select Committee we heard about the European Commission wanting to have observer status in the Arctic Council, where it does not have it for certain reasons. Do you have a view on this triangular relationship between the UK, the EC and UN bodies?

Professor Robin Grimes: I think we gain tremendously from being able to negotiate as part of an EU bloc. We were specifically part of that bloc for the negotiations for COP21, for example, which gave us considerably more clout, and the negotiations were very successful. However, as I said, we can also have separate negotiations with countries and come to bilateral relationships, and we can act through the UN. I have no doubt that we will continue to make the most of those three areas together, and being part of those three areas gives us a synergy that we are able to exploit more readily. We are also able to gain information from being part of those three groups and to compare and contrast.

Lord Hunt of Chesterton: You have chosen the climate example, which seems to be an ideal area where everybody worked together on policy. But in dealing with, say, nuclear waste or GMOs, there seem to be some big strategic scientific diplomatic issues, which, as our Chairman pointed out, are not so satisfactory, or not so clear anyway.

Professor Robin Grimes: We always have to make sure that we adhere to the principle of robust scientific evidence. We must continuously collect that evidence and put that evidence forward. It always has to be predicated on the best-quality science. In the UK, we are very fortunate that we have many outstanding scientists, universities and research institutions that can collect that evidence on their own, as well as through bilateral relationships and mechanisms such as the framework programmes, to give us the body of evidence that we can continue to use to forward our claims and wishes with regard to all the issues that you have talked about.

As you are well aware, science is not something that you come to an immediate consensus on. It takes quite a long time. Sometimes the evidence that you get allows you to modify your position, and you are required to modify your position because that is what the evidence tells you to do. It is not a single thing; it is a continuous process.

Lord Hennessy of Nympsfield: Can I follow up with a thought on what you just said about robust scientific evidence predicated on the best-quality science? I am an arts and humanities person, and I have often been intrigued by the nature of science, without understanding it. One of the fundamental characteristics of the EU is the consensual approach that you have just described. I remember the line of the great Richard Feynman when he was part of the investigatory team into the Challenger disaster. Somebody was trying to influence the nature of the report, and he said, “Nature is not fooled”. In arts and humanities, you can play around and it is part of the nature of the game to do all this, but in science I have always thought that if you have a consensual organisation it could be nonsense on stilts because it does not fit the evidence, but it is still a consensus. Is it not a perpetual problem for you that you have people such as yourself in Europe and your fellow chief scientists here who are evidence-driven, which is the alpha and omega of your craft, and you have a political class that very often goes for policy-based evidence, and it can sing itself the most deceptive lullabies? How do you reconcile that, because above all as a scientist you have a duty to speak truth unto power?

Professor Robin Grimes: You do. The position Feynman was in was that they needed to come to a position with respect to the Challenger disaster and they had to do it quickly, so they had to formulate and present the evidence they were gathering within a short period. Often science evolves, and I am not sure that humanities and science are always quite as different as they are portrayed. Personally, I am not a believer—and I wear a very personal hat here—in the two societies type of approach of—

Lord Hennessy of Nympsfield: Two cultures.

Professor Robin Grimes: Thank you, the two cultures of CP Snow. I am afraid I do not adhere to that at all. I think there is tremendous commonality. With science, over a period, as evidence is collected, the position can change. You are right that we have a duty continuously to produce and argue that evidence, but we have to make people understand the nature of that scientific process, and I think the new body of scientific advice that I mentioned earlier on with the long name is one way in which we will do that. The EU is currently going through the process of understanding what that new committee will do and how it will work, and it is experimenting to a certain extent with how to get scientific evidence in. So I am very positive that this is going in the right direction.

Q119 Lord Peston: I have always taken it for granted that scientists engage in the pursuit of truth. They do not necessarily find it, but that is the business they are in, whether they are natural scientists or social scientists. Having advised Ministers myself, my experience is that that is not what Ministers are about, and the problem is that if you insist, especially as a junior adviser, on telling them the truth, you know exactly what will happen: they will not listen to you any more and you will not be invited to meetings or anything. Does that correspond at all to your experience? If you were to tell the Foreign Secretary this or that and he just did not want to know, what would happen?

