

## **How does law make place? Localisation, translocalisation and thing-law at the world's first factory**

BENNETT, Luke <<http://orcid.org/0000-0001-6416-3755>>

Available from Sheffield Hallam University Research Archive (SHURA) at:

<https://shura.shu.ac.uk/12698/>

---

This document is the Accepted Version [AM]

### **Citation:**

BENNETT, Luke (2016). How does law make place? Localisation, translocalisation and thing-law at the world's first factory. *Geoforum*, 74, 182-191. [Article]

---

### **Copyright and re-use policy**

See <http://shura.shu.ac.uk/information.html>

# ***How does law make place?***

*Localisation, translocalisation and thing-law at the world's first factory.*

Luke Bennett

Reader

Department of the Natural & Built Environment

Sheffield Hallam University

[\*\*\*l.e.bennett@shu.ac.uk\*\*\*](mailto:l.e.bennett@shu.ac.uk)

## **Abstract**

*This article examines how law is implicated in the formation of place, and how place in turn can shape law. It is an empirical explication of Latour's call for researchers to study the global through its local instantiations. Drawing upon recent theoretical work in both material culture studies and legal geography the article examines the interplay of law and material formations at one originating site, Sir Richard Arkwright's Cromford Mills in Derbyshire in order to examine the creation and circulation of a new form of place in the late eighteenth century: the industrial scale cotton mill. It shows how a diverse range of legal elements ranging across patent law, the Calico Acts and ancient local Derbyshire lead mining laws all helped to shape that place-form, its proliferation across the United Kingdom, and ultimately further afield. In doing so the article conceptualises processes of localisation, translocalisation and thing-law by which the abstractions of both place-forms and law elements become activated through their pragmatic local emplacement. Whilst the case study concerns 200 year old place-making machinations, many of the spatio-legal articulations of Arkwright and his opponents have a surprisingly modern feel about them. The paper therefore advocates the benefits of a longitudinal, historical approach to the study of place-making, and in particular, calls for a greater attentiveness in legal geography to law's role in the intentional formation of (work)places by their owners.*

## **Introduction**

This article offers a new approach to the analysis of geo-legal place-making processes, by exploring the complex "glocal" (Hobbs, 2002) interplay of legal, material and spatial factors within the formation and early replication of an influential place-form: the modern factory. It shows how a historical, longitudinal analysis of place-making can highlight the local and distributed effects of trajectories set in train (and/or modified) by changes in both local place-making practice and in

national (and international) “matters of concern” (Latour, 2005, 114) and their attendant law-making endeavours.

This exploration of co-productive action (between the specificities of localised places and the generalities of emergent place-forms; and between changing circumstances over time) will be pursued by developing the concepts of ‘localisation’ and ‘translocalisation’. Furthermore, the article will link these essentially spatio-temporal concepts to the discursive-material concept, ‘thing-law’, to show how enduring forms (and whether of ideas, material artefacts or places) are forged – at least in part – by law’s discursive framing of human-thing material relations. Following Silbey & Cavicchi’s (2005, 556) conceptualisation of “legalfacts”, ‘thing-law’ (and its derivative, ‘place-law’) emphasises the constitutive, ontological interrelationship of law and everyday phenomenon, but it also widens the lens, such that the focus is not just on how law makes aspects of the world, but also upon how – on occasions, as in this case study – aspects of the world ‘make’ (in the sense of provoking or shaping) law itself. Thus, through its attentiveness to the role of discursive-spatial-material co-production this article advocates a holistic study of place-making that gives equal attention to these three elements and shows legal elements to be constantly jostling for position alongside a host of other influences in any place-making situation. The article accordingly asserts that law’s contribution to the complex processes of place-making must be observed alongside and entwined with non-law factors – the relations and effects between them being key to the analysis.

Thus the study presented here is fundamentally interdisciplinary in aim in that in answering the question posed in its title the article simultaneously states and acknowledges (for the benefit of historical geographers) and situates (for the benefit of legal scholars) law’s contribution to place-making, by putting it *into* place, observing the flux of law’s shaping power over any place as it jostles for influence alongside a continually changing array and strength of other place-shaping factors.

