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HOUSE OF COMMONS
ORAL EVIDENCE
TAKEN BEFORE THE
BUSINESS, INNOVATION AND SKILLS COMMITTEE

OPEN ACCESS

TUESDAY 16 APRIL 2013

DR AUDREY MCCULLOCH, PROFESSOR CHRIS WICKHAM, DR CAMERON
NEYLON AND DR ALICIA WISE

PROFESSOR STEVAN HARNAD, DAVID SWEENEY, PROFESSOR DOUGLAS KELL
AND DR ALMA SWAN

DR MARTIN PAUL EVE, PROFESSOR ANDREW MASSEY, PROFESSOR IAN
WALMSLEY AND PROFESSOR SIR IAN DIAMOND

Evidence heard in Public

Questions 1 - 110

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Oral Evidence

Taken before the Business, Innovation and Skills Committee

on Tuesday 16 April 2013

Members present:

Mr Adrian Bailey (Chair)
 Mr Brian Binley
 Paul Blomfield
 Mike Crockart
 Rebecca Harris
 Ann McKechin
 Mr Robin Walker
 Nadhim Zahawi

Examination of Witnesses

Witnesses: **Dr Audrey McCulloch**, Chief Executive, Association of Learned and Professional Society Publishers, **Professor Chris Wickham**, Vice-President and Publications Secretary, the British Academy, **Dr Cameron Neylon**, Advocacy Director, Public Library of Science, and **Dr Alicia Wise**, Director of Universal Access, Reed Elsevier, gave evidence.

Q1 Chair: May I open the meeting and welcome you? Thank you for agreeing to answer our questions today. For voice transcription purposes, I will just start by inviting you to introduce yourselves. Could we start with you, Audrey?

Dr McCulloch: I am Audrey McCulloch, Chief Executive at ALPSP.

Professor Wickham: I am Chris Wickham, a Vice-President of the British Academy, for which I am speaking.

Dr Neylon: I am Cameron Neylon, Advocacy Director at PLOS.

Dr Wise: I am Alicia Wise, Director of Universal Access at Elsevier.

Q2 Chair: Thanks very much. Some of the questions we ask you will be person-specific, although that is not to say that anybody else who has a view cannot comment as well. The reverse is true: some of them will be addressed to everybody, but if you feel that others have said everything that you would like to say, please do not feel obligated to repeat it. Time is short and we have a lot of issues that we want to explore.

I will open, and this question, theoretically at least, is to all. Written evidence submitted by the Public Library of Science to this inquiry has said that the average price of article-processing charges across journals was “below the allowances made by RCUK” and “significantly lower than the range suggested by the Finch report”. In contrast, the Association of Learned and Professional Society Publishers said that “in order to just break even, some journals” would need to “at least double their current APCs”. Those appear to be contradictory. What are the key considerations for achieving APC pricing that you think is both competitive and sustainable. Who would like to lead on it?

Dr McCulloch: The reasoning behind what I said in the ALPSP response was based on learned societies looking at individual journal business models and the profit and loss accounts specific to those. A lot of learned societies do not benefit from the economies of scale of the larger publishers. Therefore, to sustain the income that learned societies expect of

the publishing arm, it looks like they would have to increase the APCs that are currently the average at the moment, and potentially double them. They do not want to do that; they are looking at other ways to provide additional income that mean they do not have to do that. There will be a competitive market for APCs, and they recognise that.

Dr Wise: The Finch report estimated that the average cost of APCs would be between £1,500 and £2,000, and according to our analysis that does seem about right. The difference in the evidence may reflect the fact that since 1 April, when the new UK policies were implemented, there has been a differential pattern of open-access publishing. There are many more hybrid open-access journals, in particular, in the landscape now. The Finch group was looking forward to that new landscape.

To answer the specific question, every journal handles a different type of paper; they have different communities, different editorial practices, and they will have different submission levels and rejection rates. That spectrum of variation all feeds into the different article-publishing charges that would be set for a particular title.

Mr Binley: On a point of order, Mr Chairman, may I ask the panel not to use acronyms if it is possible? It is the cult of the high priest, and I have never wished to be one, so I would be grateful if you would not use them more than you need to.

Chair: I have to say there is a glossary there.

Mr Binley: There might be, but I would still rather not use them.

Chair: Some of them in this particular field are incredibly obtuse.

Dr Neylon: In our evidence, we relied on existing data for open-access publishers, and we also stated a view that we believe the current pricing in the subscription market is the result of a systemic market failure. That means that the current pricing, which is based on the systems and mechanisms that have been in place in traditional publishers, reflects a significant range of inefficiencies. Those inefficiencies can be seen when you look at those publishers that have been born open access and have adopted the efficiencies available from operating partly online and not in print, to be fair, but have also considered business models and systems that operate most effectively.

There is a very wide diversity of open-access publishers, offering a very wide range of services to a very wide range of communities. They range from journals that operate on what you might call a shoestring model, where basically all the time and effort is donated from a small community—the *Journal of Machine Learning Research* is an example of that—through to journals like *PLOS ONE*, which is an extremely large journal—the largest journal in the world in fact—that focuses on science and has a particular selection mechanism that ensures both quality and efficiency.

In the long term, if you look at the pricing for existing open-access publishers and you compare that with the hybrid offerings as traditional publishers are trying to shift into this new mode of action, that means we simply offer prices that are about half what many others are offering. There are series of different pieces of evidence to point to that. There is the Laakso and Björk paper we quote in our work. There is a comparison from a little earlier of society journals run by societies versus society journals run by commercial publishers, where the society journals actually operate much more efficiently. Then there is the work of Jevin West and another of the Eigenfactor group, which has looked at the interaction between price and the prestige of journals on its eigenfactor.org website. I would recommend those as sources of data.

Professor Wickham: I would just like to add from the standpoint of humanities and social science, which is the sector that the British Academy represents, that the prices for article-processing charges tend to be substantially higher for two reasons. One is because turndown rates for article submissions are very high. The figure of 90% is common for major journals, and so, put simply, there is a lot more throughput that has to be administrated, and

you have to pay the administrators. There are some journals with particularly high turndown rates where, if you went over to a pure gold model with article-processing charges covering everything, it would go up to about £5,000 per article accepted, if you were going to sustain a model of this kind. Actually, in humanities and social science, gold is going to have very little importance, but I expect we will be coming back to that later.

Q3 Chair: You have touched upon my next question, which can be summarised by the various commentators who have said there is “no law of nature keeping prices of article-processing charges low”—I think that is reinforced by the comments of the panellists—and that we might see mandated open access becoming expensive for higher education institutions and lucrative for many publishers, as we have seen with subscription pricing. Do you think this is actually likely to happen, or do you think that the variation in article-processing charges will reflect the genuine way in which a publisher operates in a particular area?

Professor Wickham: I think they are going to vary between different disciplines and above all between the STEM area—natural science, engineering and medicine—and humanities and social science. Most humanities and social science journals are actually run pretty much on a shoestring. They are run by learned societies, they tend to be non-profit making, and I do not think the market of APCs is going to have all that much effect on them at all.

Dr Neylon: Again, I would refer to our evidence that one of our concerns, and a concern of many pure open-access publishers, is to ensure that we have an effective, functioning market in article-processing charges. If we do not have a market and we do not have some price sensitivity for authors, there is a concern that prices can run out of control. One example of that is again in our evidence, where the charges we made to the Wellcome Trust in 2012 were actually around about two thirds of the average of what the Wellcome Trust pays. Of course, the Wellcome Trust pays those bills, so it is very easy to spend more money when you are spending someone else’s money.

The other thing I would refer to is, again, if you look at the spread of prices of existing open-access journals, there are a very large number that charge no article-processing charge at all. They receive their money from either other business models or effectively in kind from their community. The majority of those journals are in fact in the humanities and social sciences.

Dr Wise: There is extremely vigorous competition between publishers to attract the best authors. That is true in the subscription publishing world; it is also true in the open-access publishing world. We would expect that vigorous competition to continue to help to shape the market. Certainly, I think there will be some volatility in pricing in the short term as part of the transition period. As I said earlier, many journals are now offering a hybrid open-access option, and so publishers for the first time will be thinking through what their open-access pricing will be in the wake of the Finch report and Government policy.

Q4 Chair: In what areas do you think article-processing charges may escalate for open access?

Dr Neylon: For me, I think the risk is less. Again, we have journals across the range of disciplines, and we have people doing very interesting things right across the range of disciplines. The distinction and the main area of risk is among very high prestige journals—those existing journals that have very high prestige. I worry that if authors are protected from making the choice of spending someone else’s money—that is £20,000 to get the gold star versus getting the same quality in a journal that is perhaps less prestigious, but otherwise offers the same quality of peer review—and if the author is not aware of or conscious of the difference in price, that is where we will have problems.

Professor Wickham: In my sector, which is humanities and social sciences—about half the academic sector—I do not think this risk exists.

Dr Wise: I wanted to pick up the theme of quality that has been introduced. I agree with Cameron that at the very high end of the quality spectrum, it is not yet clear that the existing prices for article-publishing charges will be sustainable. I believe colleagues from *Nature* have indicated that to have a sustainable article-publishing charge, they would need to look at much higher figures of around 10,000—I do not know whether those are pounds or dollars. There is a radical difference in the quality assurance provided in those highly selective top-tier journals from those in much lower price journals, where quality standards have been dropped. For example, they have removed the requirement for the authors to demonstrate the novelty of their contribution to the scientific record. One size does not fit all authors or all pieces of science, but I think it is wrong to portray all journals as being of equal quality standards as well.

Dr Neylon: The important distinction to make here is one between prestige, quality and price. If a journal is highly selective and is offering a truly excellent service that provides value for money, I see no problem with authors choosing rationally that this is something that is worth spending that much money on. What we need to do is to ensure that authors are choosing to invest that money in effective communication based on really good information about whether that quality is actually correlated with the price.

Q5 Chair: How would they do that?

Dr Neylon: They will have to understand in a lot more detail the ability of the work to be used and to be spread, how well it is being spread, who is seeing it, who is using it and how it is being cited at the article level. They may well choose—again differently—based on the specific needs of a particular piece of research. It may be much more appropriate to publish in a very high-cost journal, or it may be much more appropriate to get that information into a context that is appropriate for the users of that research. I am thinking particularly of research that is focused on approaches in primary care, where there is very little point in publishing in a very expensive journal versus making sure that work makes it into the hands of the nurses and the primary care practitioners who can actually use it.

Q6 Paul Blomfield: I just want to introduce another area into the discussion of price: the profits of commercial publishers in the field. Alicia, I understand that your company, according to your own business review, for 2011 reported an operating profit of £768 million on a turnover of just over £2.058 billion. That is an extraordinary operating profit level.

Dr Wise: Our parent company, Reed Elsevier, in the 2012 figures reported a 37% profit. It was a revenue stream of £2.06 billion and a profit level of £780 million. Those figures are correct, yes.

Q7 Paul Blomfield: Isn't there some space when we are talking about pricing to look at those sorts of levels of profit from commercial publishers? You are developing a narrative that inevitably APC pricing will just rise. We are actually talking about all sorts of factors, apart from maybe the commercial publishers looking at their business models.

Dr Wise: Our article-publishing charges for open-access publishing range from £330 to £3,300. Our average is in line with that range offered in the Finch report. Our profit reflects the fact that we are a very efficient business and we drive efficiency gains in all our operations. It is also important to keep in mind that having commercial publishers as part of the spectrum or mix in the scholarly publishing landscape is important to be able to secure investments in products and platform enhancements in the infrastructure to offer high-quality publishing services at scale.

Q8 Paul Blomfield: But it is profits that are almost exclusively drawn from universities that might otherwise use that money for investment in research or other academic activities.

Dr Wise: We have a very diversified revenue stream. We have commercial customers as well as academic, government, hospitals, schools, advertisers and so on. It is a very broad spectrum. We have journal publishing businesses, book publishing businesses, database businesses and conferences. There is a very broad spectrum and mix of products and services that make up that portfolio. We are a digital information solutions provider, not a traditional publisher any longer.

Paul Blomfield: Thank you. I will leave it there.

Q9 Ann McKechin: Dr Neylon, you mentioned the issue about transparency—about how people are not able to determine what sort of price they should pay for publication. A key action of the Finch report was that publishers and learned societies should provide clear information about the balance between the revenues provided in APCs and subscriptions. I would like to ask the panel what their respective organisations are doing to address that.

Dr Neylon: PLOS is a not-for-profit organisation registered in California. Under Californian law, we have to make our accounts publicly available, so those are available. The 2012 accounts should be available some time soon, although I am not sure exactly when. We are in the process of our audit. We also make available our progress updates on a regular basis that describe how much revenue we gain from article-processing charges and other sources. The very significant majority of our revenue comes from article-processing charges; we have no subscription revenue. We are committed to continuing to make that information available, and our pricing information is available online. We have not changed that pricing for three years.

Q10 Ann McKechin: Is that information sufficiently clear to ensure that we do not end up with double-dipping?

Dr Neylon: In our case, there is not really an opportunity for double-dipping because we do not have any subscriptions. The detailed information of how much revenue is coming to a publisher from subscriptions, from article-processing charges, from advertising and from re-print revenue is the kind of level of information that is really required to ensure that you do not get into a situation of double-dipping.

Professor Wickham: To start off with, the academy is a publisher on a smaller scale, but our only journal is actually free. It is free and open access from the outset. We are collecting data; we have a research project to collect data on learned societies in humanities and social science to find out exactly how the revenue streams work. We can make that data available to this Committee if you like.

Chair: Thanks. If you would, that would be helpful.

Q11 Ann McKechin: Dame Finch said that quite a significant amount would be paid to publishers for gold open access out of existing research funding. Do you believe the Government should do more to ensure price transparency with regard to publishing costs? It does appear that it has been left to higher education institutions to try to work this out. Do you think the Government have a role in trying to make sure there is transparency?

Professor Wickham: All transparency is good.

Q12 Ann McKechin: Do you think Government should have a specific role?

Professor Wickham: Yes.

Q13 Ann McKechin: Is that the view within—

Dr Neylon: The RCUK requirement to provide information and the RCUK commitment to making public the prices paid from funds for article-processing charges is excellent as well.

Q14 Ann McKechin: The Science Minister said that academic journals were increasingly unbundled, eliminating the risk of double-dipping. Dr Wise, do you agree with that?