Professor Robin Grimes: That is a different issue with respect to the European agenda that you are talking about.

Lord Peston: I know, but some of it arises in a European context, as you will see when we come to the question that I will put to you about the deal that was done. There is a European context for all this.

Professor Robin Grimes: I am a Chief Scientific Adviser, and as such it is my job to advise Ministers within the Foreign Office so that they have access to the best evidence and the best networks of scientists in order to inform their policy-making. It is not my business to tell them what the policy should be; it is just to make sure that they have that evidence. If they choose to use that evidence, that is good. If they are unable to choose to use that evidence in those circumstances, they are the Ministers and that is their decision, and as a Chief Scientific Adviser you must accept that.

Lord Maxton: As possibly the only member of the political classes in the Committee—

Baroness Neville-Jones: No, I, too, have been a Minister.

Lord Maxton: You have, that is right, but could I ask that very basic philosophical question: what is truth?

Professor Robin Grimes: What is truth? Gosh, there is a question I was not expecting to get this morning.

Lord Maxton: I am afraid Lord Peston raised it.

The Chairman: Shall we allow you a stay of execution on that? I think we will leave that one on the side, if you do not mind.

Lord Hennessy of Nympsfield: Tell us the meaning of life while you are at it.

Professor Robin Grimes: I think this is one of those questions where I have to say that I will get back to the Committee with an answer when I have worked it out.

The Chairman: All you need to do is refer us to some philosophical works.

Lord Kakkar: Could I pick up on this question of scientific advice in the development of policy? There will be policy development at a European level that eventually results in directives or regulation transposed into UK domestic law, and that will be informed by a European scientific mechanism. Do you think there has been a tension here and that if those same policy issues were being formulated at a UK level, the degree of scientific input in forming that policy would have been different and might have resulted in different legislation that might have been better informed?

Professor Robin Grimes: I do not have any evidence to hand to support that either way. At the moment there is a process evolving for scientific evidence, but of course that is on top of the ability of scientists to provide evidence, both written and oral, to the EU. We wait to see how it evolves over time. I am satisfied that we can get our evidence through a number of different mechanisms, and in collaboration with our colleagues in other countries in Europe, to where it needs to get to. So I am not overly concerned at the moment. It is different for the UK, but different does not necessarily mean worse. In fact, having different ways of doing these things is often beneficial.

Q120 Baroness Neville-Jones: Professor Grimes, you said earlier that nothing stopped you from having bilateral consultations with other member states, and evidently that is the case. I would have said that bilateral lobbying and consultation are normal parts of the way in which legislative proposals come about. It is a dialogue sometimes between Commission officials and member-state officials. How big a part does the role of talking to other member states play in the way in which the UK goes about trying to get the right outcome on a directive or a regulation?

Professor Robin Grimes: Specifically for the EU?

Baroness Neville-Jones: When it is important to try to get the right scientific input into a particular legislative proposition or proposal, how active is the UK? You have talked about the network. How actively do you mobilise that in order to get the right outcome?

Professor Robin Grimes: The Science and Innovation Network, for example, works very hard to ensure that UK scientists spend time in a number of different countries, including meeting Science Ministers and senior officials in other countries to try to get our ideas over to them on a bilateral basis—I have done a lot of that sort of work over the last three years—and to ensure that when Ministers, particularly Science Ministers, from other countries come to the UK they can get their points of view across. The Science and Innovation Network in particular is a very effective way of doing that.

Also, of course, organisations such as the research councils have been very good at ensuring that our scientists talk to scientists from other countries, and we have bilateral missions all the time. Of course, the scientists themselves in those countries influence their Ministers, so there is also a second-order effect in how we get that influence in. The movement of those people backwards and forwards has been very successful indeed. Of course they do that normally through conferences and so forth, but, as I said earlier, you want lots of different mechanisms that you can exploit, because the synergies between those mechanisms really work to our advantage.

Baroness Neville-Jones: Is there anything missing in the scenery that you would like to see?