### **Situating the article within legal geographic scholarship**

This article’s concern, then, is ‘how does law make places?’ This is an axiomatic question for legal geographers, with much work in this hybrid field having focussed upon situations in which the imbrication of law, society and spatiality can be teased out within localised, bounded settings such as streetscapes, fields, zoos, shopping centres and suburbia (Blomley, 2011 & 2007; Braverman, 2012; Layard, 2010; and Butler, 2005). However much of this research has tended to focus upon delineating the spatio-legal control of access to place, rather than upon the processes and actors of place formation and proliferation. To address this deficit this article will analyse the place-making actions of Sir Richard Arkwright, one of the “early factory masters” (Chapman, 1967) who in the late eighteenth century set out to make, manage and to replicate a novel, and for its time exceptionally large, place-formation: Derbyshire’s Cromford Mills<sup>1</sup>, the first industrial scale cotton spinning factory. The analysis will show – consistent with legal geographers’ recent embrace of pragmatism (e.g. Delaney, 2010; Blomley, 2014) - how this place was made by Arkwright through his intentional co-option of legal elements and how that place, in-turn, shaped law.

In her case study examination of the operations of “the law of place” in the formation of Bristol’s Cabot Circus shopping centre, Layard (2010, 414) shows how developers and urban planners use legal concepts and processes to “create new legally delineated and characterized geographical units that combine individual properties, roads, and squares, as well as residential, office, and cultural spaces into a single, spatially defined unit” (2010, 414). Law thus is used to bring together and represent to the world, a new singular place-formation, one that is formed out of the reorganisation

---

<sup>1</sup> The plural ‘mills’ is used here to match current description of the site, which acknowledges that two separate mills operated at the site.

– and redefinition – of existing local elements. This is the sense in which ‘place’ will be used in this study, and its concern is with law’s role in the conceptualisation, stabilisation and replication of place-forms. Clearly few if any places have an entirely fixed and agreed identity, as Massey (2005) and others argue, place is relational – the possibility being that multiple orientations to a spatial area exist, each framing different, partially overlapping (in time and space) places at that location. But in the case of the place-form being examined in this study, the story of this place – Cromford Mills – is of its spatio-legal stabilisation: how that stabilisation was achieved, how it was maintained and what came along to threaten its integrity.

Layard’s analysis of the Cabot Circus shopping centre interprets the active use of law within place-making practices, as bringing about a form of modern enclosure of formerly public space, and concludes by asserting “a right to the city” in the critical tradition of Mitchell (2003). This focus upon urban critique within legal geography has produced many welcome insights into how power and inequality are implicated in the management of access to space or behaviour within it. But this article will largely eschew the standard critical legal geographical question of ‘how is this place a control of space and how does it discipline those given or denied access to it?’, for much has already been written about the emergence of cotton mills as (like prisons, asylums and workhouses) “complete and austere institutions” (Foucault, 1995, 231) in which child and adult labour was disciplined into machine-like regimens. Masterful analyses of the rise of industrial-scale ‘institutional’ buildings as places of control have been presented in the work of Foucault (1995), Melossi & Pavarini (1981) and Markus (1993).

This article does not seek to deny that facet, but wishes to see what else can be said about the place-law nexus in a very early iteration of such places. As industrial archaeologists Palmer & Neaverson note (1998), there is a danger with both hindsight and totalisation in interpretation of the early cotton mills. The documentary archive, and the physical evidence of the Cromford Mills site, both attest to the contingencies inherent in this place-form’s early development. We now know through the subsequent concentration and elaboration of cotton mills, that this originating place-form and its emergent place-management techniques would lead in subsequent decades to the emergence of “total institutions” (Melossi & Pavarini, 1981, 147). But this rise of the “dark satanic mills” (Blake, 1811, 2) was an iterative, contingent process. It was an unplanned by-product of scaling up and pushing ever-further, what had earlier presented as simple, obvious and local trial-and-error innovations at the early Mill sites aimed at attracting and ensuring a stable workforce at these early, geographically remote and unusual workplaces.