Dr Wise: For subscription purchasing of access to content, libraries have a range of options for how they choose to subscribe. They can choose collections of content; they can also choose to subscribe title by title. There is a range of practices in existence in the market place. Double-dipping is charging twice for the same content, and certainly in our company we have a strict no double-dipping policy. We charge subscription fees for subscription content however that is purchased, whether in collection or title by title. We charge article-publishing charges for our open-access content.

Q15 Ann McKechin: Do you consider that you are going to be increasingly unbundling your content in the future?

Dr Wise: All our content is available now for libraries on a range of bases. They can choose to subscribe title by title or by collection—whatever suits them best. They make purchasing decisions on what represents the best deal for them.

Q16 Ann McKechin: The Finch report found that “further negotiations between universities and publishers (including learned societies) on the pricing of big deals should take into account the financial implications of the shift to publication in open-access ... journals”. How realistic is this finding given that the procurement policies of universities acting together may not be perhaps at the cutting edge?

Dr Wise: We already operate our no double-dipping policy. We have had hybrid open-access titles for a number of years.

Q17 Ann McKechin: Have any universities come to you and said, “Right, okay; the scenario is changing, and your 37% profit margin is no longer really acceptable to us; we actually want those charges reduced substantially”? Have any done that? Have there been any conversations about that?

Dr Wise: Of course we have had conversations. I find librarians are very professional and robust negotiators. They do a good job and are tough to have across the negotiating table. The way we operate our no-double dipping policy is that we modify our list prices two years in arrears to reflect the number of hybrid open-access articles that are published. For example, our 2013 prices reflect the 2011 uptake of our open-access publishing options.

Q18 Ann McKechin: Does that mean prices are going down in real terms or up?

Dr Wise: The variation in prices for titles fluctuates year on year, and it reflects a variety of things. It can reflect the proportion of open-access content, but also volume.

Q19 Ann McKechin: I asked you whether it is going down in real terms across the board. Are the prices likely to go down in real terms? That is what the Government want to achieve: a real terms reduction in price.

Dr Wise: As I was explaining, our list prices fluctuate year on year. We are reviewing our titles on an annual basis and we adjust them to reflect submissions, open access, etc.

Q20 Ann McKechin: You are not answering my question. Perhaps you could just answer the question.

Dr Wise: For our hybrid titles, we adjust our prices based on the uptake of open access options—

Q21 Ann McKechin: Dr Wise, you have been in this market and you are an expert in this market. Is it your opinion that the price in real terms for the cost of publication in general—realising there can be fluctuations, and I am sure you are more than able to take those into account—is likely to go down the way in the next five years, to stay the same, or go up?

Dr Wise: As open access increases, subscription prices will come down.

Q22 Ann McKechin: Right. So you believe that the price in total that universities are paying is likely to come down.

Dr Wise: No, the total cost of the system does not change depending on whether you have the point of payment on the author's side or the reader's side. The total costs of the system are the same but, as you see in the majority of content published through open-access fees, you would see a counter-balancing decrease in subscription prices.

Q23 Ann McKechin: I think the idea of having more transparency is that we actually get it more competitive so the price comes down. Do you not understand that perhaps might be the Government's priority?

Dr Wise: It is an extremely competitive market in both subscriptions and for open access.

Q24 Ann McKechin: Can I just ask what share your company has of the commercial market in the UK?

Dr Wise: For Elsevier in the UK, I do not know. Globally, I think we are around 20% of the publishing market.

Q25 Ann McKechin: That is quite a big share, isn't it, in terms of trying to achieve competition?

Dr Wise: I believe the Competition Commission reviewed the scholarly publishing space about 10 years ago and concluded that there was vibrant competition and it was a functioning market.

Q26 Ann McKechin: Does anyone else on the panel have a view on this?

Dr Neylon: Just to repeat what is in our testimony, the PLOS article-processing charges, which make up the vast majority of our revenue, have been kept fixed in cash terms for the past three years. We do not have any particular intention either to raise or drop them in cash terms at the moment. That is obviously a drop in real terms. My personal view is that in the longer term prices will come down. Dr Swan in the next session has done work on looking at what are the likely costs to universities and UK institutions in a pure open-access market. In that environment there are savings to be made. The question is the process of restraining transitional costs as we move towards that market. That is a challenge and there are risks.

Q27 Chair: Just before we move on, can I just pick up the comments made by Dr Wise? I think I have them correct. Basically, if article-processing charges increase,

subscription prices would be likely to fall. My first question is: what mechanism is there to ensure that that happens? Secondly, given, as I understand it, article-processing charges are likely to be taxpayer funded, that on the face of it would increase the burden to the taxpayer. If the current method of publication—the subscription charges—was also primarily funded by the taxpayer and fell, in theory, at least, they would balance out. In practice, what do you think is best value for the taxpayer given the profile of your article-publishing charges and your subscription charges?

Dr Wise: The UK taxpayer funds a subscription-publishing regime at about a cost of £150 million per year. I believe that a complete shift to gold open access based on the Finch report estimates would increase the cost in the UK to £220 million per year. This is to reflect the fact that the UK is very research-intensive, and research-intensive countries and institutions bear more of the costs of publishing in an open-access system, where researchers or research authors pay the publishing system costs. The decrease in subscriptions that would come with a change in the proportion of publishing would benefit customers throughout the world. A subscription system is based on small payments from a much broader base of institutions, including the corporate sector. That is a definite shift from the taxpayers' perspective.

Dr Neylon: Just for the record, the Committee should ask Dr Swan the same question, because Dr Swan and Professor Houghton have done a very sophisticated economic analysis of this process. They came to the conclusion that, in a pure open-access world, the UK would save money. The reasons for that are detailed, but they are worth going into.

Q28 Chair: I did not catch all of that. Could you just repeat it?

Dr Neylon: It was just to suggest that Dr Swan in the next panel worked with Professor John Houghton on a very sophisticated analysis of both what the transitional costs would be and what the costs are in a complete open-access world. The problem with the estimates in the Finch report and the £220 million figure are twofold. One is that they over-count the number of research articles, because they include collaborative articles that include authors from other countries. The second is, of course, the question of what the actual average price is.

Chair: I think we have contradictory evidence submitted, and we will be probing them on that, but I am interested in your view.

Professor Wickham: I just wanted to say that if you have an international journal where only a small percentage of the articles are British—even if all the British ones are gold open access—if other countries have not adopted gold open access, the price of the journal is not going to go down that much. That is fairly clear. We would be paying quite a lot but other countries would not, and so the price of the journal would not actually decrease.

Chair: I want to bring in Brian Binley now, who just wants to make a declaration of interest before he asks his question.

Q29 Mr Binley: I am non-executive chairman and founder of a company that works specifically with Reed Elsevier and has done for a very long time, but in the data-building area of your customer base, rather than in this specific area. I think it is only proper, because this place is riddled with traps set for unwary Members of Parliament, that I want to make that clear. The same goes for other publishers who would be affected by this particular measure.

Can I ask a rather simplistic question first of all? The Government have said that the development of infrastructures for subject and institutional repositories will primarily be a matter for institutions themselves. Should publishers, many of which have already invested in repositories, have a role in working with universities to achieve that? Is there a specific need here, and does that need a bit of a kick up the backside? Is it working well?

Dr Wise: Repositories have a very clear role outlined in the Finch report. They saw this as a complement to the formal publishing system. It was seen as a place where data sets could reside, or theses, dissertations and unpublished resources of various kinds. The real exciting opportunity is to interlink the resources in repositories to the formal publications that they relate to and vice versa. We have a variety of collaborative initiatives between publishers, libraries and funding bodies to do this rich interlinking. It would be terrific to see some focused attention and effort on that here in the UK as well. It would be very exciting.

Dr McCulloch: I just want to make a comment as well. There was a large study undertaken in Europe. It was called the PEER Project, and it investigated the setup and management of institutional repositories, and the interaction of publishers with those repositories. It found that without publishers actively depositing in those repositories, authors had little interest in doing so. For example, publishers sent out nearly 12,000 invitations to authors to deposit articles as part of this project, and only 120 articles actually were deposited. The other 2,000-plus articles came from publishers to make the project work. It did find that there was an awful lot of investment required to standardise how articles were deposited in terms of format, and interaction with publisher systems and the institutions themselves. There is still quite a bit of work to be done there. It is work that can be done; it will just cost.

Q30 Mr Binley: Can I just press that a little further? It seems to me to be a bit of a central question in the whole issue if this is going to be of great benefit to the nation, the publishers and the authors. How do we move that forward in a practical way? Once cost comes into it, particularly in difficult times, businesses will look at their cost base and think, “Hang on. What’s really in this for us?” How do we move that along?

Dr Neylon: There are two quite different perspectives on repositories. As an open-access publisher and a publisher that is only an open-access publisher, our business is in ensuring that authors get their work spread as widely as possible so that the highest number of people can see it and it reaches the right people. The repositories are our partners in that. Just coming back briefly to the cost of it, they are also an important part of constraining transitional costs. In terms of the investment, institutions in the UK have already made very significant investment. There has been a large sector investment in that infrastructure, and of course we should be using it effectively, particularly to deal with the transitional issues we will face, with different disciplines wanting to move at different speeds and there being different funding mechanisms in place to support that research.

As an organisation, we are deeply involved in working with JISC. I am a member of the Open Access Implementation Group, representing PLOS. We talk a great deal about how to organise, standardise and mechanise the process of transmission of information backwards and forwards. It is a challenge. It does require resourcing, but a lot of the investment required in the underlying infrastructure is already there. It is really largely a matter of co-ordination. If we can do better at co-ordinating, we could solve a lot of these problems.

A lot of it also comes down to policy questions at institutions. The PEER Project showed that if you send an e-mail to an author and ask them if they would like to put a Word document in this repository they have never heard of, they tend not to do it. That is probably not surprising. However, at the University of Liège, for instance, where the process of having your work in the institutional repository is part of your performance assessment, the vice-chancellor looks at the repository to see what your outputs are, reads those outputs and judges how good they are at your annual appraisal. It is tightly coupled, and they have a very high percentage of their works in that repository. There is a mixture of policy and infrastructure, but co-ordination is the real thing that we need to get right.

Dr Wise: It does not make incredible sense in economically constrained times to duplicate effort in the way we have just been hearing. This is why evolving repositories to

complement the publishing system and the extant platforms for published articles that publishers provide makes sense. Give a home via repositories to data sets, unpublished materials, theses, dissertations. If you help those to be easily discoverable and keep the two interlinked through just a modest investment in some shared standards, you actually make more important resources available to advance science. When I was still an archaeologist, I worked in a data archive. Scholarship can be radically advanced if researchers have access both to the formal published literature and to the data sets that underpin those publications so that they can dive down and query the data sets, and move from the data back to the formal analysis and the synthesis of what they need.

Q31 Mr Binley: Can I pursue that a little bit more and pick up the point you made about authors being a bit wary? I assume that that is because we live in a global business—you live very much in a global business—and the standards differ sizably nation to nation. We know quite a lot about authors' work being lifted without the author getting any recompense for it, particularly from certain Eastern countries. Are authors right to be wary of what this is about? It seems to me that they are part of the secret of moving this whole thing along, and it seems to me that it is going to be difficult if it is seen not to be in their interest to move it along. How do we deal with that conundrum?

Dr Wise: The scholarly publishing system is very international and there are global standards from a technology perspective. You are touching on some important points around authors' choice: the fact that they will drive the pace of change and that they need to feel comfortable with the systems. Some are very passionate, and we in fact have some very passionate researchers who believe profoundly in self-archiving here in the room with us today, but for the majority of researchers, sometimes the resistance to depositing or self-archiving in repositories is that it is an additional administrative burden. They are hugely stretched already doing their research, writing grants, doing their teaching and serving on committees. The idea of spending extra time self-archiving content that they have already published formally may feel like one administrative hassle too far.

Dr Neylon: The concern about research being used or misappropriated is one that is raised repeatedly. It really does not have anything to do with open access in the sense that people can just as easily misappropriate subscription content as they could open-access content. On the concern about UK uptake and the UK being the first mover in this space, it is worth noting from the PLOS perspective that our two biggest customers in terms of articles published are the US and then China, followed by Germany and followed by the UK. Therefore, we are actually in a sense behind and taking advantage of Chinese researchers in some ways.

It is interesting to think about how this is moving, but I would concur that the primary burden to the uptake of repositories is administrative effort. As a person who until recently was a researcher, it is very much, "This is just another thing I have to do—another thing I have to fit into my 16-hour day," and it does not necessarily make it to the top of the list, unless the policies are there to encourage and make the incentives work for the researcher.

Professor Wickham: I was just going to add one thing, which is I agree that the authors' hostility is largely to the extra administrative burden. I think, though, that what happens to your works out there is something that worries authors all the way across the sector. The fact that between 75% and 80% of authors are very hostile to the most open of the CC-BY licences is a demonstration of that kind of concern. That is in humanities and social science.

Q32 Mr Binley: Can I get those figures again—75% to 80% of authors are wary of this whole thing on that basis?

Professor Wickham: Yes, there has been a study inside natural science and medicine—inside STEM—and there has been a study in humanities and social science. It is between 75% and 80% in both cases.

Mr Binley: That is a big figure.

Professor Wickham: A big figure.

Q33 Mr Binley: And a big problem.

I have one final question, Chairman, if you would allow me. The Higher Education Funding Council for England—notice I did not use the acronym—indicated in its recent call for advice on the open-access requirement for the post-2014 research excellence framework that it may mandate the deposit of research articles by the author in the appropriate institutional repository. Do you support this approach and should Research Councils UK's open-access policy include the same requirement?

Dr Wise: We very much support the conclusions of the Finch report and are looking forward to working with HEFCE and others to implement Government policy—

Mr Binley: That is the Higher Education Funding Council for England.

Dr Wise: I do beg your pardon. I am failing that test entirely.

The broader point though, just to re-emphasise the duplication of effort that that sort of policy would imply, is that our company handles 1 million articles that are submitted each year. These do not appear magically in our e-mail inboxes. We actively go out to conferences, listen to cutting-edge science, and recruit and attract papers. We support authors in depositing content through quite sophisticated systems. We have professionals—people with PhDs and medical degrees—who are talking with them in detail about the content that they want to publish and how best to communicate it. Publishing is fundamentally a people business—helping to co-ordinate and motivate people to communicate effectively. It is perhaps an over-technological vision of the future that you will offer these repository platforms and then they will magically come to be filled with quality content correctly described with metadata and so forth without quite significant professional effort. That is the sort of effort that publishers provide.