Professor Robin Grimes: I do not think there is anything missing, but, again, I go back to the concept of the evolution of the process. Because science is evolving all the time and there are new challenges occurring all the time, I am sure that this time next year we will be concerned about another scientific issue that we are not even very aware of yet. Talking to those countries, and developing those foresight activities in particular, will give us a better forward look. People learn science in different ways in different countries. They approach problems in different ways. They have different problems. The fact that we can interact with them, particularly through framework programmes, means that we get better forward understanding of what might be coming up. That is one example of the synergies that I talked about.

Q121 Lord Hunt of Chesterton: From my experience of being at the Met Office, which is a government public body that does a lot of administration as well as science, that works very easily into the UN system and is much more powerful. For example, the World Meteorological Organization spends six times more on meteorology than it does on hydrology, which I think is a scandal. The reason why so little money is spent on hydrology is because back in the UK this is under the research councils, and the research councils, in my experience, are much less interested, if not uninterested, in the role of UN agencies as compared with government agencies such as the nuclear regulatory people. Our question here is: does the FCO scrutinise the budgets and priorities of UN agencies? In my experience, the answer is no or not very much.

Professor Robin Grimes: I would disagree. I think the FCO scrutinises closely all the international budgets for which it is responsible.

Lord Hunt of Chesterton: There has never been an a priori discussion about how much we should spend on meteorology or hydrology, for example.

Professor Robin Grimes: I do not know the specifics for meteorology and hydrology, but we discuss and co-ordinate with our EU partners on international organisations' budgets where appropriate, although I admit I do not know the details of what you are talking about.

The Chairman: Baroness Neville-Jones, perhaps you should ask the rest of the question.

Baroness Neville-Jones: Yes. Thank you, Lord Hunt. Can I return briefly to the question of the relationship between EU membership and activities with the UN agencies? In a sense, this is a mundane "How does it work?" question. Is there co-ordination between EU member states when you are looking at the work of the UN agencies or trying to persuade them to do something, and is that co-ordination effective?

Professor Robin Grimes: We have bilateral relationships, and those bilateral relationships also work through the EU in our national capacity. I would say that the EU is an important vehicle for delivering the UK's objectives through the UN. It co-ordinates closely on a whole range of issues. Again, I would come back in particular to the UN climate convention as an excellent example of where it has worked very well indeed.

Baroness Neville-Jones: Can you give examples of where it has failed to work?

Professor Robin Grimes: I was thinking earlier about where it has not worked well, and from personal experience I cannot think of an example where it has worked badly.

Baroness Neville-Jones: Really?

Professor Robin Grimes: It could always do better.

Baroness Neville-Jones: If the UK had an objective that not many other member states shared, how much would we be able to persuade others nevertheless that what we wanted was a good idea for them all to agree to help us with?

Professor Robin Grimes: In that particular case, I am inevitably going to come back to the issue of the evidence base, because I would find it very hard to believe that we would have the evidence so badly different from all the other member states. That is because essentially our scientists are working through the framework programmes to such an extent now with their partners in Europe on developing that evidence base that we should have access to the same quality robust evidence base as they have, so I find it very difficult to believe.

Baroness Neville-Jones: It sounds rather as if what you are saying is that because of the degree of interaction between member states and institutions, in fact the priorities are already so shared that when it comes UN agencies there is no great difficulty in agreeing on where you should try to push.

Professor Robin Grimes: I am talking about our relationship with EU member states.

Baroness Neville-Jones: Yes, and I am talking about that, too.

Professor Robin Grimes: Outside the EU we may have other disagreements, and of course political issues can come to bear as well, but the point is that science should impact on this through that evidence and its quality. By the way, by working together there are better science-measured outcomes as well, so there are good reasons for working together, which people are exploiting more and coming to understand more, and this will become more so as time goes on.

Q122 Lord Hennessy of Nympsfield: Could I ask you about the Whitehall co-ordination of scientific advice and activity at the international level? Are you and the Foreign and Commonwealth Office in the lead, or is it Sir Mark Walport at BIS as Government Chief Scientific Adviser? How does it work?

