## Copyright term extensions fail to induce creation of new works<sup>1</sup>

Ari Friedman

In order to drive the the passage of the 1998 Copyright Term Extension Act (CTEA), content controllers, particularly the recording and movie industries, issued statements claiming the 20 years of additional term length was necessary to promote more output. In particular, the Act granted a retroactive extension, where works about to expire received a 20 year extension. While theoretical analyses of the lack of incentive to produce given such a term extension exist, to wit no quantitative study of any such effect has been attempted. Most, if not all, of the existing, theoretical, studies conclude that the additional twenty years of end-of-term life provide virtually no incentive to create, whereas the loss to the public domain of twenty years worth of content hampers creativity through derivation. Thus the net effect of the CTEA is posited to be negative, particularly for the retroactive provisions.

The copyright clause of the United States Constitution states that Congress shall have the power "to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries." There are two components to this clause which we will consider here: a purpose for the clause ("to promote...") and a stipulation that the term of copyright be limited ("limited times"). In 2003, the Supreme Court ruled in *Eldred v. Ashcroft* that the retroactive term extension of the CTEA did not violate the stipulation of limited duration, that the ability to infinitely extend terms 20 years at a time when they were about to expire did not constitute an infinite term. This paper deals with the 'purpose' of the clause. It examines copyright registrations after three different term extensions, and reaches the conclusion that no term extension has had a significant effect, either positive of negative, on output of works under copyright. Therefore, it seems unlikely that any of the major term extensions of the last century did in fact "promote the progress."



Figure 1 shows several patterns worthy of remark. The increases in registrations are relatively predictable, particularly from 1950 to 1991, where a quadratic curve predicts registration

<sup>1</sup> This document is revised and abridged from work done on my own in my first year of undergraduate study. Since then I have received guidance from various professors, particularly Dr. Peter Fader, with whom I am currently working on a quantitative study of airplay data along with Dr. Joeri Mol (U. Melbourne). Yet this work remains my most influential, with over 15,000 having read it from its July 16, 2003 front-page report on Slashdot. The original paper can be found at http://www.abfriedman.com/papers/copyreg/

growth remarkably well (Rsquare=0.993). After 1991 several changes, including 1992's Public Law 102-307 which made renewal automatic for works from 1964-1977, and the implementation of 1989's Berne harmonization efforts, which all but abolished the registration requirement, cause a break in the data's analyzability and hinder accurate analysis afterwards. 1992 saw legislation further reducing the registration requirement. The remainder of this study thus excludes years after 1991 where the registration data becomes unreliable.

Another significant pattern is the influence of major historical events. The Great Depression is clearly visible in the data, along with the post-war speculative boom leading up to the market crash. Continuing onwards, one can see World War II and post-war expansion, followed by the Korean War and an economic adjustment. After this, the aforementioned 40-year trend begins. Thus registrations seem to correlate closely with economic output, with saturation occurring at higher levels of GDP (Figure 2). Possible reasons for the correlation between copyright registrations and economic output include decreased markets for copyrighted works in weak economies, decreased leisure time in which individuals could produce intellectual output, or even that the registration fee caused greater financial hardship. The intrinsic growth rate of copyright registrations combined with its high correspondence to historical events and GDP allow establishment of a baseline from which deviations after the passage of new legislation may be due to the legislation itself. This trend is best analyzed for the 1976 term extension, which was both the greatest in magnitude and occurred in the midst of the 1950-1991 stable trend.



The registration data used in this study encompasses three major expansions of copyright term, those of 1909, 1976, and 1998. In 1909, the term of copyright was extended to 56 years. Nevertheless, the expansion showed little effect on the number of copyrighted items produced. For a decade after 1909, the best that could be said of the law with respect to inducing innovation was that it maintained the status quo (Figure 3), as registrations trended slowly downwards at approximately 0.05% per year. This lack of term extension efficacy is particularly remarkable because it happened in the middle of an economic boom following the Panic of 1907. Thus it is unlikely that the 1909 act provided the creative boost promised by its backers.



In contrast with the decade following the 1909 law, the decade following the 1976 expansion of copyright showed an increase in registrations. However, the registrations failed to deviate from the 40-year trend, and thus the law cannot be said to have encouraged the creation of additional copyrightable works. The large, temporary increase of registrations in 1977 may be an artifact of looking at all copyright registrations: since categories were added, a rush to copyright previously-unprotected works likely occurred. An analysis of a single category of works would consequently provide further clarity, were the data available.



The central question of this paper remains: does increasing the length or protective powers of copyright have any effect on innovation as measured through the number of registrations? The

metric used is unfortunate because it says nothing about the quality of those works produced, as well as being affected by changes in the way such things are registered. However, given that hundreds of thousands of works are produced each year, one must assume that the sheer numbers involved even out the effects of differing quality. So the premise remains valid, with the possible exception of anecdotal reports of quality differences which are equal in the aggregate. Some might claim the 1960's as such a period, for instance. Nevertheless, this approach is the best option currently present, and it seems unlikely that a hidden factor could cause high- or low-quality periods to correspond to decades when laws are changed. Still, with only two sample points, it is possible that chance could play a large role. An approach which attempted to measure 'quality' through subjective ratings still seems doomed to failure, given the notoriously fickle tastes of music consumers, and thus for now quantity will have to suffice as the metric. Given this yardstick, the conclusion is clear, as seen from the decades following the passage of the 1909 and 1976 laws: two changes cumulatively increasing the term of copyright from 28 years total to 50 years past the life of the author show little correlation with increases in the number of copyrightable works produced.