Cromford Mills’ story enables an empirical, longitudinal study of the rise and fall of a proprietary place-formation, and an appreciation of the contingencies of that spatio-legal process. Furthermore, in adopting a historical approach and entangling architecture, archaeology, economic history, organization studies and science & technology studies, alongside law and geography, this study seeks to widen the lens of legal geography (following Braverman et al’s (2014) recent call for this) and uses Latour’s (2005) writings on localisation, association and law to hold its analytical assemblage.

The article will now briefly introduce the subject site, and then explain its conceptualisation of ‘localisation’, ‘translocalisation’ and ‘thing-law’, before turning back to the case study, and applying these concepts to three constitutive legal regimes that were entwined in the making, sustaining and replication of Cromford Mills, during the period 1770 to 1792.

### **Welcome to Cromford Mills**

In 1770 Richard Arkwright, a 38 year old barber from Preston in Lancashire, entered into a business partnership with a Derby hosiery miller, Jedediah Strutt and three others. The partners then took a lease over a small portion of land in the remote Derbyshire hamlet of Cromford, with the intention of building a water powered mill there to house and operate the 'water-frame', the mechanised cotton spinning process that Arkwright had patented in 1769. The partnership's first (five storey) cotton spinning mill was built at this site the following year, and an additional mill (seven storeys) was added in 1776 as Arkwright's business took off. Over the following 20 years Arkwright established further water-powered cotton mill sites in Derbyshire and licensed his technology for use in many more. By the time of his death in 1792 he was one of the richest commoners in the UK, he had been knighted, and was lauded as one of the key architects of the integrated, mechanised and capitalist mode of mass production.

Cromford Mills' role in spearheading the first wave of cotton mills has brought this place much scholarly attention from industrial archaeologists and economic historians and the main studies (Fitton & Wadsworth 1958 and Fitton 1989) were helpfully written in the 'Manchester tradition' of meticulous empirical based business history research, with their analysis grounded upon a "the microcosms of individuals, firms and families who were the operational agents of the activities concerned" (Matthias in Fitton, 1989, xii). This resource provides a rich empirical basis for a study of the spatio-legal dynamics of intentional place-making.

### **Making place via the *localisation* of law**

The world is comprised of local applications, stabilisations or doings which affirm (or undermine) such abstractions as 'the global', within particular, and often embodied, pragmatic projects and this study seeks to follow Latour's exhortation to "stride towards the many local places where the global, the structural, and the total [are] being assembled and where they expand outward thanks to the laying down of specific cables and conduits" (Latour, 2005, 191). In its striding towards Cromford Mills, this study will present and analyse a case study of a place that, for a time, acted as a generative hub, the locus of a strong and influential translocal network of associations through which new ideas, forms and practices circulated. And at this part-place, part-machine site, the law was an important mediator of the constellated associations by which the idea and form of 'the factory' expanded outward from Cromford at the start of the, so called 'Industrial Revolution'.

But this study rests upon a view that law – in abstract and of itself – cannot drive an industry or its place-forms forwards on its own, through the sheer force of its own command or logic. Instead law works through *localisation* – its *em-placement* and embodiment into things and places. A provision in a statute that no-one at a place is aware of, and which is not incorporated into either the fabric of the place (e.g. via conformity to building codes, lease covenants or suchlike) or cultural systems of custom and practice for its management, is weak in its effect on that local situation. Thus the existence of 'as-made' generic law does not automatically shape the making of a place *necessarily*. Instead, there must be some process of localisation by which that provision has been brought to or asserted upon a site. Localisation will often also entail an adaptation to the specificity of local conditions – neither laws, ideas nor material forms will simply transplant 'as is' to their further sites, there will be mutations (which in the case of place, gives it its characteristic specificity, whilst still retaining some resemblance to the form from which it has derived).

