

# The Perils of Legal Scale-Invariance: Information Tipping Points and the Scope of Precedent in the Age of Artificial Intelligence

(work in progress)

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**Abstract.** Artificial intelligence has given everyone the means to imperfect but nearly unlimited forgery, surveillance, and forecasting. Users of AI are flooding all spheres of human activity with cheap machine predictions, generations, and automations. Meanwhile, developers of AI are beset by insatiable hunger for data and computing power. The legal order is stumbling over these scaled-up and sped-up social facts. More of the same can be hard to handle, like floods of AI-generated non-consensual pornography, and at the same time, more is often qualitatively different, like when hedge funds leverage machine learning to create new methods for profit extraction, or when AI companies attempt to train their models on the entirety of digitized written knowledge. Outdated or dubious classifications and ineffective enforcement leave vulnerable people without protections, harms without compensation, and wrongs without reprobation.

A lawyer's natural response is to try to scale up the law: make it handle more cases faster or larger cases better by devoting more resources or automating more processes. This goes with the temptation to think that AI can solve the problems that AI creates. Scaling up the law, however, risks making classification more rule-like, enforcement more total, and legal reasoning less grounded in facts. In turn, algorithmic classification and indiscriminate enforcement can make the law less fair and the legal order less free. In this way, genuine attempts to protect the law's integrity may backfire and undermine it. This article develops the theory of legal scale-awareness to explain why this is the case, highlight the dangers of unspoken assumptions of legal scale-invariance, and point out how common law already holds the tools to react better. Using the scope of precedent in common law adjudication as a case study, it examines information tipping points in speech and surveillance to show how scale-awareness can help the legal order accurately classify and appropriately respond to AI-related social change.

What we need is not scaled-up law, but scale-aware law.