

Studying Uncertainty in Intellectual Property Valuation

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What is the value of an intellectual property (IP) right? In particular, what damages should a plaintiff be able to recover for a patent or copyright infringement? These questions are becoming increasingly important not just to legal systems but also to economic growth and development. The answer, it turns out, depends on when the question is asked. The value of an IP right—e.g., a copyright on a movie script or a patent on a new technology—is deeply uncertain and can change dramatically over time. This uncertainty of IP valuation can cause significant theoretical and practical problems for establishing appropriate damages measures in IP litigation.

Valuing IP for litigation is difficult because IP rights are, to a large extent, like lottery tickets. Early on, at the time that the rights vest, their value is based on the likelihood that they will enable the holder of the right to obtain some share of the relevant market. At this time, IP rights are like lottery tickets before the drawing is held—their value is the weighted probability of winning the lottery multiplied by the size of the lottery. Some years later, however, at a point when the rights are being litigated or sold, their value will have become much more certain. Like the lottery ticket that either won and has value or lost and is worthless, an IP right may have succeeded (e.g., the movie script that gets turned into the summer blockbuster) or failed (e.g., the technology that was not incorporated into a standard). At this time, if the creation covered by the IP right was successful, it will be much more valuable than it was earlier, while if it failed, it will be much less so. Which, then, is the correct measure of the value of the IP right: its *ex ante* value at the time the right vested or was infringed or its *ex post* value at the time of litigation? Furthermore, how should the right's *ex post* value be measured: by the right owner's lost profits or by disgorgement of the profits the infringer made? Again, these can be significantly different values.

This paper will report the results of a series of experiments that test the fit between economic theory, the law, and people's intuitions about the appropriateness of different IP damages measures. In the experiments, subjects are given vignettes of legal disputes where the defendant's liability has been established and the only thing the subjects have to decide is the appropriate compensation. In each vignette, the plaintiff and defendant has different claims for the appropriate compensation based on differences in *ex ante* and *ex post* valuations. Subjects are asked to indicate the appropriate level of compensation along the spectrum of these different assertions. We explore whether subjects prefer the *ex ante* or the *ex post* method of valuation, or the "greater of" approach? We also consider several other related hypotheses.