Professor Robin Grimes: I work very closely with Sir Mark on a whole range of different issues. The Chief Scientific Advisers have a network that meets every Wednesday morning at a quarter to eight for breakfast, where we talk to each other over a cup of coffee and discuss the issues at hand. So it is not only me working with Sir Mark; it is will all the other CSAs as well. That is a relatively informal process in which we can talk to each other. We also have monthly meetings, which are more formal but again are between all the Chief Scientific Advisers. We also have cross-government scientific interests internationally; there is the Global Science and Innovation Forum—GSIF—which Sir Mark chairs and which I and numbers of others will go to. That is a longer-burn type of priority-setting organisation, and Mark and I work together very strongly on that.

There are also rather acute challenges, and we have the Scientific Advisory Group for Emergencies, which is concerned with crisis processes. In that case, the Foreign Office will work with SAGE through its Crisis Management Department, so we get immediate evidence on which to base our response. Of course, the Science and Innovation Network works on an intermediate scale. There are lots of mechanisms that work for us.

Lord Hennessy of Nympsfield: Chairman, could we ask for an organogram of how all that works? You described it very clearly, but it would be nice to see a spatial expression of that. Can you do that?

Professor Robin Grimes: Absolutely. There are a number of different organisations, the Natural Hazards Partnership and so on, so that would be quite useful.

Lord Hunt of Chesterton: There is an organisation that as I understand it still exists, not in your department but in another part of the Foreign Office, which used to be called the UN department and is now called the non-governmental organisations department or something. To some extent, it co-ordinates the UK governmental and non-governmental bodies that go to the UN agencies, and it is separate from the chief scientists' network—or has that now all merged?

Professor Robin Grimes: That comes back to the diplomacy-for-science arguments that I talked about at the beginning, which is the way people in the Foreign Office are working to ensure that scientists have the sorts of agreements and relationships that they need in order to progress their work. Again, we would work through people in the Foreign Office, through Sir Mark at the Government Office for Science, to ensure that the thing is joined up and that we are developing those relationships. Some of these relationships also relate to other departments such as the Department of Energy and Climate Change, which has just done an agreement with India on nuclear security. That is another example of where the Foreign Office worked with Sir Mark's office and with DECC to make sure the thing was linked up.

Lord Maxton: I notice from your own biography that you are into computer sciences as well as science itself. To what extent are the new media and the new technologies part of this interchange between different departments and scientific advisers et cetera, and other countries?

Professor Robin Grimes: How does the new technology impact on the relationship between the different departments specifically? Gosh, that is a multilevel sort of question. First, there are the issues of making sure that we have access to and the forward looks on the right sorts of technologies and that we have access to computer facilities, for example, across the world. We also have to ensure that we have the right kinds of people working in the right departments to be able to exploit the big data issues. That is a very multifaceted issue indeed.

Lord Hennessy of Nympsfield: Do you think that the way Whitehall organises its science through the network of Chief Scientific Advisers that you have described gives us a great advantage internationally? Is it your impression that other countries are not quite as well organised in the way that we are? It is a very well-settled way of proceeding, and the impression I get is that it yields dividends because of the nature of the organisation and the closeness of you all.

Professor Robin Grimes: Although it seems settled, the process is still developing, and so it should do, because as those challenges change, the type of approach has to evolve to be able to meet them. Of course, it reflects the underlying structures of the UK and the way we have developed our industry research activities, our national laboratory activities, our university activities, and how that relates to government. That has influenced the development of the Chief Scientific Advisers' network. Other countries, Germany and France for example, have different structures for carrying out science and a different emphasis on where their research is carried out, and as a consequence it is not necessarily true that a mechanism like the Chief Scientific Advisers' network would be appropriate for those countries.

One thing we spend time on is ensuring that other countries understand our structure so that we understand how we can plug into the science advice processes in other EU countries. Again, the Science and Innovation Network is absolutely at the fore in trying to make sure that we are appropriately joined up. It is true that a number of countries are interested in our mechanisms for science advice, and we are very happy to explain how we do that in case it would be appropriate for those countries to take on structures that are similar to ours, but we should not assume they are going to be identical; they may take certain aspects.