Dr Neylon: I would just say that we, as an open-access publisher, are entirely supportive of platforms where we can make material available that people will find in different ways. It is entirely appropriate for institutions to safeguard and ensure the accessibility of the content that they have created for the long term. We are broadly in support of the funding council's proposals.

We would like to see some emphasis also placed on disciplinary repositories, which do exist and are very widely used in some spaces, but from the perspective of the technological challenges, this is an automated process that happens as a side product of what we do anyway. It is part of the service we offer to authors. Again, I would note that where there are repository mandates of this kind, such as in the US and other places, we see an uptake of our service as a publisher because we include the process of making sure that the research makes it into those disciplinary repositories. We have more work to do on institutional repositories.

Q34 Mr Walker: We have seen a range of different views in the written evidence on embargo periods. I will take a quote from the Public Library of Science—I will not say PLOS, to keep Brian happy. Its written evidence said that “there is no credible evidence that availability of final versions of peer-reviewed manuscripts in repositories causes any damage to subscription business models and no evidence that embargoes of any length reduce any imagined damage”. Would the other panellists care to give any evidence in contradiction to that?

Dr McCulloch: Yes. I have two pieces of evidence. The PEER repository experiment that I referred to earlier appeared to show little evidence of harm. However, the caveat there was that publishers were allowed to set their own embargo periods as befitted their business models, which ranged from six months to up to 24 months. In that sense, it appears there may not be harm if publishers are allowed to set their own embargo periods.

ALPSP and the UK Publishers Association surveyed over 200 librarians internationally, and we asked them a very simple question: if the majority of content is available within six months of publication completely free, would you continue to subscribe? From our results, in the STEM arena, only 56% said they would definitely continue with their existing collections. In the arts, humanities and social sciences, 35% said that they would continue to subscribe to the existing collections. The others would definitely start to cancel some, depending on the journal itself, depending on their faculty's opinions of the journals and the costs of the journals—there were lots of different reasons given as to why they would start cancelling. Particularly in the arts and humanities, they felt that with six months there was little reason to wait, and they would get the articles more immediately through other mechanisms.

Professor Wickham: I would just add that I am certainly much more convinced by Audrey's characterisation of the librarians' responses than I am by any other piece of research that has been done. However, there were two problems. One is that six months for arts, humanities and social science is not the current proposal for an embargo period, although RCUK would like to do that in the dim and distant future. What is badly needed is proper research on how it is going to affect individual disciplines and how it is going to affect those with a 12, 24 or 36-month embargo period. In fact, the academy has just offered to HEFCE a proposal for a research project that actually includes this as part of its elements. I am hoping that will go forward.

Dr Wise: To explain the difference in the evidence submitted, the Public Library of Science does not operate titles under a subscription model, so perhaps pays less attention to the evidence in this space than the rest of us must do. The majority of publishers are both open-access and subscription publishers, and there is crystal-clear consensus in the subscription-publishing community that over-short embargoes can undermine the sustainability of journals.

With the Government's policy that we are all implementing, we will see an increase in the amount of hybrid open-access publishing done at scale. For the open-access components of that hybrid publishing, it is clear that the costs are sustainable through the article-publishing charges. For the subscription part of those titles, the costs continue to need to be covered through the subscription model. If the content is freely available too quickly, there will be no need for libraries to continue to pay those subscription costs. While we have not seen clear evidence of an undermining or cancellation of subscriptions at this point, there is evidence, such as that Audrey referred to, that librarians are watching this space very closely and are very mindful of it. We have also seen that where content is deposited at scale, there can be an erosion of transactional revenues—the pay-per-view business model. Those are very modest components of most of our revenue streams, but again it is a potential early-warning sign.

There was, for example, a study recently by Phil Davis, who has looked at the availability of content in repositories, and he has found that there is a diversion of usage from publishers' platforms to those repositories. The reason why is important to be mindful of that is that usage information is one of the key metrics that librarians review when they are making decisions about what content to subscribe to. I think we are all here because we want to make open access work. We are working to implement the Government's policy, but we are mindful that, for embargoes for green open access, it is best to start in a careful and

considered way. We can decrease embargoes over time if that is sustainable, but if we have too short embargoes and damage is done, and journals or publishers go out of business, it is impossible to increase them over time, so it is starting carefully and adjusting as we learn.

Professor Wickham: I totally agree with what Alicia has just said. There is a great danger that if embargo periods are reduced too fast, major journals will go to the wall and the learned societies, whose revenue is dependent on those major journals, will cease to be able to function. That has very negative effects for the academic ecosystem.

Dr Neylon: I wrote that statement, so I should probably defend it—I am very happy to do so. We have heard a lot of words about consensus that there is a problem and we have heard a lot of statements about fears. There is very little evidence. The PEER Project has been mentioned a couple of times and usage has been mentioned a couple of times. The PEER Project actually showed that, for the content that was in the repository, there was a small but significant increase in traffic to the publisher side. That is actually consistent with a number of studies outside the research space—making material freely available can actually increase traffic to a commercial value-added offering that is providing extra value that people want. That is one piece.

The ALPSP survey is an interesting one for a variety of reasons. If we focus on the results for the UK, what it said was that, in terms of the STEM subjects, only 3% of all UK institutions and none of the Russell Group would definitely cancel with six-month embargoes. Some 19% of arts, humanities and social sciences in the UK and 7% in the Russell Group would definitely cancel. The problem with the way the question was asked is this thing of, “Would you cancel some of your subscriptions?” If you go to a university librarian and ask them just a blank question—“Will you cancel some of your subscriptions this year?”—the answer is yes. I would actually argue that the ALPSP survey shows that the UK is much better placed to do this because the proportion of librarians saying there is definitely a real concern or issue here is smaller than for any other country or global region described in the survey.

The other thing to note is that there is another ALPSP survey from a couple of years before that said embargoes are among the least important issues for librarians in deciding on cancellations. The Phil Davis paper that Alicia mentioned is a really excellent new paper. It has some really interesting new data. I could spend 20 minutes explaining why I do not—

Chair: Please do not. I will invite you to submit further evidence.

Dr Neylon: Absolutely. I am very happy to do that.

The other piece of evidence it is really critical we bring to the table here is, of course, that there exist repositories in physics—particularly high-energy physics—and mathematics that have had essentially 99% negative embargoes. The research is available before the journal articles are published, and there is no evidence that the physics journal subscription system has collapsed in that time. My colleague might say that that is physics and it does not necessarily apply, but the same is true in social sciences, with the Social Sciences Research Network and the RePEc repositories. Therefore, we already have examples of a number of spaces where a wide variety of content has not made a difference.

At the end of the day, as a publisher, we will all make the argument that we add value—that what we do adds value to the work that the researcher has done, and that added value is worth paying for. It is slightly odd that people are therefore concerned there might be a copy of a Word document somewhere on the web. If a Word document without that added value were a major commercial concern, what that really means is that you are not convinced the price you are charging for the added value is actually something that people are keen to pay for.

Q35 Mr Walker: The view in the 2011 report *Heading for the Open Road* was that permitting embargoes of any length at all is unlikely to provide the long-term incentives for publishers to transition to open access. Do you think the debate about embargoes has a role in providing an incentive?

Dr Wise: In the way the Finch group has set out, green open access and embargoes are used in two very different ways in the group's consensus. Where publishers do not offer a gold open-access option, embargoes of six months or so were envisioned essentially as a stick to beat them with to encourage them. Where publishers have done our part and offered gold open-access options, the Finch group envisioned greater flexibility. Publishers set embargo periods of at least 12 months to recognise that we are making the changes we need to make to move towards an open-access system, but giving a sustainable business model to underpin the content that continues to be paid for through subscriptions in the transition period.

Chair: Can I bring in Paul Blomfield now on licensing?

Q36 Paul Blomfield: Finch was very clear that open-access policies should minimise restrictions on the rights of use and re-use, especially for non-commercial purposes. The Government has gone further and said that where APCs are paid, they would expect to see completely unrestricted access. It does not draw that distinction between commercial and non-commercial use. Do you think the Government is right not to draw that distinction?

Professor Wickham: You have in your submissions a lot of opinions about CC-BY, and I hope I can call it CC-BY because otherwise it is going to go on and on. The great majority say that the most open access licence under the CC-BY—the Creative Commons rules—is unpopular, dangerous and potentially allows the stealing of knowledge. It is actually quite interesting that that is true right across the range. It is not just humanities and social science; it is the science and medicine learned societies as well. I have already said that between 75% and 80% of authors will not choose the most unrestrictive licence.

You also have a small minority of people who often express in quite shrill terms that nobody understands what the rules are of CC-BY and that it offers protection against plagiarism and everything of that kind. I am certainly with the large majority here, partially because I am interested in what the ordinary academic is concerned with, but also because I am not convinced by the arguments that the minority have put.

It is interesting that the Creative Commons submission that you have seen has actually misrepresented the terms of its own licence. There is a technical detail here that I am very happy to provide at a later stage. Its licence offers much less protection than it claims, and it offers much less protection against what ordinary academics understand plagiarism to be than it claims. The core worry is about unauthorised use and unauthorised misuse of authors' works here. It is a worry that goes all the way across the sector and it is a worry that Finch was not concerned with. It barely dealt with this at all, but is a worry that I think the Government and RCUK have underestimated.

Q37 Paul Blomfield: I appreciate what you are saying and we will take note of it. Very specifically, would you draw any distinctions between commercial and non-commercial use?

Professor Wickham: I think that academics are very leery about the process of commercial re-use, but academics are more concerned about whether their words are maintained in future work. I am a historian; the commercial use that people are going to make of my works is relatively little. I am very worried, though, about the integrity of the sentences I write. The commercial use worries people, but it worries fewer people.

I am actually quite attracted by the CC+ licence that is currently being worked through. I think that is something that Alicia knows about. That will protect against various forms of commercial misuse, but also again will focus on words.

Dr Neylon: I will obviously disagree somewhat with the characterisation of the written evidence. I would agree that the majority raises concerns. The majority also has a number of statements in it that are incorrect.

Professor Wickham: We can argue about that.

Dr Neylon: We can argue about that, but there are a couple of classic ones. One is that the Creative Commons licences are intended for software. It would not take more than 10 minutes to check the Creative Commons history to realise that it was set up precisely because existing licences did not apply for software. Of course, the other thing is that there was a great deal of involvement of scholarly publishers in the early development of Creative Commons licences.

On the specific question of commercial versus non-commercial, the Government and the taxpayer invest in research for the creation of a public good. That public good includes an infrastructure or platform for both commercial and non-commercial innovation. If we are concerned about growth and development, both in the specific space of innovative developments in scholarly publishing itself and the re-use of content, and of research more generally, I think it is critically important that commercial use be allowed.

Q38 Paul Blomfield: I can see that argument entirely, but why do you think Finch drew that distinction?

Dr Neylon: Because Finch had to make a compromise between the commercial interests of publishers and the needs of the Government. There are two things that we need to separate quite carefully here. There is the motivation of publishers to argue for non-commercial restrictions. The argument for the incumbent publishers to do that is to protect the current set of exclusive commercial rights that they currently hold. Then there is the concern that has been raised by authors and researchers about the use of their work, which I think is a more principled if, I believe, misguided view of how research should be used.

We need to separate out those two distinctions carefully because the risk is that we conflate these two discussions together. We conflate the concerns about researchers' use of their work and what can be done to ensure good academic practice. There are very real limitations to what licensing and copyright law can achieve in that space. That is part of the problem. People grabbed hold of this licensing thing as the be-all and end-all of enforcing good academic practice.

Then there are concerns about business models. It is in the interests of incumbent publishers with a range of commercial revenue streams that are based on the enclosure of content—the marketing of content that cannot be gained from any other source—to define open access in as narrow a way as possible so as to protect each of these revenue streams one at a time as we move towards a situation where we actually allow full access to this content. It is very important that we distinguish between those two issues, because we have to be clear that at the moment authors give up all these rights that we are concerned about. The majority of research authors are already giving all those rights to the publishers in the form of a copyright transfer.

I am very happy to talk about transferring those rights back to authors, and I am very happy to talk about the appropriate balance of rights and services one pays for from publishers, but I do not think we are doing incumbent publishers any favours by allowing them to protect a series of relatively small-scale commercial revenue streams by handing over all the commercial rights to them and giving them exclusive commercial exploitation rights on what is some of the most valuable content we have created.

Chair: Can I just intervene? I recognise this is an important area, but we are time-constrained. If you would be prepared to develop your ideas and concerns on this and put them in evidence to us subsequently, that would be very helpful indeed.

Q39 Paul Blomfield: I would like to explore some of those issues in more detail, but we clearly do not have time.

Let me ask just one other question on licensing that kind of develops out of the point that Chris just made about an effective licensing regime, which is presumably therefore going to be very costly. Finch did not take any account of the costs associated with licensing in economic modelling, and nor has BIS. How likely do you think it is that publishers are likely to raise APCs as a result of Research Councils opting for mandatory CC-BY?

Dr Wise: We have seen at least two publishers already offering differential prices depending on the choice of licence that the author makes. Certainly that is something we have discussed and considered, but we have not followed suit—we could do at some point in the future. The reason for that is the choice of licence does influence the mix of revenue streams that can be used to underpin the publishing cost and create a sustainable system. I would also add that I was not on the Finch group, but I was on its licensing working group. I can remember a discussion very clearly. There was an intervention by the representative from the Technology Strategy Board, a chap from Rolls-Royce, who thought it was absolutely ludicrous that anyone would suggest that his company's access to research literature should be subsidised by the taxpayer. There was no call in that group for the most unrestrictive licences for the complete cessation of the ability to have a diverse mix of revenue streams based on commercial re-use versus non-commercial re-use.

To pick up on the earlier points, it is our authors who are expressing extreme concern about this. We are offering a choice of licences for open-access publishing, and we have been surprised at some of the concerns being expressed. We hear of ethical concerns and unwillingness, perhaps, in the health space to see an author's article used alongside advertising by pharmaceutical companies. There is a lot of complexity here that the Finch group did not have a chance to delve into and that would warrant conversation between stakeholders.

Q40 Paul Blomfield: I appreciate that, but I am concerned not to re-open the previous discussion. I take from what you are saying, Alicia, that publishers are looking at licensing costs as an upward driver in APCs. Is that fair?

Dr Wise: No, I think that is an over-generalisation. I would say that the choice of licence influences the kinds of revenue streams that you can have. Over the transition period we will all need to look very carefully at how to ensure a sustainable business model for each journal. That may be solely reliant on article-publishing charges, but if there is flexibility to continue having commercial revenue streams as well, that could actually be a downward pressure on those charges. There is lots of complexity here in having a balanced portfolio for each journal.

