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Questions and Answers on the Future of IP for Research and Innovation

Sean Flynn

QUESTIONS AND ANSWERS ON THE FUTURE OF IP FOR RESEARCH AND INNOVATION

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ABSTRACT

This paper publishes the annotated contents of an interview with PIJIP Director Sean Flynn by the staff of WIPO's work on the Future of IP.[2] All questions relate to the future of copyright with respect to AI assisted innovation.

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[2] https://www.wipo.int/about-wipo/en/activities_by_unit/index.jsp?id=1045

QUESTIONS AND ANSWERS

Q1: What would you identify as a critical issue for the topic of the future of intellectual property?

A: A critical issue for future concerns copyright and artificial intelligence assisted innovation. The COVID-19 pandemic is one example demonstrating that the current IP system may need to change to accommodate and enable faster innovation. AI can speed up research through computational analysis. Such analysis was one of the ways we sped research on vaccines during COVID, for example. And it can speed research for other kinds of innovation. But copyright laws prevent many from fully participating in computer-assisted information analysis. Outdated copyright rules thus become a barrier to global innovation. The future of IP will have to grapple with this issue.

Copyright may be more important than technological barriers in preventing the whole world from fully participating in computational analysis projects and AI-assisted research. It is a myth that only wealthy countries can engage in computational analysis. Our research program has found that many countries in Africa and Latin America, for example, produce over 1000 articles using computational analysis every year. The technology is not that complex. But using the technology to study copyrighted works is not

lawful in every country.[3] Globally distributed copyright exceptions for research uses may be needed to facilitate globally distributed innovation.

Q2: If things went well, being optimistic but realistic, talk about what you would see as a desirable outcome [regarding copyright and AI assisted innovation].

A: A desirable outcome for a positive future of IP in the area of artificial intelligence and innovation would be a global harmonization of copyright norms around the use of works for computational research purposes. A global harmonization around scientific uses of computational research should be accomplishable. This harmonization need not solve all the issues with copyright and generative AI for entertainment purposes that may have its intent and effect to substitute for the creative works that are used. It could instead focus at least on uses of computational research for knowledge production, such as to help speed drug and vaccine research. This is a point made by James Love in his recent article in Scientific American.[4] Over the next decade, I would hope that consensus will be reached on allowing for the scientific use of data through computational analysis within the IP framework. This harmonization could take various forms, such as an international treaty or widely accepted practices.

At present, there is sufficient international flexibility for countries to move forward on their own, and many are. But the ideal future would see broader alignment of research rights across nations.[5]

Q3: If things went wrong, what factors would you worry about?

A: The fear of negative effects of generative AI on creative communities is being mobilized by some stakeholders to push for an updating of copyright law to clarify that computational analysis practices are illegal without consent of the holders of copyright in the works used. There are surely cases under existing copyright law where remuneration may be required, such as when AI programs substantially reproduce works used to train the machines. But if broad rights to exclude computational uses of works are adopted for all products and purposes, there could be a severe negative impact on research and innovation. The problem is that the copyright rights

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[3] Flynn et al, *Legal reform to enhance global text and data mining research*, Science, https://www.science.org/doi/10.1126/science.add6124

[4] 2023. James Love. We Need Smart Intellectual Property Laws for Artificial Intelligence: "One-size-fits-all" regulation will sideline medical and research benefits promised by the advent of artificial intelligence, Scientific American, August 7, 2023

[5] See Flynn, Sean; Geiger, Christophe; Quintais, João Pedro; Margoni, Thomas; Sag, Matthew; Guibault, Lucie; and Carroll, Michael W., "Implementing User Rights for Research in the Field of Artificial Intelligence: A Call for International Action" (2020). Joint PIJIP/TLS Research Paper Series. 48. https://digitalcommons.wcl.american.edu/research/48

in many high quality materials needed for scientific research are held by a small number of dominant multinational publishers. If we give them the power to exclude all uses of their works for research, then they will have the ability to choose winners by only licensing to those with ability to pay the most – the wealthiest universities and businesses. In medicine and health innovation, for example, publishers might sign exclusive deals with only the largest firms, hindering the ability of smaller innovators, or those in poorer countries, from participating in the research enterprise. This would in turn magnify the problem we already have of so-called "neglected" diseases and health conditions where investment flows primarily to researchers located in and focused on the health needs of the global north.

Q4: Looking at internal systems, how might these need to be changed to help bring about the desired outcome?

A: For our IP policy systems to move toward the optimistic scenario where research rights are expanded and globalized, researchers who are significantly affected by IP policies need to be better integrated into IP policy discussions. Currently, researchers are not well organized into associations, especially global associations, that impact IP decision-making processes. This lack of representation can be attributed to low awareness, organizational challenges and historical legacies. In many countries there are processes underway to regulate AI which is driven by concerns about remuneration and exclusive rights. But these processes often lack input from researchers who will be directly affected. Science agencies and parts of the government that represent researchers should be more involved in the IP system.

At the international level, I think WIPO should be more aligned to other UN agencies in the way they approach the concept of open science. open-source content and data and in some way break the silos within the international organizations.

Q5: Looking back, what would you identify as the significant events which have produced the current situation?

A: Perhaps the most significant events that have shaped the current IP system as well as pave the way to the possible optimistic future, involve the mobilization of public interest, consumer and development groups into IP policy debates.

Historically, copyright policy discussions have been dominated by publishers and other intermediaries. But researchers and educators have also

been important even if radically underfunded voices in the system. Universities in Germany, for example, influenced the research exception included in the original Berne Convention. In the early 1990s, reactions to the negotiation of the WTO TRIPS Agreement and other developments led to a broadening of the voices mobilized to impact IP debates. This mobilization brought in consumer groups, academics and developing countries ultimately representing the interests of the majority of those affected by the IP system. Key examples of outcomes of this shift include the narrowing and of agreed statements to the 1996 Internet Treaties, the adoption of the WIPO Development Agenda, and the successful conclusion of the Marrakesh Treaty and the Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge, all of which reflect broader concerns and interests beyond the traditional IP stakeholders. This mobilization represents a democratization of IP policy processes toward broader consideration of the benefits and challenges within the IP system and indicates the possibility that research interests as well could be better reflected in the future of IP policy.

Q6: Looking forward, what do you see as priority actions which should be carried out soon?

A: Priority actions to promote a positive future for IP and research could include a thorough needs analysis of the current innovation and landscape that utilizes computational research. This analysis would identify where innovation utilizing computational research is taking place, the conditions enabling them, and legal barriers preventing them from scaling up. It is crucial to understand who benefits from the IP system and how, and to examine the impact of globalization of the IP system on financial flows between countries. A rigorous analysis in this area is currently lacking, although the necessary information is available. The review of the TRIPS Agreement required by the WTO agreements and the work plans of the Chief Economists at WIPO and the WTO could be forums where some of this analysis could take place.

The benefits of the IP system are largely enjoyed by intermediaries in larger countries, as seen in the academic publishing and pharmaceutical industries. Changes to the system could be prompted by a clear-eyed look at these dynamics, potentially benefiting the innovation system.

Q7: If all constraints were removed and you could direct what is done, what more would you wish to include?

A: Historically, scientific works were not covered by copyright laws, allowing researchers to freely use and build upon existing scientific articles. However, over time, copyright laws have evolved to cover all works, creating barriers for researchers. If all constraints were removed, I would have a global exception in copyright laws to allow unrestricted use of copyrighted materials for scientific research purposes, including in computational research.