Q123 Lord Peston: Professor Grimes, the background to my question is Mr Cameron's deal with the EU. I might add that whereas all other commentators seem to understand the deal perfectly, I do not understand large parts of it. But that is neither here nor there. As I understand it, a main part of the deal is that our country totally rejects the original Monnet idea of ever closer union and does not want to be a part of it. I think I am right that as part of the deal we have said we are opting out of that. Given that, assuming for a moment that we stay in, how will that affect science diplomacy? Will us not being part of the ever closer union advantage or disadvantage the other member states? Will it advantage or disadvantage us? Can you throw any light on that at all?

Professor Robin Grimes: It is very difficult, and I do not think I should speculate on processes that have not occurred yet, but I do not see necessarily why that should have a large impact on our improving and ever-evolving science relationships in Europe.

Lord Peston: You mean that even if we have opted out of ever closer union, which we have clearly said we will, that will not affect the ability to do all the different versions of science diplomacy with what would still be our partners? How could we get involved if we were part of it but not part of the most important bit: ever closer union?

Professor Robin Grimes: In a way, this goes back to the science issues being separate from the political issues in a way. I think that our scientific relationship with EU countries is strong and will only get stronger.

Lord Peston: So speaking as a scientist, and an important scientific adviser yourself, you feel that you, your staff and the equivalent in other departments would still be able to play a major role in science diplomacy, in collaboration both within Europe and the rest of the world. That would not worry you. I can see there is a political aspect that you do not want to get involved in, quite rightly, but what matters to us is the future of science in Europe, and we would not like to feel that we were a party to or were in agreement with things that might damage science in Europe. That is the bit we would like you to throw some light on.

Professor Robin Grimes: I feel certain that the UK's focus on excellent science within Europe is going to ensure that we will continue to be a country that all other member states will wish to collaborate with most strongly.

Lord Peston: That is the sort of answer I wanted. Thank you.

Lord Hennessy of Nympsfield: I am interested by your distinction between science issues and political issues—that they are separate, as I think you put it. Is my impression justified that when it comes to science diplomacy within the EU, it is qualitatively different from a lot of British political diplomacy within Europe? We have been the permanent awkward squad in Europe for the bulk of the 43 years since we acceded to the EU, and, to adapt PG Wodehouse, it is always easy to distinguish in Brussels between a ray of sunshine and a British Prime Minister bearing a grievance. There is this kind of permanent drizzle of complaint. I get the impression that your world is rather exempt from that and that the atmosphere is different. Am I right?

Professor Robin Grimes: Scientists get on with the science, and I believe very strongly that it tends to be a very bottom-up type of activity. People work together on scientific issues, become friends and colleagues, and develop relationships that last their entire lifetime, and they see those relationships and concentrate on them. We are now back to the definitions of science diplomacy, and that is one of the aspects of it. I should say that these relationships go on for generations; PhD students work with the PhD students of those people, and so forth.

Lord Hennessy of Nympsfield: So it is a great success story within our rather patchy membership of the European Union.

Professor Robin Grimes: I would say that it is a great success story, and leave it at that.

Q124 Lord Kakkar: May I turn to the question of the impact of our nation's membership of the European Union on bilateral relationships with non-EU countries, particularly those that are seen as important powerhouses in science, such as the United States and China?

Professor Robin Grimes: Of course, those nations have made it clear that they believe that our membership of the Union is important, particularly from a scientific point of view. I think that is an important point, and the Prime Minister made that point quite firmly. To give an

example of how we sometimes use our EU membership to enhance a bilateral relationship—you mentioned China—we work with the EU in China to maximise our policy impact and our influence in China to make changes to the enabling framework, which allows better conditions for UK-China collaboration, including on intellectual property protection, for example, where we align our lobbying with the EU and use the EU-China dialogue to push forward on that sort of difficult issue. Again, we come back to the point that it really complements our bilateral activities in this regard.

Lord Kakkar: The corollary of that is: if the opportunities from UK membership of the European Union were to diminish or be lost, would that affect our bilateral relationships with large science countries such as the United States and China, or would there be opportunities for those to be maintained?