Dr Neylon: I would just say that the main open-access publishers have been using the Creative Commons attribution licence as the default more or less since it became available. Again, we are generally offering lower prices than most hybrids.

Q41 Nadhim Zahawi: Research Councils UK's policy requires the use of the Creative Commons attribution-only licence when its funds are used to pay article-processing charges. What is the impact on the rights of authors if publishers, and ultimately funding bodies, determine which licence applies to their work?

Professor Wickham: I think that Research Councils UK has not taken sufficiently into consideration the needs of certain parts of the sector. I speak again particularly for the humanities and social science. The consequences for bioscience of a straightforward CC-BY licence are clear; they can do a number of things in terms of data mining that they would not be able to do easily if they had a highly restrictive licence. That kind of thing does not actually make sense in most humanities and social science disciplines, where you are not even presenting the data in the article. The kind of information that you can get, you can get out of a normal Google search. The openness of the simple CC-BY licence is unnecessary and threatening.

Dr Neylon: On this issue around data, there is a misunderstanding about what text and data mining is. The question around author rights, though, is a really important one, and the question around author choice is a really important one. I would accept that those of us who have advocated these licences have more work to do on explaining why they are the way to ensure the most impact for the research that has been funded out of the public purse.

Again, as with embargoes to a certain extent, in this space there is a lot of concern centred on licensing and a lot of misunderstanding about what licensing can and cannot achieve. Licensing is a great tool for enabling people to use research in ways that we have not yet imagined. It is actually a really blunt instrument to try to delicately control the uses of research to protect what are basically academic and moral rights, and questions of academic practice. There are many things we need to do to focus on that and get that right, but I do not think licensing is actually the argument we should be having in many cases.

Dr Wise: I suppose I would just add that we are all here because we support the Government's policy and want to see it implemented. There is a much broader spectrum of complex issues around licensing, author choice of licensing and the business model impacts of licensing than the Finch group had time to delve into. This would warrant further conversation and detailed thought, and some flexibility in the intervening period while that conversation takes place.

Q42 Chair: Our final question was going to be about the policy of Research Councils on Creative Commons licensing, but I think we have probably covered most of that. Is there anything you wish to add to it?

Professor Wickham: Not really.

Chair: In that case, that concludes our questioning. May I thank you very much for your contribution and just repeat what I have said to other panels on other occasions? If you feel there is a question we should have asked you, but did not, and you would like to respond to, feel free to submit it in further evidence to us. Again, if we feel there is anything we should have asked but did not, we will write to you, and we will be grateful for a response. Thank you very much for your contribution.

Examination of Witnesses

Witnesses: **Professor Stevan Harnad**, Professor of Web Science, University of Southampton, **David Sweeney**, Director of Research, Innovation and Skills, Higher Education Funding Council for England, **Professor Douglas Kell**, Information Champion, Research Councils UK, and **Dr Alma Swan**, Director of Key Perspectives Consultancy, and Director of Advocacy, SPARC Europe, gave evidence.

Q43 Chair: Good morning. Thank you for agreeing to address us and answer our inquiries. May I just ask you, as with the previous panel, if you could just introduce yourselves for voice transcription purposes?

Professor Harnad: My name is Stevan Harnad, and I am Professor of Web Science at the University of Southampton, and a 20-year battle-scarred veteran of open access.

Q44 Chair: Do you get a green medal or a gold medal for your scars?

Professor Harnad: So far just wounds.

David Sweeney: I am David Sweeney. I am the Director for Research, Innovation and Skills for the Higher Education Funding Council for England.

Professor Kell: I am Douglas Kell. I am the Chief Executive of the Biotechnology and Biological Sciences Research Council. I represent the Research Councils UK as their information champion. In addition, I am for 0.2 of my time a professor at the University of Manchester, so I have an academic perspective as well.

Dr Swan: I am Alma Swan. I am Director of Advocacy for SPARC Europe and Director of Key Perspectives Ltd, which is a consultancy specialising in scholarly communication.

Q45 Chair: Thank you. Again, some of the questions will be person-specific, which means others can feel free to add to or subtract from what has been said by the person originally answering. Also, of course, some questions will be to all, and do not feel that you all have to contribute if you feel that everything you would have said has been said already.

My first question actually is person-specific—it is to David Sweeney on basically the costs of gold and green access, on which we seem to have a professional disagreement. In your oral evidence to the House of Lords Science and Technology Committee, you said that the published work of Professor John Houghton, whom you described as “the premier economist in this area”, did not show that green open access was cheaper than gold. Yet Professor Houghton and Dr Swan have told this inquiry that “green open access is cheaper” and that “adopting gold open access would cost the UK universities we studied 12 times the cost of adopting green open access” and “for the more research-intensive universities, gold could cost 25 times as much as going green”. That appears to be a contradiction. Can you explain?

David Sweeney: No, I do not think it is a contradiction. Indeed, I think it gets to the heart of where we are in the open-access journey in the UK. There is general acceptance—Dr Swan can speak for her work with Professor Houghton—that in an environment where we reach an entirely open-access world, the gold model may well be the cheapest way of funding the scholarly dissemination system. What that piece of work also indicates, which I did not draw out at the previous hearing, is that the transition costs of a mixed economy can be higher with a focus on gold.

Much of the discussion at the moment is around transition costs, and that is why in our proposals for submission criteria around the research excellence framework we draw no distinction between material that is made open access by either route and, as with Research Councils’ open-access policy now, we leave the decision with the author and the university on where to publish. It is about transition and about the far-seeing views of Finch for the ultimate open-access world, which perhaps needs to be moderated by a consideration of the transition costs.

Q46 Chair: Can I ask Dr Swan if she would like to respond to that, since I quoted her?

Dr Swan: Actually David Sweeney has got that right. We modelled several things. In an entirely open-access world, where every country is taking the same steps and we deliver through policy 100% open-access scholarly literature, if that were a gold-based mechanism or a system, it would be cheaper for the UK in the end when we get there. However, it is cheaper for us to transition to an open-access world through the green route, using repositories. The reason for that has been explored quite extensively in the previous session. That is because we need to pay for subscriptions for the journals that UK academics need to read at the same time that we would be paying gold open-access fees if we were to go through the gold route. The green route is a much cheaper one, because the costs in the UK are virtually sunk for the repository system. There is a marginal cost for depositing each article, but it is very much smaller than the cost of paying an article-processing charge for gold open access.

Professor Harnad: I agree completely with David Sweeney and with Dr Swan. I just wanted to add to the last session on double-dipping. It is very pertinent here and it is a very simple thing. Double-dipping means subscriptions plus article-processing fees are higher than the current subscription-only fees. Double-dipping would be if you continued to collect those fees, you do not pay back, and you just take more than what you had before. What Alicia Wise said was, "We will feed it back two years after we have got more gold open-access fees; we will give it back by lowering subscriptions." However, you have to bear in mind from the UK point of view that that payback is to the whole world. The UK produces 6% of research output and, let's say, it also pays for 6% of it. It pays 6% more if it is doing both subscriptions and article-processing fees. You cannot cancel journals if all you have is UK output. If the rest of the world gets back the feedback, it is 6% of 6%, and the UK is subsidising the rest of the world.

Q47 Chair: Could I just come back to David? I am not sure if this is some sort of caveat. You have also said it may well be that we come in two or three years' time to a different view about the economics of open-access policy. Is that a reflection of your not being very confident of your existing assertions? Basically, what do you mean by that?

David Sweeney: It is just a factual statement that we will see many different proposals for different models of open access over the next few years as a result of mandates not only from Research Councils UK and from us through the REF, but from the European Union and from the White House. The whole economics of scholarly publishing will be in some way perturbed by that. Therefore, I expect that Professor Houghton and Dr Swan will be doing further work to re-evaluate that in due course. I was not predicting what would happen.

Chair: It is a bit like a Mexican wave here. Professor Kell.

Professor Kell: Chair, I think it is just helpful to amplify the question of the cost by adding the rider "to whom". The whole recognition of Finch was that there was a variety of actors in this play, many of whom had ostensibly different aims and objectives that were to some degree mutually exclusive. The glory of what the Finch group managed to do was not to give anyone everything they wanted, but to give everyone something that they wanted. To answer the question of what the costs are without discriminating to whom would not quite get us to the right place. Of course, from Research Councils' perspective, we are hoping to increase the quality and availability for a lower cost.

Dr Swan: I would just like to add something here about the costs of the system and to reiterate that I do think things will change over the next few years. We heard in the previous session some anxiety about the article-processing fee or charge and how high it might need to be, especially for journals that have a rejection rate of something like 90%. As we heard, that can be the case in the humanities.

We should be viewing this whole thing as a service to the research community. The research community wants to have two things done for its work. It wants the work to be taken through peer review and, if necessary, it wants another quality-control step, which is editorial work done on the paper. They are two services currently bundled together and called “publishing” for historical reasons. We do not have to think of the future in terms of those two services continuing to be bundled together. We do not have to think of it like that, but we are at the moment. Hence our modelling used a fee or a cost for that bundled-up process.

Actually what we should be doing, particularly in the case of the humanities, is saying we have a cost to the system, which is to take these papers through peer review. That is the first step. Therefore, we should be prepared to think about paying for the real cost of that step, not having the cost of taking 100 papers through the peer review system loaded on the 10% that eventually get published. What I am trying to say is that although we are now constrained in our view about having one charge for publishing, we should not be. We are talking about a set of services here, and we should be thinking about a future where they are separated, unbundled and offered where needed. That could bring the cost down considerably.

Professor Harnad: Could I say something more about the unbundling? Besides the peer review costs and the editorial costs—which are really a question mark, because it is not clear how much editing is being done anymore—there are also the access-provision costs that publishers are now assuming, because they are producing paper editions and circulating them, and there is the archiving cost. Those are all things that can, in principle, be unbundled. Then the separate one, which Alma mentioned, is the cost to the author whose article is unlucky enough to be accepted. That is the cost for all of those articles that were rejected. He or she must pay them, and that can be unbundled. That is rather a radical step, though, at this point. We are talking about open access, and the unbundling will follow, rather than precede, open access.

Q48 Chair: Can I just ask a question of Professor Kell? Why is Research Councils’ preference for gold open access, given that organisations such as Rolls-Royce, the Russell Group and Universities UK have serious concerns about it and that it is quoted in the *Going for Gold?* report that green is cheaper?

Professor Kell: This follows my earlier comment about the variety of actors in the system. It was the Finch report’s recognition that in order to effect a transition of the type we are presently seeing, gold was going to be necessary in many cases, and it was a preference. There was also recognition that there would not be 100% compliance with gold—or green, come to that—and with all the activities going on and the changes in the market place to which David Sweeney effectively alluded, we should not place all our bets on one particular horse. We should, though, express a preference, and the preference followed from the recommendations of the Finch group because of the recognition that there were a variety of actors, such as learned societies, who, if we had an instantaneous move for instance to all green, would essentially be put out of business.

Clearly, everyone has to show some elasticity in these processes, and as the landscape moves we hope folk will transition to a stable and sustainable place that allows open access. Finch, though, concluded—and we conclude with them, and are implementing—a recognition that the way this can be done in a sustainable manner is through gold. This is in a historical context, and you can see the graph in Tony Hey’s evidence, in which subscription charges increased over time massively more rapidly than the retail prices index under conditions in which the cost of actually doing the publishing was falling for technical reasons.

Chair: May I now bring in Ann McKechin to address one of the issues that I think you used in your modelling, Dr Swan?

Q49 Ann McKechin: The Government expressed a preference for gold access recently, but actually the international comparators appear to be moving in the opposite direction towards green access. Why do you think the Government misread the international situation so poorly, given that we are only 6% of the entire world research base? How we coordinate and have a dialogue with international partners about how we treat research is clearly an essential part if we are all aiming to try to get net costs down. Why do you think the Government went for that route?

Professor Kell: There are a couple of reasons. I have already outlined that Finch went for them as a recognition that there are going to be changes happening, but if you instantaneously moved in a green direction, it would almost certainly be unsustainable for some important parts of the landscape, such as learned societies.

Q50 Ann McKechin: The Government wanted to be the world leader and wanted other people to follow them, but was there any discussion in the Finch report about actually speaking to international counterparts about what route they were likely to take? There is no point being the world leader if it is very clear that the others are going to go in the completely opposite direction.

Professor Kell: There are a lot of international comparisons. They appear in our own written evidence, so we have set them down so far as we know them. Many of these of course have happened since Finch and some were happening beforehand, and the landscape is very fluid. From where we sit, the UK is actually in the lead. We are very clearly not going to ignore all the things that are happening in the rest of the world. There will be a very important debate at the Global Research Council at the end of May, where these things will be discussed. Of course, there are other things happening, such as Horizon 2020 and so forth.

Professor Harnad: I might well ask a question: in what sense is the UK in the lead?

Q51 Ann McKechin: That is my question: in your view, why did the Government come to that conclusion?

Professor Harnad: I think they allowed themselves to be too strongly influenced by an over-represented publisher contingent in the decision-making process. The concerns of publishers were given more weight than the concerns of the UK research community. That was why it happened.

Dr Swan: Could I just give some data on policies around the world? Part of my job is to monitor that and work with policy makers. The UK is unique in having a policy all of its own that does not align with any of the others. The policies that were in place before our one were all mandated green open access. Some of them had an option for grant money to be used for gold payments and article-processing charges. Many of them were only green mandates, with no specific mention of gold. These are just data that I am giving you here. That is how it was until RCUK came along. Policies that have come out subsequently, including Horizon 2020, are also green mandates.

Q52 Mike Crockart: The focus up till now has been very much on research, academic institutions and publishers. The area that has not been talked about is SMEs. In written evidence submitted to the House of Lords Science and Technology Committee inquiry, the Minister for Universities and Science said that there is as yet limited empirical evidence of the quantifiable impact of open access on economic growth, which is surely one of the major aims of moving towards open access. Are any of you aware of any such empirical evidence of the impact or likely impact?

David Sweeney: May I say first of all that I think the case for open access is made in principle and globally? The benefits that will then accrue are good, but they are a spin-off from the fact that we all sign up to the principle, in the interests of better research, that research information should be widely disseminated. The only piece of work I know is by Dr Swan and Professor Houghton in Denmark, so I will defer to Alma to comment on that.

