Research on Copyright, Cumulative Innovation, and Access to Creative Works

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1: Copyright Term Extensions and the Availability of Music: Evidence from "Cliff's Law" (MacGarvie and Watson, with John McKeon)

Changes in copyright duration after a work has been created are controversial. Many have argued that lengthening copyright terms will have little impact on the incentives to create new work, and there is evidence that term extensions have restricted the availability of copyrighted books.[1] In this project, we examine the effects of a recent copyright-term extension on the re-release of recorded music.

In 2011, the UK enacted Directive 2011/77/EU, which extended the copyright terms of sound recordings from 50 years to 70 years. Using the 2011 term extension as identifying variation, we examine the impact of copyright protection on the number of re-releases in the UK of tracks by artists from the early 1960s.

Preliminary results suggest a substantial increase in the number of re-releases of tracks once recording copyright has expired, relative to tracks of the same age and approximate vintage whose copyrights remain in place. The average increase in the number of re-releases after copyright expiry is approximately 69%-167%. The effect of copyright expiry does not have a significantly different effect for artists whose demand is concentrated in the UK (those with more than 50% of their releases in the UK). Results are robust to controlling for artist fixed effects as well as to dropping superstars like the Beatles. Placebo regressions using data on US re-releases of these tracks during the same period confirm our expectation of no increase in re-releases for tracks remaining under copyright.

However, although the availability of recordings as measured by re-releases appears to be negatively affected, it is possible that extensions of copyright on existing works increase access to works via live performances. Because concerts help promote album sales, artists whose works remain on copyright may be more likely to perform them in public. Preliminary results from a small number of artists with more than half of their releases in the UK suggest an increase after 2011 in the annual probability of performing in concert and the annual number of tracks performed in concert for UK-focused artists in our sample. We will also examine data from concert set lists to ask whether copyrighted songs are more likely to be performed than songs of the same age for which recording copyrights have expired.

The main re-release dataset for this study has been collected, cleaned, and prepared for analysis, which is now underway. Additional data on the songs that artists perform in concert has been collected, and is to be prepared for analysis. This project has been selected for presentation at the July 2017 annual congress of the Society for Economic Research on Copyright Issues (SERCI).

2: Copyright and the Production of Hip Hop Music (Watson)

What is the impact of copyright protection on the artistic re-use of sound recordings? A novel, self-collected dataset has been built that tracks re-use in commercial music through a phenomenon known as "digital sampling," wherein past sound recordings are re-used and re-purposed in creating a new piece of music. A first project using this data explores how a court decision strengthening copyrights affected the rate and direction of re-use downstream in the popular music industry. This cumulative innovation

1 Heald, Paul J. 2008. "Property Rights and the Efficient Exploitation of Copyrighted Works: An Empirical Analysis of Public Domain and Copyrighted Fiction Bestsellers," Minnesota Law Review 2007-2008 (4): 1031 – 1063. Reimers, Imke. 2013. "Copyright and Generic Entry in Book Publishing," Working Paper.

setting is among the first for empirical papers on copyright.[2] Given the current dearth, more research in this area is needed due to the norms of re-use and re-appropriation in creative works covered under copyright policy.

Early evidence shows that re-use declined significantly after upstream rights were strengthened by federal courts in the *Grand Upright* decision, with new songs containing between 0.3 and 0.45 fewer samples on average after the decision. Interestingly, there is no evidence of a decline in the song-level propensity to sample (i.e. all of the effect occurs on the intensive margin). These results document not only the change in the music industry's policy with sampling practices and the production of new music, but also point towards a mechanism of inefficient licensing from hold-up and royalty stacking. The data also suggest that prominent artists were disproportionately affected by the ruling, and that restricting re-use lead to a decrease in novel, previously unsampled works being re-purposed in new songs – such that musicians are now drawing from a less diverse pool. While this project is among the first to examine copyright's impact on re-use, it additionally provides evidence of how copyright law can influence the overall direction of a new artistic genre (hip-hop) by altering both the rate and variety of sampling.

The data for this project has been collected, cleaned, and analyzed. A working paper has been drafted and is being prepared for journal submission. During the grant period, minor modifications will be made to the paper to prepare the article for journal submission and eventual publication. Funding will also support travel to present the work at relevant conferences.

3. The Effects of Copyright Enforcement: Evidence from Sampling (Simcoe and Watson)

Building off the sampling data described in the previous project, it is also possible to study the impact of litigation and enforcement on re-use. In May 2001, the music publishing company Bridgeport Music filed infringement suits against hundreds of entities in the hip-hop music industry over unauthorized sampling of Bridgeport's copyrights in sound recordings and music compositions. Using these lawsuits as the source of identifying variation for a matched-sample difference-in-differences design, we examine how the assertion of copyrights impacts the continued exploitation of musical works by other artists.

Many artists view Bridgeport as a pioneer in the business of "copyright trolling." The proposed study will contribute to a small literature on the real effects of Patent Assertion Entities (PAEs) by examining a setting where it is possible to directly observe cumulative re-use, instead of relying on proxy variables such as patent citations.[3]

Preliminary evidence suggests that copyright assertion through litigation reduces the rate at which the underlying music is sampled. The data for this project has been prepared, and analysis is currently in an early stage. With analysis proceeding over the summer of the grant term, it is expected that a working paper draft will be produced by late Fall 2017.

Timeline and Deliverables

- Summer 2017
  - Project #1 drafted, presented at SERCI
  - Submission of Project #2 to journal
- Fall 2017
  - Project #3 drafted
- Spring 2017
  - Draft of additional paper using sampling/streaming data platform

2 Nagaraj, Abhishek. "Does Copyright Affect Reuse? Evidence from the Google Books and Wikipedia" Management Science, *Forthcoming*

3 Cohen, Lauren et al. "Patent Trolls: Evidence from Targeted Firms" NBER Working Paper

Budget Justification
Total Budget: $15,000

Research assistance:
30 weeks,20 hours/week, hourly wage of $22/hour
$13,200

Travel for one author to 2-3 conferences
$1,800