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Federally Funded Research: Examining Public Access and Scholarly Publication Interests

Witnesses: Frederick Dylla Executive Director and Chief Executive Officer, American Institute of Physics Elliot Maxwell Project Director for the Digital Connections Council, Committee on Economic Development Crispin Taylor Executive Director, American Society of Plant Biologists Stuart Shieber Director, Office of Scholarly Communications, Harvard University Scott Plutchak Director, Lister Hill Library at University of Alabama at Birmingham

Members Present: Paul Broun (R-GA), Chair Paul Tonko (D-NY), Ranking Member Zoe Lofgren (D-CA)

On March 29, 2012 the House Committee on Science, Space, and Technology Subcommittee on Investigations and Oversight held a hearing to examine public access to federally funded research and how it may affect the scientific process. Traditionally, access to federally funded research has come through a paid subscription to a publisher holding the rights to the journal article. However, there has been a recent push to make access to these journal articles increasingly more open. Advocates in favor of making federally funded research publically available blame high subscription prices from restricting access. Scientific societies fear the loss in revenue that increased public access would bring.

Chairman of the Subcommittee Paul Broun (R-GA) opened by calling structure of research communication "organic and ever changing." He said that "society's expectations of transparency are clearly increasing" with the move into the "digital age." Broun warned that this situation must be approached cautiously to ensure that science and research are not harmed. He asked the panel if a solution to this issue would be more agency-specific opposed to a "one-size-fits-all policy." Broun said he looked forward to hearing from the witnesses how public access programs currently in place have affected the quality of research.

In his opening statement, Ranking Member of the Subcommittee Paul Tonko (D-NY) began by reviewing the two competing public interests at play in the open access discussion. He said taxpayers would like their funding of this research to be used to "deliver the maximum public benefit." Tonko said on the other hand, the public wants quality scientific research and consequently will not approve of increased public access if it is found to tarnish the quality of the scientific research. Tonko highlighted the National Institute of Health (NIH), the National Science Foundation (NSF), and the Department of Energy (DOE) as examples of agencies moving towards increasing public access. In 2009, NIH adopted a policy which requires all investigators funded by NIH to submit a copy of their final peer reviewed manuscripts to the *National Library of Medicine's PubMed Central Database no later than 12 months after the official publication date.* Tonko said he believes it would be difficult for traditional publishers to survive "without significantly re-thinking their business model." Tonko expressed his preference against imminent legislative action when he said, "I believe we should take the time to hear from all interested parties…and refrain at this time from prejudging the best outcome through prescriptive legislation."

In his testimony, the Executive Director of the American Institute of Physics (AIP) Frederick Dylla communicated that he believes "The current system of scholarly communication is working." He cited the America COMPETES Reauthorization Act of 2010 (P.L.111-358) as effectively mandating all stakeholders to work together to increase public access to scholarly articles. Dylla believes the core of the debate pits the taxpayer's right to access against the financial concern of agencies. Elliot Maxwell the Project Director of the Committee on Economic Development's (CED) Digital Connections Council began his testimony by discussing a report done by CED investigating the facts on both sides of the public access debate for NIH. Maxwell stated that the report, entitled "The Future of Taxpayer-Funded Research: Who Will Control Access to the Results," found that increased public access sped up scientific progress and broadened the scope of knowledge. Additionally, it showed increased public access benefited authors by making access to their work more readily available. He said the report found no evidence of any harm done to the publishers with the exception of a slight decrease in the rate of growth of profits of these publishers. However, it was unclear if this decrease in growth was due to a change in the public access policy of NIH or the nationwide recession.

In his testimony, Executive Director of the American Society of Plant Biologists (ASPB) Crispin Taylor provided an overview of ASPB funding stating that half of the agency's \$6 million in annual revenues comes from publication membership fees. He said that it has been increasingly more difficult for ASPB to maintain this revenue stream with the recent push towards free publicly accessible publications. Taylor expressed his belief that more public access to journal articles would stifle innovation rather than promote it.

Director of the Office of Scholarly Communications at Harvard University Stuart Shieber began his testimony by listing off some benefits of open access including access to scholarly articles by academia, business, and the general public. He stated that economists have shown that open access would have a positive impact on the U.S. economy into the billions of dollars. Shieber said that university libraries have been hurt by the "dramatic" price inflation of membership fees associated with access to scholarly articles. He approved of the open access policy put forth by Harvard and NIH and encouraged more universities and agencies to adapt similar policies.

In his testimony, Director of the Lister Hill Library at the University of Alabama Birmingham Scott Plutchak told the subcommittee how little collaboration occurs between libraries and publishers. He said this lack of collaboration has resulted in unnecessarily contentious debates between the two sides and has ruined the opportunity to come to a decision based off facts and opportunities. He stands in support of open publications but emphasizes that the policy "must be in a context that maximizes the value of those articles." Plutchak believes that public access to scholarly articles must be from a source that continually updates, corrects, and peer reviews the scholarly articles. He said access simply to a final copy of the scholarly article is not enough. He said the public needs access to a copy of the scholarly article that is updated as the real publication of the scholarly article is updated.

Broun asked if there is a "one-size-fits-all" policy that could be used for the entire federal government or if specific policies would have to be determined by agencies. Dylla did not believe a "one-size-fits-all" policy would be effective or appropriate because of the wide array of activities conducted by the various agencies. He said the model adapted by NIH works well for prominent agencies in the medicine and chemistry fields, but the model cannot be adapted with the same success to less prominent agencies in the mathematics and social sciences fields. Taylor commented that he does not believe a mandate is necessarily needed at all he believes individual agencies should govern themselves. Broun asked to what extent these open access forums need to be concerned about piracy from countries like China. Taylor said it is difficult to know who is using the downloaded publications, so it is hard to know the extent and consequences of piracy.

Tonko asked Dylla and Taylor to comment on the importance of peer review on the progress of science and how open access policies have affected this progress. Taylor responded that peer review is important to assess the validity of the conclusions made in the scholarly article. He called peer review "a stamp of validity" in ultimately accepting the conclusions in the scholarly article as valid. Dylla emphasized that the peer review process is not cost-free stating that AIP pays hundreds of PhD scientists from around the world to review 15,000 annual publications. He said however, that this is absolutely necessary because the other option is to put it out on the open market and let anyone review it. He compared it to a blog's review of a restaurant versus a professional review.

Opening statements, witness testimony, and a webcast of the hearing can be found on the Committee web page.