Dr Swan: I will just say that in the US one piece of evidence that is commonly used now is about the economic impact of the human genome project, where the data were made freely available. The data are that for every federal dollar invested in that programme, \$141 of economic activity has been generated and tens of thousands of jobs with an average yearly salary of \$63,000. A lot of good benefit has come. That is just in the US, by the way. We do not know what has happened elsewhere; it has not been measured.

We did the study in Denmark for the Danish Ministry for Science, Technology and Innovation, which was concerned about the ability of small Danish research and development-based companies to access the information that they needed to do their work. It was not just about research information; it was about all kinds of information. We surveyed them; we were given a database of about 1,000 companies on the Ministry's list of R and D based start-ups or early functioning companies, up to 10 years old. It sent out invitations to complete our survey and we also followed up with a further 25 personal interviews.

We learned from that that they do need access to basic research information. Academic research is very important to these companies. We could place a value to the Danish economy of them being hampered in their access to that—I will have to put my glasses on and read the data. The typical kinds of companies that I spoke to were in biotechnology, solar cell technology, mobile ticketing, microchip technologies, biomass monitoring, debt-collection software and so forth. You might think that debt collection is done by burly men knocking on the front door, but obviously not these days. The average cost to a Danish company of having a delay to product development due to not being able to access research is 16 million Danish krone a year—there are about 10 Danish krone to the pound. That is the cost to a company, and it would have taken on average 2.2 years longer to develop their products and services if they had not had reasonable access to academic research. Most of them did not have reasonable access to academic research. In fact, 80% of them said they had difficulties in accessing it.

We worked out the cost of access difficulties to the Danish economy to be 540 million Danish krone a year. That is £54 million. Denmark is a small economy compared with ours, so we will have to extrapolate upwards in our heads as to how that might work out in the UK. It is clear, though, that if small and medium-sized R and D-based enterprises are having difficulties and delays in accessing this information, there is a cost to them, and that is multiplied up by the number of them to be a very considerable cost to the national economy.

I will pick up something that Dr Neylon said, because I want to get the perspective right here. Publicly funded research is done for the benefit of society. These companies are part of society, and the premise of the Danish Government was that these companies create jobs and wealth in the Danish economy. Our R and D-based SMEs should be doing the same here, so we should be very interested in minimising the difficulties that they have.

Professor Harnad: I would just like to supplement that with one more basic concern. SMEs are, of course, important. I do not know how many SMEs benefit from historical research of the sort that was represented in the prior panel, but SMEs figure in this. The real question to ask is not what the evidence is of the economic benefits of open access to the economy, unless you are prepared to ask what the benefit to the economy is of funding research at all. All open access really does is to make sure that the research is accessible to all its potential users so that they can use it, build on it and apply it. Open access simply opens up the access to what you are already funding.

Dr Swan: I have just one very short point: these companies do not care or know what kind of open access they are getting hold of. What they do is they use Google and put a few keywords in—or if they know the name of the author they are after, they put that in—and hopefully happen upon a free copy of an article. They do come up against publisher pay walls. They do not very often pay per view, because they cannot afford it, and they certainly do not buy subscriptions. What they are doing through that Google search, though, is possibly arriving at papers published in gold open-access journals, like the PLOS journal, or they are coming up against free copies of articles that are in repositories.

I will reiterate that, for their purposes, they neither know nor care. They come up against the article. They want the article. They do not care about the journal, the business model of the journal or the publisher. They just want the article, and the repository copy that has been peer reviewed is perfectly adequate for their purposes.

Q53 Mike Crockart: My one small supplementary question to that is: what is your definition of reasonable access? We can have the debate about the technicalities of what that access should look like, but for SMEs what is the technical solution that gives them what they need to get the quick access?

Dr Swan: Some of them said they would sometimes search for five hours to try to find a copy of an article that they needed. They went to all sorts of other troubles to work around this issue, including by employing postgraduate students in the local university so that they could go and look in the library for these articles. The time taken to get to it is the most important thing. If you are running a small company and there may be four of you on the books, you do not want to spend half of the day looking for an article. You want the information. The average was nearly an hour spent looking for an article, which is a long time in their view.

Professor Kell: This bears again on the question of gold versus green. We may or may not come back to different kinds of licensing later. If you do not have full and unfettered open access to these kinds of materials, the estimable economic gains that we all seek are unlikely to be easily forthcoming. This is another major reason why Research Councils and Finch expressed that kind of preference.

Chair: Can I bring in Robin? I think some of the issues have been touched on already, but please pick out those that have not been.

Q54 Mr Walker: Dr Swan, you are right to emphasise the importance of the SME sector. You stressed in your written evidence that, although that was very much part of the impetus of the Finch report, you were disappointed to find the interests of this sector, and the opportunity to contribute to innovation and economic growth, had become largely lost. Why do you feel that the interests of business have been lost in this process? What do you think can be done about it?

Dr Swan: I think the thrust of the Finch report was to provide gold open access at a huge cost, which is not what those businesses care about at all. They want quick access to the literature. For them that is freely, and for the country it is best that we do that as cheaply as possible.

Q55 Mr Walker: In terms of representation, the only business that was involved in the writing of the Finch report was Rolls-Royce, and it was involved only in a sub-group.

Dr Swan: I would not call that an SME, of course.

Q56 Mr Walker: Of course, but do you think the membership of the group should have been different to try to get that business interest in?

Dr Swan: Yes, indeed. Companies like Rolls-Royce and even much smaller can afford information services and to have a company library, and usually an information officer to seek out this information, and they will be paying subscriptions for journals. However, the companies in my group in Denmark were much smaller.

David Sweeney: I think we are setting up an unnecessary tension in attributing the motivation of the Finch group to be about gold or green. The reality is that we have a mixed model now. The philosophy that the costs of dissemination should be part of doing the research is really quite easy to sign up to, which is an ultimate solution of gold. Philosophically, the Finch report was sound, and I think the preference for gold ultimately is entirely understandable. That was a statement. We are now moving forward in trying to implement that policy in a way that supports researchers and business, and where it is quite clear that a mixed model is present for the future.

Research Councils is stimulating a necessary response of institutions in a mixed model where there is a substantial gold provision by publishers, and we heard that. That is all part of a joined-up solution, and our challenge collectively is to work out the optimal way of managing the system, a system of which nobody is in overall control and where a large group of people have to work together. The work we have seen from Research Councils in consulting the community, and our work in also doing that, the work we were doing together both in funding and assessment, and the advice we are getting from all over the world, are likely to lead in the implementation of the policy to a satisfactory solution.

Q57 Mr Walker: Is there a concern about the pace of implementation and the way in which it is implemented? If it is completely controlled by suppliers rather than demand, people who want to get access to the information are going to be held back.

David Sweeney: There is a market there. There is a market both in journal subscriptions and a market in the publishers looking for scholarly material. Our aim is to encourage that market to develop. It is to regulate it to an extent, primarily by mandate to persuade those in receipt of grants or those with research that has been assessed that that should be openly available. Once that mandate is in place, the response of publishers, both not-for-profit and commercial, has to meet both the requirements of the mandate and the needs of the community. I think that is reasonable.

Professor Kell: Of course the suppliers are in fact the researchers, and I am very keen on the recognition that what we, as Research Councils UK, and I as a researcher want is to do and buy the best science. The numbers of peer-reviewed papers being published in biomedicine alone are two per minute. In the rest of science, it is probably a total of five per minute. Nobody, of course, can read them. Computers can. If you want to buy the best science, you have to have read everything that is out there. Of course you or the computers cannot read everything out there if you do not have access to it.

A big benefit of open access as a whole—but in practice this does mean gold or at least CC-BY and no restrictions—is that you can then do this kind of text mining that will enable you to discover new knowledge from hoards of literature that any individual scientist would not normally read. In fact, most people's solution to the problem of two papers a minute is to pretend it is not happening and focus on their own little thing. This does not buy you the best science. Science then gets siloed, and we want to break that.

Professor Harnad: I do not know who has to read all those papers at the rate of two papers per minute; I do not know that historians want to read all the papers even in history. Before we even embark on solving problem of being able to read two papers per minute, can we remind ourselves that the reason the open-access movement began was because access was being denied? The question was asked by Mr Crockart: "What is it that's needed?" At

the very least, the vanilla, bottom access that is needed is free online access to these articles. That is what is needed, and that is what is being denied right now.

You asked about the suppliers. In principle the authors are the suppliers, but I think the suppliers you meant were the publishers. In fact, the agenda for open access is being co-opted by publishers now: “It will be done on our terms and according to our timetable.” David Sweeney has been very modest in not mentioning that the Higher Education Funding Council for England has proposed a solution that moots all this green-gold tension. It is very simple. It is related to what Alma said as well, and it says that if you want your articles to be eligible for REF four years hence, you must immediately deposit them in your institutional repository regardless of whether you decide to pay for gold—

Chair: We are coming on to this.

Professor Harnad: This policy essentially moots many of the questions that you are asking.

Q58 Mr Walker: I have just one more brief one. I mentioned Rolls-Royce earlier. It has said in written evidence to us that it believes that limited budgets for research dissemination are better spent promoting direct interaction between researchers and users of technology—for example at conferences—than on funding article-processing charges to publish it. Do you agree?

David Sweeney: That just reflects that the position of SMEs is rather different from larger companies. Rolls-Royce has valuable partnerships with universities and researchers. In a number of ways, I think that is absolutely fantastic, and to be commended and encouraged. However, that will not solve the broader problem of the engagement of small companies that cannot spend time going to conferences. I think you just have to look at the different range of business interests.

Professor Kell: It is important to recognise the kind of fraction of the research budget we are talking about. We are optimistic that these numbers will go down, but all present modelling has it to be between 1% and 1.5% of our research budget. Research dissemination is a cost of research just as much as buying pipette tip or a mass spectrometer, and we recognise that, but it is actually a very small fraction.

Q59 Mike Crockart: These questions are obviously more directed at Professor Kell. Helpfully for you, the Finch report has said that Research Councils will be able to check compliance with its open-access mandates comprehensively and systematically from this year. It is just a question of how you will do this. When will the results actually become available?

Professor Kell: The guidance that was issued on 8 April includes towards the end of it an outline of the kinds of data that we will be asking higher education institutions to collect. You may not be surprised to imagine that it is the nature of publishers, the average article-processing charge, the names of journals and stuff like this. It is set down in our guidance and there will be a full review in the last quarter of 2014, which is as soon as we think it is reasonable to have enough data to say some sensible things about this, and there will be independent membership of that committee. That is what we have set out in the current guidance.

As well as SHERPA/RoMEO under the University of Nottingham, setting out journal compliance is another thing we will be putting there: understanding what kinds of article-processing charges are being levied by different journals, including other hidden aspects of article-processing charges such as the page charges that some journals also use. We will have access to all the facts to make things transparent. As part of the developing market in which people may decide to publish or otherwise, at least they will be able to be armed with the facts

on the type of licensing or service used. We are hoping to collect all this and make it available.

Professor Harnad: May I discuss now the topic I was stopped on? RCUK has accorded all its interests in compliance to gold compliance. It has accorded absolutely no attention or mechanism to green compliance. We know that RCUK has a Finch preference for gold already. I will let you take that on in a second. On the other hand, what I was going to say before was that HEFCE has paid attention to the issue of compliance. It has given the optimal compliance mechanism to green, and I stress that it is for green because although HEFCE does not care whether you go green or gold, it does care whether you deposit immediately, and depositing means green. The publishers are exercising some constraint over it here with their embargo power. They are saying, “Deposit if you like, but you can’t make it open access right away.” I suggest we need a compromise and we should be prepared to swallow that for the time being. If we accept the HEFCE policy of the immediate deposit of everything—green or gold; embargoed or un-embargoed—the UK re-takes the lead in open access that it used to have.

Q60 Mike Crockart: You have been prescient. If I can ask my next question, you will probably be able to answer the two together. I know that you have recently revised your policy and requirement for 45% open-access publishing in 2013-14. You now feel it can be met via green or gold open-access routes rather than via gold only. That will presumably answer Professor Harnad’s point. What prompted the change of policy?

Professor Kell: At one level it was always the case anyway, because words like “requirement” were never used. Words like “preference” were used. The 45% is not a desire; the desire is 100% open access. The 45% is a recognition that it is unlikely to happen anyway. If you actually look at evidence OA 29 by Peter Carroll, you will see the amount of author-depositing compliance, and it is sadly very low. Most of the deposits in green repositories are actually done by publishers, as was said in the previous session. The requirement that is potentially going to be in the research excellence framework will indeed be met by self-depositing in the repositories, which is not in four years but probably in 2020. We will all be looking to see that happen. It is not at all inconsistent with our own requirements, because our own requirements were around making the stuff available. However, we do have a preference for making it available in an unfettered manner.

Q61 Mike Crockart: The specifics of the targets—you have a 45% target for 2013-14 and a 53% target for the following year.

Professor Kell: They are not targets. They are recognition that compliance will not be immediate. The Wellcome Trust, which has been quite heavy-handed in encouraging—you might say forcing—its authors to go open access even after seven years only achieved 60% compliance. In a sense, we are living in the real world in which we recognise that, probably for reasons of academic apathy, people simply will not deposit stuff without some serious encouragement. The Higher Education Funding Council for England’s stipulations would definitely constitute for working academics considerable encouragement.

Q62 Mike Crockart: I admit we are living in the real world, but equally you have to have a track along which you are trying to get to your ultimate aim. You have set out the 45% for 2013-14 and the 53%. What confidence do you have that you will be able to get to those compliance rates and by what method?

Professor Kell: I am pretty confident we will get to compliance rates far in excess of those, because when you look at the current journals’ offerings, very largely they are compliant. We just did a survey of 108 top journals across all the Research Councils’

bailiwick, and 97% of them are already compliant. I think we can be optimistic that compliance will increase very swiftly. We will be monitoring it in this first review and there will of course be subsequent reviews. Soon we will know, but I am confident that we can get there, and the evidence is that the journals themselves are becoming compliant by both routes.

Q63 Mike Crockart: Dr Swan, you look as though you are straining.

Dr Swan: Yes. I think it is worth saying that before this time last year we did have almost 40% of UK literature open access. That was 35% by the green route and 5% by the gold route. We were already there. If the previous RCUK policy had been enforced, as Professor Kell terms it, we may have even been higher than that. Certainly, when you see individual universities supporting their open-access policy in a sensible and constant way, you can get the compliance rate up to over 80%. My original research showed that 81% of researchers would comply with the policy perfectly willingly. A further 14% would comply unwillingly and the other 5% would not comply, but we do not worry about the 5%.

