

demonstration of phenomena from performing experiments, activities that require quite different apparatus. Based on approaches currently being applied successfully in Finland, his contribution is an interesting counterpoint to what has gone before.

With such a range of authors and topics, there is much to be drawn from this group of essays, which opens up fertile ground for future work. This is one of the editors' aims, so they have certainly laid a solid foundation. They are also honest about some of the deficiencies, notably the volume's partial and episodic nature. Given the many links to be made between the chapters, however, I did feel that an index would have been a useful addition. I would also add that some of the chapters are predominantly descriptive and could go further in providing some analysis and thoughts about the bigger picture, but again this is something that can follow. I do not hesitate, however, to recommend this as a thought-provoking contribution to an important aspect of the history of science and as a potent demonstration of the range of sources historians could be exploiting.

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MARIO BIAGIOLI, PETER JASZI and MARTHA WOODMANSEE (eds.), **Making and Unmaking Intellectual Property: Creative Production in Legal and Cultural Perspective**. Chicago and London: University of Chicago Press, 2011. Pp. vii + 466. ISBN 978-0-226-90709-3. £26.00 (paperback).  
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This stimulating collection comes just at the right time to address both cultural and historiographical concerns among historians (among others) about how to engage with the topic of 'intellectual property'. So rapid and overwhelming has been this term's rise to prominence in daily life and scholarly treatises alike that it is easy to forget that it only acquired any general currency in recent decades. Hitherto it has indeed been hard to find any strictly historical work that placed this increasingly divisive interpretive framework into useful diachronic or critical contexts. Fortunately this volume covers, with politically aware adroitness, the contingent ways in which useful knowledge has been both sometimes appropriated for profit and at other times liberated for the intellectual commons under pressure of political or economic critique. From this survey we learn productively of the non-proprietary representations by which practitioners of science and technology (among others) have treated their subject, in ways that point ahead to a very different future.

The editors of *Making and Unmaking Intellectual Property* assemble a rich array of twenty-three chapters that collectively challenge any (dis)ingenuous attempts to reify intellectual property (henceforth IP) as a primitive concept. Their subtitle of 'Creative Production in Legal and Cultural Perspective' is shared with its originating 2006 conference *Con/texts of Invention*, sponsored by the Society for Critical Exchange, directed by Woodmansee, to assemble an impressively multidisciplinary array of lawyers (including Jaszi), historians, anthropologists and literary scholars (including Woodmansee). To capture the range of perspectives from all such fields, the editorial division of the book into five sections gives readers an effective map through territory sometimes unfamiliar, but never uninteresting,

The first section, 'High and low: IP practices and materialities', focuses on changes in patent law and practice over the last two centuries. Mario Biagioli's opening piece explains how over the course of the nineteenth century – and for the particular national contexts of the USA and France – the legal status of patents was transformed from mitigated monopoly to that of an inventor's right. This is followed by Kara Swanson's parallel study of the changing key role of the patent examiner in the US system, and William Rankin's account of the evolving character of the notional 'Person Skilled in the Art' inscribed in US patent drawings. Looking beyond patents and the USA, the second section is evocatively titled 'Before and after the commons and traditional

knowledge'. Here we see the rich politics of communitarian folklore and non-Western perspectives on tangible and intangible property explored by Marilyn Strathern on social invention, while Chris Kelty studies the invention of 'copyleft', Richard Stallman's radically anti-proprietary approach to sharing software code.

Next, Woodmansee and Adrian Johns (among others) take us into the troubled topic of piracy in copyright, investigating 'IP crimes and other fictions', problematizing the expediently legalistic approach of publishers to protecting their creative assets over the past three centuries. Of more direct interest to *BJHS* readers is the fourth section 'Old things into new IP objects', which looks at how novel kinds of IP management emerged in tandem with new kinds of technoscientific object. Daniel J. Kevles looks at how plant and fruit breeders sought to protect new kinds of asset, while Alain Pottage and Brad Sherman bring the discussion up to date with analysis of IP issues in cloning, along with papers on the troubled issues of pharmaceuticals, genetic commodification and software interfaces. Finally, in the book's closing, somewhat more miscellaneous, section we see the theme of 'Doing and undoing collaborative IP' in contemporary technosciences explored in iconoclastic detail.

Overall the laudable depth of historical and ethnographic study in most chapters of this book would merit its purchase by anyone seeking a standard volume on the subject. It will, however, also interest more politically minded readers to map the clear policy agenda laid out at the end of the editor's opening introduction (p. 36): having shown the historical emergence of 'intellectual property rights' as tied to a very particular past political schema of property and rights, we might look to a future in which we find the territory of this volume analysed in very different and rather more equitable terms.

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