**Research Grant Proposal**

**NBER Economics of Digitization and Copyright**

Applicant: Brett Danaher

Position: Assistant Professor of Economics

Association: Wellesley College

Project Title: Copyright in the Digital Era

**Summary:**

The digitization of media – e-books, mp3 music files, digital movies, etc. – has presented the content industries with a plethora of challenges and opportunities more rapidly than they have been able to react.

Since the rise of Napster and music filesharing, global recorded music sales and licensing have plunged from $27 billion US dollars in 2000 to $15 billion in 2010, with most studies finding that anywhere from half to all of this displacement can be explained by filesharing activity (see Liebowitz 2008, Rob and Waldfogel 2006, and Zentner 2006). Governments have explored a variety of interventions on both the demand side (targeting consumers who fileshare) and the supply side (targeting websites or protocols that support filesharing) to restore the power of copyright laws, often sparking huge public debates such as the discourse over HADOPI (“three strikes law”) in France or SOPA in the US. Despite the increased importance of understanding if and how copyright should be reformed to meet the challenges of the digital age, there exists little academic work on the effectiveness of various interventions.[[1]](#footnote-1) Additionally, content owners have explored a plethora of new, convenient distribution channels in the hopes of migrating consumers from piracy to legal consumption methods that provide a revenue stream, but again little is known about how these channels (often lower revenue) interact with piracy and other legal, more profitable distribution channels.

I propose a set of projects during the 2012-2013 academic year to better understand how various types of government anti-piracy interventions can impact consumer behavior as well as how new channels for distributing information goods (such as music or movie streaming channels) interact with filesharing and more traditional channels like paid digital downloads. Below are descriptions of several of these projects (some of which are already underway and some of which are still in the planning phase).

**Research Projects:**

***The Effectiveness of Supply-Side Government Anti-Piracy Intervention***

One approach governments have taken to dealing with rampant Internet filesharing of illegal content has been to shut down the actual sites or protocols through which these files are shared. Two recent examples of this are the shutdowns of Limewire and Megaupload.com, both of which generated enormous controversy in the media and over the Internet. However, we have little understanding of whether such shutdowns even have any impact on media sales, as pirates may convert to legal sales after their favorite filesharing channels are shut down or they may simply find new means to pirate content, displacing traffic from the old piracy site to a new one. Because these shutdowns typically affect the entire world all at once, it is difficult to simulate the counterfactual of what would have happened to sales if the shutdowns had not been ordered.

Fortunately, there exists cultural cross-country variation in piracy. Not only do some countries pirate more content than others, but two countries with equal filesharing activity may tend to prefer different piracy sites or channels. Thus, when a site like Megaupload is shutdown (treating all countries at the same time), the intensity of treatment varies across countries and we would expect countries with higher pre-shutdown use of Megaupload to exhibit larger increases in media sales after the shutdown if said shutdown has any causal impact. Or, in a more sophisticated analysis, we could model the time trend of sales in each country prior to the shutdown, and then ask if countries with higher Megaupload penetration prior to the shutdown then depart from their pre-shutdown sales trends more strongly than countries with lower Megaupload penetration.

This analysis could also be broken down by genre, with the understanding that certain genres of music or movies are more heavily pirated and thus could be expected to show this pattern greater than others. This methodology could be applied not just to Megaupload but also other shutdowns like Limewire. I have some preliminary results for a small subsample of movies and countries that demonstrates that this approach has merit and that the shutdown of Megaupload had a large positive impact on digital movie sales. However, my goal is to broaden this research to more countries, more forms of media or distribution channels, and more supply-side interventions.

***Panacea or Plague: The Impact of Free Streaming on Music Sales***

As profits from legal sales have eroded in the years since Napster, the music industry has turned to alternative low-revenue distribution methods to entice consumers to legal channels. One of the most controversial has been streaming services, where consumers can listen to any music they like for free (or with an inexpensive subscription fee) but cannot actually own the music. For example, Spotify allows consumers to legally build playlists of nearly any song they like and access these playlists from any computer with an Internet connection. Proponents of streaming complements digital sales, as consumers will be exposed to more music by seeing their friends playlists and listening habits. Sampling can also create a buzz around a particular artist or song. However, critics point out streaming services are also a clear substitute for more profitable paid downloads. But there is no empirical evidence as to how streaming impacts digital or physical sales channels.

I propose a study to identify these causal effects, using panel sales and streaming data across cities in conjunction with several natural experiments – for example, the implementation of the 10 hour “cap” on Spotify users (which impacted cities with high Spotify usages more than cities with low Spotify useage).

Both this study and the previous have a common theme – how to sell (and appropriate revenues from) information goods given the challenges of the digital age, as well as whether government intervention can be relevant to this problem. In general, this is the overarching question that will drive my studies during the 2012-2013 academic year.

**Funding:**

I am requesting a research grant of $20,000. The sole purpose of this will be salary replacement for my sabbatical year. Should I receive this grant, Wellesley College will supply me with a small research fund for the year which I will use for conference travel and acquisition of additional data (from sources like Nielsen).

**References:**

Liebowitz, S. 2007. Don’t Play it Again, Sam: Radio Play, Record Sales, and Property Rights. Working Paper. University of Texas at Dallas.

Liebowitz, S. 2008. File-Sharing: Creative Destruction or just Plain Destruction? *Journal of Law and Economics*,49 1-28.

Rob, R., J. Waldfogel. 2006. Piracy on the High C's: Music Downloading, Sales Displacement, and Social Welfare in a Sample of College Students. *Journal of Law and Economics*, 49(1) 29-62.

Zentner, A. 2006. Measuring the Effect of File Sharing on Music Purchases. *The Journal of Law and Economics*. 49 63–90.

1. The only economic study I am aware of is my own on the impact of HADOPI on French music sales, which I completed during Summer/Fall 2011 funded by an IFPI grant. [↑](#footnote-ref-1)