Q64 Mike Crockart: So a 53% target by 2015 is a bit unambitious.

Dr Swan: It is not very difficult. A little bit more work on advocating open access in the UK would have got us there anyway, I think, so you should manage it.

David Sweeney: That makes my point. I think there is broad policy agreement, but in implementing the policy you have to look quite clearly at the incentives and the benefits. I actually do not accept that advocacy would get us there. I think we require mandates to get us there, and it is far easier if those mandates share common features globally as far as possible, which I think we are now very close to achieving, and most certainly nationally, which again I think we have largely achieved. There are details around those. Professor Harnad refers to the price one pays for some stability in the system by allowing embargo periods, and the detail of those has been thrashed out. I think particularly in respect of the humanities there may be further work to do. That really is at a detailed level, though, which is important, but it is far better for us to accept that we have policy agreement—and we are talking about the details of implementation—than, as sometimes is characterised, to fight about the policy itself.

Dr Swan: As this is for the record, may I just say that I agree that a mandate is the basic thing? Advocacy goes on top of that. Advocacy alone does not work.

David Sweeney: We agree.

Q65 Nadhim Zahawi: Very quickly, Professor Kell, we have heard that Research Councils UK's established preference is for gold open access. Why is that not reflected in your policy then?

Professor Kell: With respect, I think it is, so I am probably not quite seeing the basis of the question. We express a preference, but we recognise that there is going to be a mixed economy. That is what the guidance states.

Q66 Nadhim Zahawi: My point is: shouldn't you be more consistent that that is what you want to do?

Professor Kell: We think that stating a preference rather than a mandate in this case is the right strategy. A mixed economy is appropriate for all kinds of reasons, and it is such a fluid landscape that constraining some things unnecessarily is probably not desirable.

Q67 Nadhim Zahawi: Wouldn't it just help you to set more ambitious targets? I think that was what I was hearing.

David Sweeney: I think the RCUK targets are realistic and we should support them.

Q68 Nadhim Zahawi: Is realistic good enough?

David Sweeney: I think the uptake of open access has been slower than we would all have hoped, for reasons that have been rehearsed during the session. To set aspirational targets that prove to be unrealistic would not foster the support of all the various actors in this. Setting realistic targets and working together to achieve those is likely to give the best outcome.

Professor Kell: I sometimes find it helpful to use the counter-factual, which is to imagine a world in which we did have full and unfettered open access. If we decided to go back and invent a system with pay walls and so forth, which is our historical one, clearly the result would be outrage, and we would like the result of going in the direction we are to be joy.

Q69 Chair: Can I just intervene at this point? I understand that all the RCUK's policy papers have said their preference is for gold open access, yet to comply with either green or gold is okay. This would seem to slightly contradict your opening assertion that you had no preference.

Professor Kell: We have a stated preference, and that is Finch's preference, so there is no contradiction there. But it is not an absolute preference. There is recognition that it is a complex world and a complex ecosystem. One day it may go all gold, one day it may go all green, and one day it may be a mixed economy that is discipline-specific. It would be hazardous to predict much beyond that in my opinion. I do not think there is any contradiction. The expressing of preference is sending a clear message of changing cultural norms, which is what we are trying to do.

Chair: I am not sure how clear having an absolute preference and having a preference is, but I will bring in Nadhim because he is looking equally puzzled.

Q70 Nadhim Zahawi: It is as clear as mud, I think, Chairman. I think I have heard you correctly, and correct me if I am wrong. You have just said to imagine a world where we have complete open access and then we try to go back to pay walls, and the outrage that that would create from society and people using this valuable data. I think what you said was that we are striving for joy, implying that the outrage now that would come from that nirvana of complete open access would come from the publishers. Is that what you are saying?

Professor Kell: It would hopefully come from a sustainable system in which those who are providing value provide it at the appropriate price, and there will be a market, as has been mentioned several times. There will also be innovative new products as a result of the digital availability of everything. Any one learned society's publishers will be encouraged and are encouraged to keep on developing these, but you can develop them only when you have access to the base material.

Professor Harnad: I am getting confused, so let me try to sort it out, for my mind anyway. Are we talking about nirvana for open access, nirvana for gold open access, or nirvana for gold open access CC-BY? They are not the same thing. I think your question was if the Finch-RCUK decision was to go for gold, why are they not going for gold entirely? The answer is they originally said that they wanted to go for gold. It is very much like what Alicia said. They said that they wanted repositories to be just for data, not for articles: "Leave articles with us." Then there was resistance from many sectors, including from researchers who did not want CC-BY and all that research money spent on gold. Then they backed up and said, "Okay, we prefer gold, but you can go for either gold or green."

You are right that that was waffling, but then David Sweeney came in and cleaned it up with something that would make sense of all this, which is to have your preferences for

gold or green embargoes or what have you, but you have to deposit immediately anyway. That cleans it up and we do not need to worry about it anymore.

Dr Swan: Can I just say something? Stevan mentioned the outrage on the part of researchers early on in this process about the gold emphasis. I think the outrage was aimed at the fact that there was complete acceptance by RCUK and Finch that paying for hybrid gold open access was okay. People feel that that is not the case, because of the double-dipping.

Q71 Mr Binley: Do you know what hybrid is?

Nadhim Zahawi: We have a glossary here.

Professor Harnad: A subscription journal makes gold open access accessible to you. They continue to collect subscriptions all over the world, but in addition you, Brian, can pay to make your article gold open access.

Mr Binley: Yes, I understood that is what it means.

Chair: Can I bring in Brian now?

Q72 Mr Binley: I still share his concerns about not being absolutely clear on what we are talking about, but never mind. I have no doubt over the next two years that you will clear that issue up. I do not want to spend too much time on this, but my concern is the impact of the article-processing charge on higher education institutions. It seems to me that Research Councils has a very concentrated policy in this respect. When you look at the number of institutions receiving, I think 80% of it goes to a very limited number. It seems to me there is a view in that allocation that concentration on a few means higher quality. I have never found that in my business life. Is that, therefore, harmful?

Professor Kell: The calculations of the block grant were based on the number of articles published that are attributed to Research Councils-funded research—that is very much not the entirety of it, which is quite an important point—the average article-processing charge then used by the trust and calculated by Finch, which we heard earlier may be rather higher than is the case, and the compliance ratio. The product of that gives you a number, and that is the amount that is divvied up, essentially according to the number of people working on project grants. It just started on 1 April. We are talking to librarians of course and looking at how institutions are implementing these kinds of things. The truth will lie somewhere between they have spent all their money in the first month and they have loads left over at the end of the year. I have heard both versions. More commonly, oddly, especially as the amount of green increases, they may well have some money left over at the end of the year. They do not have to spend all of it on APCs. We have asked them to spend it in as good a manner as possible consistent with our policy.

Q73 Mr Binley: Let me go back to my question. My concern is that the funding could well be detrimental to good research that sits outside the core group of people in receipt of this particular block funding.

Professor Kell: You mean institutions.

Mr Binley: I mean people as well, because it is people who make up institutions. I am saying that this seems a lazy way of doing it.

Professor Kell: I am sorry; I misunderstood the exact question.

Mr Binley: I want a wider, bigger net. In my business, when I look at SMEs, it is very difficult to judge which are going to be the winners and losers in two years' time. It seems that this is a rather crude and lazy way of doing it, and we are missing out a lot of people from a very centrally specific block allocation. Am I right in that, and is there a better way of doing it?

Professor Kell: The amount of money that went out as part of the block grant covered 99% of all the funding that we distribute to a variety of institutions. Your 80% is probably around the Russell Group and the 94 Group, but there is another long tail that goes all the way down to the point at which £10,000—

Mr Binley: A very small long tail.

Professor Kell: It is the smallest part of the long tail. This therefore leaves some people who are not in receipt of these kinds of funds specifically and, in extremis, your lone researcher who is nothing to do with the academic world at all, but might have something valuable to publish in an academic journal. An obvious example is PLOS. Fully 10% of the publications in PLOS do not attract an APC at all, despite the fact it is an APC-only organisation, because it looks kindly upon people from developing countries and other circumstances in which payment cannot be made. There are examples like that. It is equally possible for researchers without funds to publish in compliant areas without any APCs at all.

Q74 Mr Binley: Let me cut you short. The University Alliance report in 2011 found that there was no correlation between research excellence and the concentration of research.

Professor Kell: I will pass that to David Sweeney, if I might—that is more his bailiwick.

Q75 Mr Binley: Is this the most efficient way to get the most important research published? It seems to me that it is a rather lazy way. Am I right, or am I being unfair?

David Sweeney: I am not responsible for the policy, but I think you are being unfair. We have a funding policy for research in this country that rewards excellence. Excellence is assessed in different ways by Research Councils and by us, through what will be the research excellence framework, and it comes to basically the same answers. It is perfectly reasonable to assume that rewarding good performance with funding has driven the improvement in the quality of UK research. RCUK has gone out of its way to recognise 99% of the funded research. There are words in its policy about sympathy for particular cases in that 1%. I think it has been eminently fair and reasonable.

I think your question is about the broader issue of performance-based funding. In my view we are adopting the right policy, but it is a broader issue than the one we are discussing today. It remains the policy of the UK funding bodies that excellent research, wherever it is, including the University Alliance, should be supported and funded. We do that, but there is not all that much of it by volume in those places. It also remains our policy that all universities should contribute to the exchange of knowledge with businesses and society generally, and we fund that separately through our innovation-funding scheme. Together I think we are doing our very best for the country, and we are open to debate about different funding methodologies.

Q76 Mr Binley: But my real concern is that open access really means that. I just wonder how many people cannot get open access because the funding does not allow them to get it because of this charge.

David Sweeney: I am absolutely convinced that, if that proves to be a significant problem, between us we will respond to it, including through talking to the University Alliance, as we both do.

Professor Kell: Having spent time in a smaller institution, it also applies to the subscription model. Smaller places cannot afford to subscribe to the range of journals that larger ones do.

Q77 Paul Blomfield: I wanted to share Brian's concern from a slightly different perspective. There is a debate about what sort of universities we should have. Should we have all research funding concentrated on a few, with others becoming teaching only, or should we recognise excellence across the board? Isn't there a danger that the way you are approaching supporting transition to open access is simply going to drive concentration of research into elite institutions, and in a sense shift that balance by default or by the back door?

Professor Kell: It is going to reflect it rather than drive it, because if you take the line that the cost of disseminating research is a part of the cost of doing it, and that cost is paid by us in proportion to whoever gets our research grants judged by excellence, the funding follows the excellence; it does not necessarily drive it. That is probably not an issue as such.

Professor Harnad: I am getting confused again. Are we talking about open access, gold open access or funding of research? There is an issue of concentration, but since we already know that you can make your research open access either via the green route, which does not cost you a penny, or the gold route, which is the preference of RCUK, what is it specifically that Brian and you are worrying about here?

Q78 Paul Blomfield: The way that funding is supporting the transition by being concentrated on Russell Group and 94 Group institutions.

Professor Harnad: You mean the transition to a 100% gold open-access model, but we are here to talk about open access—period. One way to provide open access is by taking an article that you submit to a subscription journal and depositing it in your repository without paying an extra penny. That provides open access. The eventual transition to the gold open access model is a side issue, but open access is open access; it is not gold open access.

Q79 Mr Binley: Professor, are you absolutely confident that all the stuff of value gets published irrespective of through which institution it comes?

Professor Harnad: I know that everything gets published. What you are asking about is where it gets published. It may not get published in the most prestigious journals.

Q80 Mr Binley: We are told that in some cases only 10% of stuff gets published. Are we missing out?

Professor Harnad: Is your question whether an author who has done a piece of research and would like to get it published succeeds in getting it published?

Mr Binley: Yes.

Professor Harnad: The answer is yes; 120% get their research published.

Q81 Mr Binley: So you are happy with that.

Professor Harnad: Yes.

Mr Binley: I am perfectly happy. I am being provocative on purpose, because if that is the case I am perfectly happy.

Professor Harnad: But the issue here was not whether it got published but whether it became open access.

Mr Binley: It was for me, because I ask the questions.

Chair: With respect, you let us define what the issues are. That concludes our questioning. Can I thank you for your contributions? You will probably have heard what I said to the previous panel. If you feel that there is a response to a question that we did not ask, please submit it as further written evidence. We may well decide that we want to follow up any issues and write to you, and we would be grateful for your response. Thank you very much.

Examination of Witnesses

Witnesses: **Dr Martin Paul Eve**, Lecturer in English Literature, University of Lincoln, **Professor Andrew Massey**, trustee, Political Studies Association, and Professor of Politics, University of Exeter, **Professor Ian Walmsley**, Pro-Vice Chancellor for Research, Academic Services and University Collections, University of Oxford, and **Professor Sir Ian Diamond**, Chair, Research Policy Network, Universities UK, and Principal, University of Aberdeen, gave evidence.

Q82 Chair: Good morning, and thank you for agreeing to contribute to our inquiry. I will do as I did with the other panellists. For voice transcription purposes, could you introduce yourselves?

Dr Eve: My name is Dr Martin Paul Eve and I am a lecturer in English literature at the University of Lincoln. I have experience running several open-access journals and am starting a project called the Open Library of Humanities.

Professor Massey: I am Andrew Massey, head of the department of politics at the University of Exeter. I am also a trustee of the Political Studies Association of the United Kingdom and vice-president of the European Group for Public Administration. I should declare that I also edit two academic journals, but for no money whatsoever.

Chair: I had the privilege of being lectured by a long-time predecessor of yours, Professor Victor Wiseman.

Professor Walmsley: I am Ian Walmsley, pro-vice chancellor for research, academic services and university collections at the University of Oxford. I am also active on a number of editorial boards and in professional society publishing.

Professor Diamond: I am Ian Diamond, principal of the University of Aberdeen and chair of the Research Policy Network of Universities UK.

Q83 Chair: I will reiterate what I have said to previous panels. Some of our questions will be person-specific but others may feel free to add to or subtract from the contribution by the person being questioned. Similarly, some will be addressed to everybody, but please do not feel that you have to add to it if every point you would have made has been made by a previous speaker.

Can I start with a question to Dr Martin Paul Eve? You have already submitted evidence to the inquiry that Finch did not consider alternative funding models for gold open-access routes, including subsidies from HEIs themselves. Have you any evidence to show that other models can work in practice?

