3D PRINTING AND INTELLECTUAL PROPERTY

IP laws were drafted for tangible objects, but 3D printing technology, which digitizes objects and offers manufacturing capacity to anyone, is disrupting these laws and their underlying policies. In this timely work, Lucas Osborn focuses on the novel issues raised for IP law by 3D printing for the major IP systems around the world. He specifically addresses how patent and design law must wrestle with protecting digital versions of inventions and policing individualized manufacturing, how trademark law must confront the dissociation of design from manufacturing, and how patent and copyright law must be reconciled when digital versions of primarily utilitarian objects are concerned. With an even hand and keen insight, Osborn offers an innovation-centered analysis of and balanced response to the disruption caused by 3D printing that should be read by nonexperts and experts alike.

Lucas S. Osborn is Professor of Law at Campbell University Norman A. Wiggins School of Law. He has spoken about the implications of 3D printing on IP at numerous academic conferences and has published seven articles in leading journals on the topic. Since 2014, he has served as an elected member of the Confidentiality Commission for the Organisation for the Prohibition of Chemical Weapons based in The Hague.

"With great clarity, Lucas Osborn skillfully delineates a normative intellectual property discourse operating in a broad social policy context. He proposes a sound, holistic approach to innovation policymaking in response to the complexities introduced by 3D printing technologies."

Phoebe Li, Senior Lecturer in Law, University of Sussex Law School

"Lucas Osborn is a leading scholar on the implications of 3D printing for intellectual property theory and practice. No other scholar has addressed as wide a range of issues across the many areas of IP, and this book synthesizes years of his careful and thorough work. It's a must-read for anyone working on issues relating to this cutting-edge technology."

Mark P. McKenna, John P. Murphy Foundation Professor of Law, Notre Dame Law School

"Lucas Osborn provides a nuanced conceptual framework to begin any analysis of the interaction between 3D printing and intellectual property law. He also articulates the most precise description I have read of how copyright law interacts with 3D files for useful objects. Highly recommended for anyone searching for a sophisticated accounting of where 3D printing could actually disrupt intellectual property law."

Michael Weinberg, Executive Director, Engelberg Center on Innovation Law & Policy, New York University School of Law

"Does the uptake of 3D printing challenge prevailing concepts of patentable subject matter and current patentability requirements? Does 3D printing fundamentally alter the scope of rights and the concepts of direct/indirect infringement? Approaching these themes with legal rigor and bold originality, Lucas Osborn provides an exciting journey with well-founded answers and invites readers to look beyond the traditional limits of patent law."

Geertrui Van Overwalle, Professor, University of Leuven, Belgium

"Lucas Osborn brings important intellectual leadership to the law of 3D printing in this ambitious and groundbreaking study. His comprehensive yet straightforward discussion makes a topic saturated with cutting-edge technology and legal nuance remarkably accessible. An engaging read for lawyers, innovators, and technophiles alike."

Daniel Brean, Law Professor, The University of Akron School of Law, and IP Attorney, The Webb Law Firm

"This timely book walks us through the maze of intellectual property law and policy surrounding the digital marvel of 3D printing, and helps us to understand that the future is now. A must-read for technologically curious and forward-thinking lawyers and policymakers as well as designers and artists."

Nari Lee, Professor of Intellectual Property Law,
Hanken School of Economics

"Lucas Osborn's fascinating new book demystifies 3D printing and explains why this technology is having positive disruptive effects in many industry sectors. The future is bright and the technologies are evolving rapidly, but can intellectual property laws quickly adapt to appropriately regulating digital files that can be transformed into physical goods and back again? Osborn explores the myriad mysteries that 3D technologies pose for conventional IP regimes and how those mysteries should be resolved to promote the public good."

Pamela Samuelson, Richard M. Sherman Distinguished
Professor of Law and Information,
University of California, Berkeley

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I hope that whatever is good in this book brings God glory.

Abbreviations

CAD	Computer Aided Design
CJEU	Court of Justice of the European Union
CRM	Computer Readable Medium
DMCA	Digital Millennium Copyright Act
DMF	Digital Manufacturing File
DRM	Digital Rights Management
EPC	European Patent Convention
EPO	European Patent Office
EU	European Union
EUIPO	European Union Intellectual Property Office
FOSH	Free and Open Source Hardware
IP	Intellectual Property
JPO	Japanese Patent Office
PGS	Pictorial, Graphic, and Sculptural
TPM	Technological Protection Measures
USPTO	U.S. Patent & Trademark Office