Professor Robin Grimes: A good example would be that China has committed 200 million renminbi¹ to match Horizon 2020 programmes, and we would like to partner China in some of those Horizon 2020 programmes. That is an example of where things would change. I probably should not speculate as to what might happen if something occurred.

Q125 Lord Hunt of Chesterton: This is a question about the UK as a gateway to Europe. We had interesting evidence from Professor Russwurm of Siemens, who commented, as you heard, that Siemens would continue to work well with the UK if the UK left the EU but would welcome participation. If the UK remained part of the EU, it would help his company, for example, and he said that as people were beginning to talk about Brexit, he felt in his brain—he tapped his head—that there were trends. Is the gateway to Europe a very strong part of our connections and benefits, and will that continue if we cease to be a member of the EU?

Professor Robin Grimes: It is certainly true that the UK can be viewed as a sort of landing point in the EU which non-EU countries can access. We have a lot of very long-standing historical collaborations with many countries around the world, and indeed new relationships as well. R&D into Europe through the UK generally is a very strong factor indeed. A lot of the standards and regulations issues, for example, are developed in the UK, so again that makes the UK a natural place for multinational collaborations into the single market.

Lord Hunt of Chesterton: There are some big institutional differences. Germany has very large government laboratories and systems and we have fewer of them. Institutionally, we are quite dissimilar in many ways in relation to the way they are still doing things on the continent. Do you see some sort of convergence? Do exterior companies coming into Europe want to have to choose between these different models of how science and application works?

Professor Robin Grimes: It is true that Germany tends to have a model whereby a lot of their research activity takes place in central laboratories, and that the UK, in engineering-like activities, has to a certain extent moved away from those sorts of models and much more of that work has tended to be done in universities, but by no means universally. In another

¹ During the period from 2016 to 2020, the European Commission expects to continue spending over 100 million Euros per year for the benefit of Europe-based entities in joint projects under H2020 with Chinese participants. China will match corresponding resources and expects to spend 200 million RMB per year for the benefit of Chinese based entities that will participate in joint projects with European ones under Horizon 2020.

area, such as biomedical, a lot of the activities in the UK are co-ordinated and take place in large laboratories. It is very topic specific, so it is very hard to say that the UK does it in this sort of way and Germany or France does it in another way. It depends on which topic you are talking about. Again, it is about our relationship with EU countries. How can I put this? You can cut the cake in a number of different ways to try to understand that way of working. Again, the fact that we can do that with those countries, particularly through framework programmes—where, by the way, we do extremely well, and I am sure you have had lots of evidence as to just how effective we are at gaining access to collaborative funds through Horizon 2020, for example, and we have maintained our share of that, compared with FP7—gives us confidence.

Lord Hunt of Chesterton: But globally we still have the problem that the investment in R&D in the UK is significantly less than we are seeing in France and Germany. Is that a problem? If we are a country that is not putting in at the same level as others, does that militate against our gateway role?

Professor Robin Grimes: You have me at a disadvantage; you are asking a scientist whether or not he feels there ought to be more funding for science.

Lord Maxton: The answer is always yes.

Professor Robin Grimes: There is certainly an answer that I can think of, yes. We have to be careful about using simple numbers with overall analysis to try to understand the landscape in the UK and how that fits in. We would always need to do more work to try to understand the subtleties of those individual relationships. We do very well at that, and the extent of our funding shows that we do very well on that. There are not just the framework programmes; there are numbers of other programmes that we benefit from, particularly with respect to industry collaboration, where our SMEs in particular are starting to do very well. We need to keep working at it, but that is always going to be the case.

Lord Hennessy of Nympsfield: I was interested in your phrase describing the UK as “a landing point” for science in Europe. Do you think it is fair to describe it as a concept where we have intellectual inward investment as well as industrial inward investment in the UK because of our membership of the EU? If you think there is something in that notion, can you outline the magnitude of it?

Professor Robin Grimes: I do not have those specific numbers with me, but I do think that is the case. The types of investments by companies such as Tata into Jaguar Land Rover, which is something I know a bit about, and how successful that has been for the UK, and now the kinds of collaborative relationships with Warwick University and the catapult in particular there, are great examples. Also, companies such as Rolls-Royce have access to a lot of research that is being carried out in Europe, and they bring that back to their manufacturing bases in the UK. There are lots of great success stories.