Dr Eve: Not in addition to the fact we have no evidence that the current APC model will hold. I think they are on an equal footing, but one looks more appealing to publishers. The Budapest open access initiative statement, which is now 11 years old, suggests a number of models upon which gold open access can be facilitated. It explicitly makes clear that gold does not refer to a business model, but to making the research available at source open access. In the process of Finch, gold open access appears to have been made synonymous with article-processing charges, which in some disciplines, where the majority of work is unfunded, is deeply problematic, especially if the RCUK policy and HEFCE's potential mandate trigger a full-scale shift.

There are small projects, although I cannot now name one off the top of my head, that have worked on the basis of institutional subsidy. Libraries have run their own small niche open-access journals, but it is untried en masse. But so are APCs, because we have not yet seen whether we can get through the transition period without mass damage.

Q84 Chair: You mention a variety of funding models for open access. You have just touched on one. Are there any others?

Dr Eve: There are. It is one I favour less for problematic ethical conflicts of interest, but advertising is another route that could be made to work. Most of the internet projects subsidise themselves through placing adverts alongside material. Is it not possible that could be investigated? Could we think about ways in which we could get around potential ethical conflicts of interest, so you do not end up with oil companies next to articles criticising oil companies, or vice versa? There are other mechanisms we could explore.

Q85 Chair: Can I ask a further question, which in theory at least is to everybody? The Russell Group has calculated that funds from RCUK to cover gold open-access costs will fall short of enabling RCUK's compliance rates to be met. To what extent have RCUK's most recent changes to its open-access policy alleviated universities' concerns about the cost of compliance?

Professor Walmsley: That is broadly unchanged. The ability to pay for gold APC is not adequately funded by the RCUK numbers. However, the ability to cover other aspects of the RCUK mandate—that is using some of the block grant to cover green access—is very welcome and will go a long way to helping us meet the RCUK requirements.

Professor Massey: We are next to receive some of that block grant, and we support the comment just made by Professor Walmsley. If I could explain to the Committee how that works at departmental level, I am head of a fairly large department with 35 full-time academics, plus a very large number of post-doctoral students and others. The amount of money that came down to our department would have funded one gold APC. I can either give a fiver each to everybody or set up a very expensive committee that looks at how we could give them that money. It would cost more in real terms to distribute that money than the money itself. We would have liked more consultation on how to do that, but, if we go the green route, that money would go further and we could explore other innovative ways of funding this.

Professor Diamond: It is acknowledged that we are in transition. As Ian Walmsley has said, it is absolutely the case that in the short term funding from RCUK, as it is at the moment, would not fund most research-intensive universities' gold open access. That is why we would welcome in the transition the mixed economy. It is likely that efficiencies will come over time in APCs and we may well move towards a totally gold model, but at the moment the mixed model will enable funding to work.

Q86 Chair: Would it be fair to say that broadly it has been helpful? My next question is: do you think that with revised policy and guidance, there is now sufficient clarity and flexibility on how grants can be used to move to open access?

Professor Walmsley: In terms of how the money is spent, yes, but there are other issues associated with things like licensing, where that clarity and flexibility have not been implemented. That is potentially a source of great difficulty.

Q87 Chair: Can you outline the deficiency?

Professor Walmsley: For example, if you look at the directory of open access journals—I am not suggesting that that is the only way one can do it—it has in it about 8,700 journals. Of those, across all disciplines, about 32% have CC-like licences. They are not all CC-BY; about 1,400 have CC-BY. In a sub-domain like physics and optics—my own area—there are about 20 journals, and about half of those give CC-BY. Of the mainstream journals that are doing that, such as those published by the American Institute of Physics, the Institute

of Physics in the UK and the American Physical Society, there are three out of those, and the rest are published by journals that offer very low APCs but, in our view, very low-quality reviewing. Therefore, if one is not careful, one is taking away the academics' choice of venue of publication, which is critical to maintaining the stature of UK research internationally, and forcing them to go to what I would call, broadly, sub-standard journals because of cost and licensing. It seems to me that that is a very big liability.

Q88 Chair: Do other panellists agree with that?

Dr Eve: I slightly disagree with that. As a researcher my choice and freedom are not as great as might be made out. I publish in the place that is most likely to bolster my reputation through assessment in the REF. I am not sure that is actually a freedom; that is Pepsi or Coke. You publish where it will do the most for you, as opposed to where your research will be the most read. The secondary seems to me to be dissemination here.

Coming back to Professor Massey's point, I also worry about the green economy. This does not fix the already extant economic problems. At the moment Harvard is saying that it cannot afford to subscribe to every academic journal. That is an investment bank with a university inside it. What happens to lesser institutions at the moment? It is imperative to think about how we get through the transition phase, and green plays an important role there. For me, it is trying to patch up an economic problem by ignoring the economic issues.

Professor Diamond: At our university we have taken the pretty strong view that we will publish in the best places possible and encourage colleagues to do that. The economies around that, for example journal subscriptions—green, gold, whatever—we will manage because it is to the benefit of the university to make that happen. Over the transition period we have to look at the changing business models that will come with journals and, I hope, will lead to reductions in journal subscriptions, which will make possible many of the things people are talking about.

Q89 Nadhim Zahawi: We have touched on a lot of this. RCUK has said it is insufficient to state that it is not providing sufficient funding, rather than acknowledging that the HEI community must play a key role in negotiating with publishers to drive down the costs of subscription and APC costs. How much negotiating power do universities have regarding subscriptions and APC costs?

Professor Diamond: The research libraries network, of which my university and Ian's are members, has done incredibly good work in shared procurement to drive down costs, which has huge potential for efficiencies in library subscriptions. There needs to be continued work, and I believe that the research libraries network is a good place for it to be led from. There needs to be continued work to drive down costs in relation to open access.

Dr Eve: Can I put a counter-argument that I have encountered in speaking with librarians? Non-disclosure clauses on big deal bundling of journals make it very difficult for libraries to consult with one another about the prices they are being charged. Therefore, getting any kind of solidarity to pressure publishers can become difficult in an environment where information is restricted. For the benefit of those who do not know, publishers sell bundles of journals where the very successful ones that are needed are sold along with others as a condition. You have to subscribe to the whole package, and libraries are prohibited from telling other libraries what prices they pay for each of those bundles. There is no way I could know I am being charged more or less than another, which means that the power for us to negotiate is driven down. We are given one price that we cannot tell anyone else; we do not know what they are being charged, and the cycle continues.

Professor Diamond: Which is why shared procurement, for example advance procurement of universities and colleges in Scotland, which leads the way for the UK on this,

together with the new work being led by Universities UK and Professor Nick Petford of University of Northampton on procurement in England leading to this kind of shared procurement, is absolutely critical if there are to be efficiencies in all aspects of higher education, including this one.

Professor Walmsley: These are all correct things that universities and collectives have been doing. One should not lose sight of the fact that the UK publishes only about 6% of the total output of journals, and there is necessarily a risk in first moving here. If the model is not seen to be viable, it is hard to see how publishers would change their views on, say, licensing for such a small part of their activity. It is also worth not putting all publishers in the same box. There are places like *Nature* and *Science* that are going to have very little pressure to change because of their position in the market, whereas professional societies see journal publishing, for instance, as part of a much broader dissemination activity associated with meetings and public engagement. One needs to make a more nuanced statement about publishers.

Q90 Ann McKechin: I have a question on a point Dr Eve raised about the issue of non-disclosure of what libraries and universities are paying for the big bundles. We had before us earlier this morning a representative from Reed Elsevier who made no comment about that whatsoever, which I find extraordinary given what you are saying. Can anyone on the panel tell me whether anyone in the university sector has referred this issue to the Office of Fair Trading as an anti-competitive practice, and, if not, perhaps why not?

Dr Eve: I wish they would.

Q91 Ann McKechin: It is a profoundly anti-competitive practice. I would have thought that if this has been happening in the public sector, in the public interest there should be a referral to the Office of Fair Trading to carry out a full investigation.

Professor Diamond: I just repeat my understanding that the research libraries network is working together to do shared procurement, which overcomes that.

Q92 Nadhim Zahawi: I put my question to Professor Walmsley and Professor Diamond. A recent report by the UK Open Access Implementation Group concluded that the systems and processes currently associated with the payment of APCs could present a significant barrier to the wider adoption of open-access publishing. What are the universities and their representative bodies doing to establish efficient arrangements for payment of APCs as recommended by the Finch report?

Professor Walmsley: I am not familiar with the details of the report you have quoted. Are you talking about driving down the cost of APCs, or how we deal with the procurement?

Q93 Nadhim Zahawi: How onerous are the administrative arrangements for payment?

Professor Walmsley: If we think of the scheme before the current guidelines and how it would have happened, there would have been a standard invoice purchasing order through the regular finance system, so certainly no more onerous than any other sort of payment. Within the current arrangement, as Professor Massey was saying, we now have to have a more burdensome internal process to make sure, first, that we are allocating the funds in an appropriate manner and, secondly, that we have a single point over which they can be paid. It remains to be seen how much additional burden that imposes, but it is clearly not zero.

Professor Diamond: I could not agree more. The bottom line is that one is trying to make one's university efficient, so one needs to put together a way of managing this in an effective and appropriate way. I suspect most universities will maintain a policy of wanting

their academics to publish in the very best places and working a bureaucracy around that. The discussions we have had in Aberdeen are clearly important ones, but they have not been ones that have made us say this is a bureaucracy that is going to impact on us in a huge way; it is just something we have to do.

Dr Eve: This is a somewhat contentious point, but “the best places” is a phrase I hear often. I query what that means and whether there is a cycle of tradition here whereby a journal holds prestige because in the past it has published good-quality academic research—I do not want to do that down—but that value is conferred by academic labour in peer review. We could theoretically choose where to do our peer reviews. I remain unsure why we are unable to break this cycle of expensive publishers who have held a monopoly in the past still holding that prestige when it is conferred by academic labour in the first place, and why we have all debated economics when there is a fix, which is to build new infrastructures where we give our labour and are not constrained by the historical accident of publications as they stand. It is contentious and it would require a shift in thinking, but if we thought differently, rather than approaching this by saying we must merely preserve what is, we might have an answer that is better than all this financial wrangling.

Professor Massey: We need to make a distinction between STEM subjects, and humanities and social science. There is a very different approach in those different traditions. In STEM, methodology is very important. Quite often, you can move to gold open access—indeed, that has occurred very easily and quickly—at cheaper cost. If you take medicine for example, if there are 40 trials going on round the world looking at anti-microbial resistance, you will want that in there very quickly. You heard a colleague from the British Academy this morning who is an historian. That does not happen there; there are not 40 Pompeii excavations, or however you wish to look at that. Therefore, the guarantee of quality comes from a model where editors and senior academics who run the professional journals seek advice from other people who are expert in that field, usually through peer review although it can be in other ways. That is a guarantee that what you are getting is not only methodologically sound, but of high quality, and is therefore deserving of being published in those kinds of journals. That is quite expensive. In political science, we are looking at other models and trying to find ways of changing our approach, but at the moment it is hard to maintain that level of quality without having lots of people who are expert in the field guaranteeing that quality.

Q94 Nadhim Zahawi: I think what I am hearing is that it is quite nuanced—on one side, which is admirable, Martin wants to shake up the industry; on the other side, you put at risk real quality.

Dr Eve: When we say that peer review is expensive, that is an interesting statement because it means it is expensive to organise on the basis of a rejection-to-acceptance rate. It does not mean that academics are compensated in any way for the labour of doing that, especially in arts and humanities subjects. I am aware that some STEM subjects do give peer reviewers an inadequate degree of compensation for the time it takes to review a paper. I am not paid for the time I put into reviewing papers. When journal publishers say it is expensive, they mean it is expensive to write an e-mail to ask me to do it, which does not tally with the amount they ask for in some circumstances, but I agree there is nuance here that cannot be disregarded.

Professor Walmsley: It is entirely right that modes of publication will change. One wants to be cognisant of the international setting and the pace at which we move. For instance, BIS commissioned a comparative performance of the UK research base a year or so ago looking at our place in international league tables based on rankings through the REF. Those are often based on these very established journals and the primacy of certain ones

within each discipline. If we change more rapidly than the rest of the world, we jeopardise that. I certainly would not wish to say we should not change as part of that, but the way in which we do it and the pace at which we do it need to be commensurate with maintaining our world-leading status.

Professor Diamond: I agree with that completely. As the person who said “best” a couple of times, can I just clarify that when I said “the best place to publish”, I did not mean the place where everyone has published for the last 100 years? I believe in change. There are examples in PLOS, which did not exist 10 years ago and where some of the best science is now published.

Q95 Nadhim Zahawi: Professor Walmsley, you mentioned the thinking you are having to go through about the allocation of funding. My understanding is that there is widespread uncertainty about how universities allocate funding. What discussions have taken place in the HEI community to determine how allocation will work in practice?

Professor Walmsley: We have had extensive discussions inside the University of Oxford. We have had connections and contacts with colleagues at other universities and through the Russell Group, but there has been no discussion about how we might do that so that every institution does it the same way, for the obvious reason that every institution is different and has a different amount of money from this block grant. But it has been very much an issue that has occupied a lot of time within the university: to understand how to do that in a way that, as Professor Diamond said, is not burdensome for academics and administration, and is as equitable as we can make it.

Professor Diamond: The person in my university in Professor Walmsley’s role produced a wonderful paper to our senior team that looked at the issues and the principles I have outlined about wanting to give everybody in the university the opportunity to publish anywhere they wanted to, and it was believed that in a transition period with a mix of green and gold, the funding would enable us to do that. At the moment we do not find the bureaucracy difficult.

Q96 Ann McKechin: RCUK confirmed that its policy covers all research that is wholly or partly funded, including research that also uses commercial or overseas funding, or is undertaken by students. Is that problematic for authors and their institutions? I do not know whether any of you have direct experience of that issue.

Professor Walmsley: At Oxford more than 40% of our papers are published with international colleagues, and there are two challenges: first, it means that we do not have sole discretion over where publication happens; and, secondly, if we have a mandate to have open access through a gold route, and if that is available and funding is available and so on, we probably have the prime burden to do that. In a case where it is NIH, we may be able to share that easily; in other cases we may not.

Professor Massey: I would echo that. UK universities operate in an international context. We are probably among the most internationalised university systems in the world. If you take my own department, probably more than 50% of my colleagues were originally non-UK. We all research through the European Union and elsewhere in joint groups. We have not yet had a problem because the policy, as I understand it, is a proposal, and bits of it have been implemented since 1 April, but we will have issues if colleagues, particularly from North America and elsewhere, object to some elements of that practice. A knock-on effect would also be that if you have to be wholly compliant with the REF as outlined in the previous sessions this morning, what happens if you want to employ someone who is an outstanding academic from the United States, say, and is not REF-compliant? Do we say that we do not care and we want this person, which is what we should say, or do we say, “We

can't take them because we want to put them in the REF and get the QR money"? I do not think all that has been thought through at all, and we have certainly not been consulted.

