



COPYRIGHT IN THE DIGITAL ERA BUILDING EVIDENCE FOR POLICY (2013)

Over the course of several decades, copyright protection has been expanded and extended through legislative changes occasioned by national and international developments. The content and technology industries affected by copyright and its exceptions, and in some cases balancing the two, have become increasingly important as sources of economic growth, relatively high-paying jobs, and exports. Since the expansion of digital technology in the mid-1990s, they have undergone a technological revolution that has disrupted long-established modes of creating, distributing, and using works ranging from literature and news to film and music to scientific publications and computer software.

In the United States and internationally, these disruptive changes have given rise to a strident debate over copyright's proper scope and terms and means of its enforcement—a debate between those who believe the digital revolution is progressively undermining the copyright protection essential to encourage the funding, creation, and distribution of new works and those who believe that enhancements to copyright, are inhibiting technological innovation and free expression.

This debate is poorly informed by independent empirical research. Although copyright law's efficacy and second order effects are largely empirical questions amenable to systematically collected data subject to transparent analytical methods, this type of analysis is too rarely conducted. Instead of asking, "What is the research-based evidence?" partisans tend to rely on claims of and evidence marshaled by stakeholders. This situation contrasts with the emerging pattern in patent policy discussions, where empirical research has begun to play an important role in the genesis and resolution of important policy changes and whose support is becoming institutionalized.

Not all copyright policy questions are amenable to economic analysis. In some cases, it may be possible to determine only the direction of the effect of policy changes, not the magnitude. Nevertheless, a robust research enterprise, supported by public and private funders and using a variety of methods—case studies, international and sectoral comparisons, and experiments and surveys—can inform copyright policy by addressing a range of questions. The research we call for is especially critical in light of digital age developments that may, for example, change the incentive calculus for various actors in the copyright system, impact the costs of voluntary copyright transactions, pose new enforcement challenges, and change the optimal balance between copyright protection and exceptions.

With respect to **changing incentives for creators, distributors, and users**, research could help determine

- how the expenses involved in creative expression and distribution differ across sectors and the role of copyright in generating revenues to offset those expenses;
- under what circumstances sources of monetary and/or non-monetary motivation outside of that provided by copyright are effective in motivating creative activity;
- the motivations of various types of users and potential users of creative works, including both infringers and lawful users; the effects of enhanced enforcement remedies on promoting creativity, technological innovation, and freedom of expression; and
- how the costs of distributing creative content are affected by social media and other new technologies.

With respect to the **enablers of and impediments to voluntary licensing transactions in copyrighted works**, research would help determine

- the significance of transaction costs as barriers to utilization of copyrighted works;
- the extent of problems involving orphan works (whose owners cannot be identified), user-generated, content, and collaborative and iterative works;
- what are successful arrangements for managing transaction costs;
- the roles of public and private institutions in facilitating licensing;
- the relationship of transaction costs to legal rules such as compulsory licenses; and
- changes in transaction costs with new technological and business developments.

With respect to the **enforcement challenges**, research could help determine

- how much is spent by governments and private parties on copyright enforcement;
- against whom enforcement efforts are targeted and what remedies are sought and granted;
- the results of enforcement efforts in terms of compensation, prevention, education, and deterrence;
- how the effectiveness of enforcement efforts is changing with the expansion of digital networks;
- the costs and benefits of current enforcement methods vis-à-vis those associated with proposed new enforcement methods;
- the relative vulnerability of different business models to infringement; and
- the costs and benefits of fair use exceptions and the Digital Millennium Copyright Act (DMCA) safe harbors.

In assessing the **balance between copyright protection and the statutory exceptions and limitations to copyright**, research could help determine

- the costs and benefits of copyright exceptions and limitations in terms of the economic outputs and welfare effects of those individuals, businesses, educational institutions, and other entities that rely on them;
- how copyright and the various categories of limits and exceptions interact with innovative and/or disruptive technologies and platforms; and
- what adverse effects, if any, exceptions and limitations have on copyright holders and their potential to generate economic outputs and welfare effects.

Eventually, research will help inform decisions about **key aspects of copyright policy**, including

- the appropriate scope of copyright protection;
- the optimal duration of the copyright term;
- the best arrangements for correcting market imperfections that inhibit voluntary licensing;
- appropriate safe harbors and fair use exceptions to copyright;
- effective enforcement remedies for infringing use and the best arrangements for correcting deficiencies in enforcement mechanisms;
- the advisability of reintroducing a formal registration requirement; and
- the advantages and disadvantages of reshaping the copyright regime with different rules for different media.

A precondition of good empirical studies is the availability of data across the principal content media on such matters as the costs of production, marketing, and distribution; prices of products and quantities sold; ancillary sources of revenue for creators; consumption behavior; patterns of access including unauthorized access to copyrighted works; licensing terms and the efficacy of licensing arrangements; and the costs and efficacy of anti-piracy technologies and legal enforcement areas.

Collecting, organizing, and making such data amenable to systematic research represents a considerable challenge. Government-collected administrative data, although important and subject to improvement, are far more limited in the copyright than in the patent arena.

It is encouraging that the digital revolution, while transforming the conditions underlying the copyright system, also means that a wealth of information relevant to the functioning of the system is generated and stored routinely in the course of business—for example, purchases, licensing transactions, and website views among others. On the other hand, data about the creation, consumption and distribution of digital media reside largely in the hands of private entities whose incentives diverge from those of investigators. The first task of public and private grant-making organizations should be to cooperate in building a copyright data infrastructure by negotiating access to privately held high priority datasets, and financing their acquisition costs, where necessary.

The federal government can incrementally improve data collection from businesses and consumers by adding copyright-related questions to the regular surveys conducted by the Bureau of Labor Statistics and Census Bureau and by encouraging donations, for example to the Bureau of Economic Affairs, of private sector business data. But the committee recommends consideration of a more ambitious approach. These agencies, together with the National Science Foundation, U.S. Patent and Trademark Office, and Copyright Office should study the advisability and feasibility of a regular systematic survey of businesses' acquisition and use of intellectual property of all types—copyrights, patents, and trademarks. We also recommend consideration of a companion consumer survey to acquire information on user-generated digital content and consumption of digital goods.

The robust empirical research undertaking envisioned by this report should identify both the costs and benefits of different types and levels of copyright and other forms of intellectual property, and carefully distinguish the various impacts of policy options on different stakeholder groups—creators, developers, distributors, and consumers.

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