Lord Hennessy of Nympsfield: I was thinking as well of scientific labs in universities and a wider concept of intellectual inward investment than merely the industrial.

Professor Robin Grimes: Again, we are going back to those inter-generational collaborative relationships between ourselves and established research groups in Europe. I am really excited about some of the research activities in other emerging countries in Europe and how that is going to become important for us.

Lord Hennessy of Nympsfield: Can you give examples?

Professor Robin Grimes: I would say countries such as Romania, and to a lesser extent Bulgaria, which are emerging. I am not sure they would be very happy for me to say they are emerging, but they have particular strengths. Then there are more established countries with strengths, such as Hungary. Hungarian mathematics has been absolutely excellent for generations. Again, we are developing relationships in those strengths. I have just been to Poland, and I was most impressed with the quality of activities and the way UK scientists are increasingly going and collaborating. There is a really rich landscape.

Q126 Lord Maxton: The evidence—I had better not say overwhelming evidence—from the science community, including, I have to say, from you, is that we benefit from being part of the European community, but you only have to look behind you today to see that that is not part of the debate that is going to take place on Europe, either within government or within the media. How does the science community start to get that message across both within government and elsewhere?

Professor Robin Grimes: The learned societies in particular have a very important role here, and they need to continue to get these messages out. I know that a number of them have given evidence to this Committee in this regard. That is very important as they are very influential. University Vice-Chancellors, who are becoming more vocal about that, also have an important role to play. A lot of that is already in hand. I think you will see more in the media from those people, and they should be encouraged to do so.

Lord Maxton: You are a chief scientific officer. Presumably you discuss these things with the other chief scientific officers and the head himself. Are you getting that message across within the departments that you represent?

Professor Robin Grimes: I believe that offering that advice and ensuring that people are aware of that is in hand, and that it takes place. Again, it is a question of ensuring that people have access to our evidence base. Some of the evidence base you have collected here should form part of that.

Lord Maxton: Do you think it will?

Professor Robin Grimes: Yes, I do.

Lord Maxton: Are you hoping that it will and that it will be part of the wider debate that is going to take place within government itself?

Professor Robin Grimes: It is relatively early days yet, and it is hard to speculate, but I would certainly hope so. I believe that people are starting to take action to ensure that is the case.

Lord Kakkar: What reaction has the Foreign Office received or understood from science diplomats in Brussels, member states and non-EU states with regard to the fact that we are going to have this referendum?

Professor Robin Grimes: I think there is a strong desire for interactions with the UK on science and innovation, and I do not think we have seen any change in that as a result of this announcement, but it is early days. Certainly my general sense is that the science community wants us to remain in the EU, but we have seen that more broadly from the reactions from other non-EU countries. It seems to me that there is an analogy here with what the Prime Minister said yesterday. I have the wording here, but it is something to the effect that he cannot think of any of our friends—I think it was Australia, New Zealand, Canada and

America he quoted specifically—who would want us to leave the EU. It seems that is the case for our scientific colleagues specifically.

Q127 Lord Hunt of Chesterton: Could the UK science community develop healthy relationships with the EU, and presumably continue our existing ones, if the UK became an associated country like Norway or Switzerland? What prospects would there be for some kind of renegotiation on the scientific side? Have you thought about that?

Professor Robin Grimes: I genuinely do not think it is appropriate for me to speculate on the referendum. However, I note that there are some non-EU countries that are part of the European research area and they sit on the European research area committee, but they do not get a seat at the table when the Council of Ministers or the Parliament are setting the rules or deciding on budgets and planning programmes.

The Chairman: Professor Grimes, I think we have exhausted all the questions that we had for you, unless any of my colleagues want to come back on anything. We are most grateful to you. You have been very helpful and we have covered a lot of ground. It will certainly help to inform our report when we come to draft it. Please do not bother to tell us what “truth” means.

Professor Robin Grimes: I was hoping you could help me with that one.

The Chairman: Thank you.