Facially Apparent (but Non-Obvious as a Matter of Law): Empirical Evidence of Low Patent Quality

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Patents are a bargain: inventors get exclusive rights to practice their inventions; the public gets to know how the inventions work. The public benefits when the disclosed know-how wouldn't be publicly available, but for the patent disclosure. The public is harmed patents claim already-available know-how, effectively removing that knowledge from the public domain. Assessing what was already available is difficult—innovation is often obvious in hindsight.

This article introduces a novel method for evaluating patent quality: using versions of commercial chatbots that predate a patent's priority date, I test whether a patent's claimed innovations were already available to chatbot users on the claimed date of invention. This approach mitigates hindsight bias, offering new insights into patent quality. Initial results suggest that well over a third of recently–granted software patents claim solutions that were already available to most professional computer programmers. Some argue that the public also benefits when patents reward articulating new problems or commercializing solutions. But a system that awards patents for problem-discovery and commercialization is dangerous. Some problems emerge organically. When naturally-arising problems have facially apparent solutions, patents for those solutions give first filers an unearned competitive advantage. Patents leveraging new, accessible technologies—like smartphones or AI—are especially susceptible to this class of socially unproductive grant. And applications for software patents (a growing plurality of which claim AI applications) make up a growing majority of all applications received by the PTO. So while my results do not necessarily suggest that any patents were improvidently granted, they should be cause for concern.