Professor Diamond: That is a very valid point. All universities in my view will go with the former point, but it would be sensible if HEFCE clarified the point. It would take almost a nanosecond to clarify that point, but it would just calm a few fevered brows.

Dr Eve: I know there is a lot of angst among early career researchers on this issue. If RCUK-funded PhDs, such as my own, were subject to these conditions, with the bureaucratic overheads that have already been mentioned, how would we allocate that and how would those funds boil down within a department? You simply would not be able to accrue the number of publications in high-prestige journals to get a job afterwards.

Q97 Ann McKechin: So there is much more work required by RCUK in terms of clarifying how it anticipates these guidelines working.

Professor Diamond: On the first point, clarity around international scholars who have published before coming to the UK would be helpful. As to the point about junior colleagues, from where I sit in the University of Aberdeen, it is in our strong interest to further all their careers. It is also in our strong interest, having invested in bringing them to Aberdeen, to make sure their careers flourish at Aberdeen. Therefore, I can speak for the University of Aberdeen in saying we are not in the business of disadvantaging junior colleagues in the slightest.

Q98 Ann McKechin: Do you think RCUK is willing to engage with you about these issues?

Professor Diamond: I have not the slightest doubt that RCUK would have a conversation.

Ann McKechin: I hope we might have a conversation with it.

Q99 Mr Walker: Doesn't the preference of both Government and RCUK for gold open access, together with the limited funding for APCs, mean there is a risk, as the Russell Group has suggested, that cost rather than academic relevance defines where people will publish their work in the future?

Professor Massey: That is a danger. May I nuance that slightly? Having had discussions with people in BIS involved in the policy, the distinction between STEM and HSS needs to be made slightly clearer for the reasons we have discussed. I suspect that the implementation, as far as it has gone, would have gone smoother had a little more consultation taken place earlier. I do not think anyone on this panel would oppose the policy overall. We would like to see it recognise some of the difficulties that have been discussed this morning and on this panel. If we can do that, we can make the implementation a lot smoother. That would recognise that the rest of the world is largely green and is not in a great hurry to go gold.

Dr Eve: It is fantastic that the UK is leading the way on gold and it sends a strong signal that this is what we should do. There are repercussions. The White House responded recently to a petition for federally funding research and is looking into what it should do. This positions us ahead of the crowd and it should be thought of in those terms—not that we are going to be going alone, but that we are sticking and this can work. A Norwegian conference is being convened by the Government in September of this year to see what they can do about this. They are thinking about it. We show it works and we are through.

The problem is whether the issue of APC makes this problematic and how we get through the transition period from moving subscription funds to a supply-side effort. It is

theoretically an economic reconfiguration. The problem is the period when we are paying for subscriptions and for APCs, and how we get through that reconfiguration.

Professor Diamond: I was going to make a slightly different point, which was to reflect on your discussion earlier this morning about SMEs. For SMEs, the point about gold is that it enables immediate access to information that may well then help SMEs to drive the economy.

Q100 Mr Walker: Do you think there is a risk in the current policy—as you said, perhaps it is a matter of more consultation with the HSS side—that without that consultation the quality of research is what could suffer most?

Professor Massey: Yes.

Professor Walmsley: The current model is essentially to take money out of the funding of research to dissemination. One may want to know what is the best value for doing that. There are two elements to that. First, can we, by institutional and other repositories, such as archive, PubMed or what have you, achieve the same ends—access as widely as possible to research outputs as quickly as possible? The second is that we are keen to be able to use this to support the economy. It would be good to know what the evidence is that says zero is better than six months and better than 12, in those terms. That is untested and will take time to work through, but that ought to be a piece of work that goes on at the same time so that we understand the costs being paid to go into this dissemination have a real benefit elsewhere. That is something everybody would wish to support.

Professor Diamond: I could not agree more. It is incredibly important. We are not in the position of doing, if you like, randomised control trials on some of these open access areas. We are in an observational study, and it is unbelievably important that we have research going on over the next couple of years to understand how best to move forward in this arena.

Professor Massey: I entirely support that. It is very important. To give you an analogy, this morning I came here on a train. As a taxpayer, I have already subsidised the railway system quite considerably for many years, but there is no way I am going to get on a train and not buy a ticket. For open access, there has been a lot of talk about SMEs, the economies and the taxpayer paying for this. Let's look at what it is the taxpayers pay for. Are they paying for the fundamental infrastructure for research, and then they have to pay their ticket on top, or are they paying for everything that comes out free at the point of delivery, like prescriptions in Scotland for example? Are we going to have different structures in different parts of the country for different kinds of research? We have not begun those conversations yet. I do not know the answer to them, but I think they are important conversations we ought to start looking at and, as Professor Diamond says, get the evidence. We do not yet have the evidence to say which is best. We need that evidence, and then we can proceed down whichever path is best for us.

Professor Diamond: In completely agreeing with that, the problem is that we will not get the evidence unless we move forward with open access. It is not a question of waiting for the evidence before taking the policy. In social science terms, we have to undertake the policy and then do the action research at the same time.

Dr Eve: Can I bring to the Committee's attention the OAPEN-UK project, which is looking at the impact of gold open access on the monograph ecosystem and whether they sell in conjunction? It is a JISC project that is collecting exactly the kind of evidence we are saying we need here and is a valuable case study for monitoring how this is going. It would be worth considering that.

While we are on embargoes and the differences between STEM and HSS, as a researcher the embargo periods are over-long to my liking. I work in the field of

contemporary fiction, thinking there is value in theorising how this field works as it evolves. At the moment, it can take two years between my submitting an article and it being published, and there is a 12-month embargo on top of that for AHRC work. That means work is three years' old by the time I see it, and that is deeply problematic for those working on contemporary issues. That is not an HSS and STEM problem.

Professor Diamond: I have a lot of sympathy with what Dr Eve said. In the humanities and social sciences, one of the things open access might lead to is improved business models that will shorten the time of publication, because that is a real challenge.

Q101 Paul Blomfield: Can I return to the question of licensing? It has been argued to us that the requirement for a CC-BY licence when an APC has been paid will lead to other countries benefiting from commercial opportunities presented by UK research. Do you think that is fair? Professor Massey, you are nodding.

Professor Massey: I do not know whether it is fair, but it is a fair assessment. I do not think it is necessarily fair to the UK taxpayer. To speak as someone who edits a European journal with very few UK academics being published in every single issue, the view of our European colleagues is that which was best summarised by the Russell Group's written evidence to you, which is that at best the case is not proven. It may be we just need to tweak the licences slightly, but we are not happy as a professional association and discipline that it protects our academics in political studies and elsewhere from plagiarism. I know that was addressed this morning and I will not belabour those points, but I entirely share the perspective of my colleague from the British Academy. I know that political studies shares that.

We are also concerned about replication and the fact that people's work can be used in advertising and charged for without their permission. If you take my colleagues who work in election studies, for example, they could do some work on by-elections that they find is then being used in a wholly partisan way that they would not remotely support. As the colleague from the British Academy said, that would harm their reputation and impartiality. We are not happy that there are safeguards on that particular licence, and we would not be happy to see that continue to be mandated in the way it is.

Dr Eve: Can I just respond on the issue of plagiarism? I strongly disagree with some of the assertions that have been made. The Creative Commons licence strongly states that you must cite the person who wrote the original article and you cannot imply support from the person for your reuse. Plagiarism is a term for the academy to enforce, not a legal term. If somebody were to violate the terms of the licence, you have legal recourse to redress that, and any institution that found a researcher was misusing this material would penalise them, and they would lose their job. I think the risks of plagiarism are heavily underplayed.

The Creative Commons attribution licence can come with significant benefits for the digital preservation of scholarly material. At present, when publishers put out material in a proprietary format, it can be difficult for us to ensure that in 100 years' time that material will still be available to our research community. The Creative Commons Attribution licence allows people to modify the format as computer systems change and accounts for machine translation, so we can ensure continuing access, which is a really valuable point. We want to make sure that born-digital research is safe, and this licence helps us to do that. I entirely agree with the point about commercial use.

Q102 Chair: Earlier I think you made the statement that the risks were underplayed, and you probably meant overplayed. Is that correct?

Dr Eve: I did not quite catch that. What was overplayed?

Nadhim Zahawi: The issue of plagiarism was overplayed.

Dr Eve: I think that the issues of plagiarism in the Creative Commons licence have been overstated and it does not facilitate plagiarism.

Q103 Paul Blomfield: You also suggested that the licence precludes implying support when citing. That must be incredibly difficult to regulate, to the point where it has no meaning.

Dr Eve: If I want to publish a paper in favour of, say, some very extreme political position and cite one of my colleague's Creative Commons Attribution licence, saying, "Look, this guy says...", and cite in a way that it is accepted he supports me, I cannot say that.

Q104 Paul Blomfield: That is a very extreme example, isn't it?

Dr Eve: It is, but neo-Nazism is the example people have trotted out to try to denigrate the Creative Commons licence. I just cannot see that happening.

Professor Walmsley: First, this conversation shows that the territory of licences is not one that is widely and completely understood by all academic colleagues. This makes it a difficult transition when they are choosing where they wish to publish in trying to bear in mind all of these issues. A second important point is again one of nuance and exploring things as we make changes. I gave the example earlier of the American Institute of Physics, which is a major STEM publisher in the US. A very small fraction of its journals allow CC-BY. That is a very positive sign and shows you it is something that should be explored for all the reasons that have been given, but its impacts in terms of predatory publishing, for example, are not yet well understood, and they would like to move at a pace that allows that to be properly worked out.

Dr Eve: Can I ask my colleagues what they think about the discussion? It is important. Universities are commercial entities in some senses now. Does it pose a problem for us as a group if we restrict our licences to non-commercial premises for universities in the UK?

Chair: We are coming on to this, so perhaps you would not anticipate the questions.

Q105 Paul Blomfield: Professor Massey, I want to press you on the concerns you were raising, because the direction of travel is very much pressing CC-BY licences. If not that then what?

Professor Massey: I have forgotten the exact title of the licence, but it is CC-BY and then two bits added on.

Professor Walmsley: The hybrid.

Professor Massey: That is the one.

Paul Blomfield: I am glad you are being confused.

Professor Massey: I had it down in front of me because I thought you might ask that question, but I have mislaid it. As a professional association, we have been in discussions with publishers and looked at ways to do that. The concerns of the academics we represent and our colleagues are the ones I have just outlined and you have already heard. They are anxious that they retain possession of their own copyright and then reinvest it in the publisher, whoever that publisher may be—it may not be one of the big publishers—and whatever model we move to, which we all agree will be changing quite rapidly, and that they are protected in some way given those fears. As colleagues have said, we are academics and researchers; we do not understand the nuances of the licences and the permissions. That is why we publish, because we then get that protection. If we take where we are now and move to something different, they would like to be reassured that all their fears are met. We think we should have had the conversation before we were pushed towards a particular kind of licence. It was not had; the argument has not been won. It may be we do move to CC-BY,

but I do not think it will be CC-BY exactly as it is at the moment because it has the potential for commercial exploitation of a product that someone has produced non-commercially.

Q106 Paul Blomfield: We had a lot of submissions arguing for non-commercial licences to be used instead of CC-BY. Do you think that that would prevent publishers and universities from reusing content? I would welcome a range of views.

Professor Massey: I do not know. We would need to look at it. I have consulted commercial lawyers, not university lawyers, at Exeter. They have said it is not very clear and have made presentations in previous workshops on open access nationally. We would like some clarity and would like to know precisely where we stand on each of these licences. Your question is one that should start the debate from here, rather than my answering it from my perspective.

Professor Walmsley: One wants to distinguish between the research output itself, the journal article, and the intellectual property it contains. If one is considering SMEs, one is talking about the intellectual property, which is managed in a different way prior to publication. There are good mechanisms for handling this. The challenge is how it is reused in the ways Professor Massey and Dr Eve have indicated by, say, other publishers. That is less of an issue for the university per se than for whoever is doing the publishing. That is one where professional societies are particularly concerned and are exploring how that can go. As Professor Massey says, a lot of these things are uncertain and not quite clear and it will take time for the consequences to work out.

Dr Eve: I could not agree more.

Professor Diamond: I agree.

Q107 Paul Blomfield: Returning to the impact on authors in humanities, arts and social sciences because of mandatory CC-BY licensing, are they losing out? It has been argued that they will lose out, and you have made that point. As was argued by an earlier panellist, is it because of the commercial application or because, unlike STEM scholars, they cannot protect their work in other ways through patenting? Can you illuminate that problem for us?

Professor Massey: It is both of those. Patenting is a very important issue. If you take the advances discussed by this Committee with earlier panels as it relates to small and medium-sized employers, access to technology should be very rapid. One of your previous panellists showed the economic advances in her studies, but those are technical issues that are covered by patents. You can have access to the technology, but you would pay a fee through the patent. That kind of protection does not apply in the humanities and social sciences; it is a very different kind of product. I cannot answer your question directly because I do not know the answer, but those are the concerns.

Q108 Paul Blomfield: Are there any other comments on that one?

Professor Walmsley: I support that.

Q109 Paul Blomfield: Can I come to a different question, which is VAT on e-journals? Finch recommended that the Government and the sector should work together to reduce VAT on e-journals to encourage online publication and reduce library costs. The Government are arguing they cannot do that on the basis of EU rules. Do you think the Government should look again at that issue? We know that EU rules are quite often a pretext for all sorts of inaction.

Professor Diamond: I am not going to comment on EU rules, nor on their pretext. What I would say is that anything that can serve to drive down the costs of journals is going to

be of benefit to UK higher education, whether that is VAT or driving down costs through shared procurement or in other ways, which open access can do. Universities are paying far too much for journal subscriptions. If they could be reduced, that money could be used very profitably for both education and research of the highest standard.

Q110 Paul Blomfield: There seems to be general agreement on that.

Dr Eve: There is.

Chair: That concludes our questions. May I thank you and repeat what I said earlier? If you feel there is anything that we should have asked you but did not and you would like to respond to it, please send us further written evidence. Again, we may wish to follow up one or two questions and would be grateful for a response from you if we do so. May I thank you very much for your contribution?