

To patent or not to patent: a pilot experiment on incentives to copyright in a sequential innovation setting

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Abstract

This paper presents preliminary results from a pilot experiment dealing with the economic motivations to contribute to Free/Open Source Software (FOSS). In a seminal paper [Bessen and Maskin \(2006\)](#) argue that in a dynamic sequential innovation framework in which every innovation builds on previous inventions the standard argument for granting patent protection is no more valid and the innovator has at certain conditions an incentive to fully disclose the results of his works; in these same conditions, a copyright strategy could result in a *tragedy of the anticommons* ([Heller, 1998](#); [Buchanan and Yoon, 2000](#)).

We study in the lab the choice of copyrighting or copylefting subsequent innovations in a dynamic setting *à la* Bessen and Maskin, introducing an innovative experimental design requiring real effort on the part of subjects. The players are asked to actually 'innovate' producing words from given letters, and face the choice to *copyright* or *copyleft* their words. Subsequent words can be created by modifying existing words, for free if a word is copylefted, and paying a fixed license fee if the word is copyrighted.

Preliminary results show that copyleft is more likely to emerge when royalty fees are relatively high, and when the extendability, modularity and manipulability of inventions is enhanced. Moreover, copyleft innovations are sparsely started but once set in motion attract a higher number of contributors than copyrighted innovations, generating higher quality innovations and showing a more thorough exploration of possible profitable extensions. Finally, high royalty fees tend to generate anticommons effects, namely a lower rate of cooperation resulting in underuse of resources and lower innovative output.

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