But the range of law elements that may influence place-forming is heterogeneous and plural. Law is not just legislation. In addition, civil law (contract, tort, property) provides a tool-kit which place-makers can select from (and/or ignore). But the use of such tools to make or sustain a place, also requires localisation – these tools must be deployed, and their mark made upon space to form and

stabilise place and its bounds. In this article – and as a contribution towards widening legal geography’s own image of the law of place tool-kit - we hear of the place-forming influences of patent law at Cromford Mills, and glimpse Arkwright as an active agent, coming to terms with the “fragile force of law” (McGee, 2013, 147) and the relative efficacy of alternative techniques, to make and protect his places.

### ***Translocalisation – making places through transplanting localisations***

‘Localisation’ is posited above as a process by which a law element and/or a place-type is brought to, and becomes imbricated in a specific location. This picture of localisation is broadly consistent with legal geography’s talk of place-making as a matter of “splicing” (Blomley 2003, 29), or the formation of “nomospheres” (Delaney, 2010) or “lawscapes” (Graham, 2011; Philippopoulos-Mihalopoulos, 2011). But legal geography’s focus upon individualised places means that the processes by which law spreads across space - forming further iterations of place - has been given less attention. Here the notion of law’s localisation can be widened to encompass the mobility of law itself, and its ability to contribute to both the spread of place-types and also the spread of legal consciousness (e.g. that of an infringer feeling the force of Arkwright’s patent rights). Our question then becomes – how did Arkwright spatially and temporally *project* his law-based control over the proliferation of his machine-place formation?

Here the work of Benton (2010) on the geographies of imperial sovereignty in early modern European empires is instructive. Benton portrays the way in which European imperial expansion was achieved in its initial phases through the formation of enclaves and corridors. Territories were not brought under imperial dominion in one fell swoop, instead the spread of imperial sovereignty was spatially incremental, and with differing degrees of ‘thickness’ being achieved. Thus enclaves and corridors were the places in which the law of the colonialists held sway, and those places received a certain stability and identity from that sovereignty. Furthermore, Benton argues that that sovereignty was not a given once introduced to a locality – it had to be constantly performed in order to be maintained. Likewise the reach of Arkwright’s proprietary law-effects, and of control over the dissemination of his place-formations, required active effort and his law-effects were felt more strongly in some areas than in others.

Benton argues that many agents acted as the means for the formation and sustaining of those zones of imperial sovereignty, and gives particular prominence to pirates’ role as carriers of imperial sovereignty. This at first glance appears counter-intuitive, for pirates are culturally the epitome of lawlessness, but Benton shows that where-ever they went the pirates carried with them European notions of jurisdiction. In short, pirates helped to spread European imperial sovereignty, and the places that pirates made, were places made in the European jurisdictional mould. Benton styles such agents as “vectors” (2010, 112), using that expression in its biological sense of a carrier by which an infection is spread. This points to a mobility of law, but also to that transmissivity causing further localisations of the thing that is so transmitted, hence ‘translocalisation’.

Benton shows the performative dimension of a core legal aspect of place-making (i.e. the imposition of imperial sovereignty upon a colonial territory). In particular she highlights the active, constitutive role of key local stakeholders (e.g. governors, traders, pirates, the indigenous population) in achieving the localisation of imperial law within these enclaves and corridors. This was achieved through both the governor’s active imposition of imperial law’s command and the settlers’ active adoption of imperial law-tools to organise their trading and other activities by which they could settle and survive there. Whilst this on one level is simply another description of law’s localisation, it is also an example of *translocalisation* – for in the iteration of those practices, and the mobility of

their vectoring, multiple similar places are formed by reference to legal mores already tried and tested elsewhere (i.e. back in the European capitals from which the colonialists came). The vectors thus spread European laws, and in doing so replicated European formations of place.

This article seeks to trace Arkwright's vectoring of his proprietary law-effects and his Cromford Mills place-forms.

### **Thing-law and place-making**

We are presently experiencing something of a 'material turn' in social theory (Latour, 2005; Whatmore, 2006; Barad, 2007; Miller, 2009; Bennett, 2010; Hodder, 2012; Olsen, 2013), and there are some tentative signs of that turn reaching legal scholarship, an early signal of which was Hogg's declaration that

"if we were to take the spatiality of legal practices seriously ... we should cease to look upon law as a closed, formal and acontextual system and see it instead as an assemblage of heterogeneous elements, discursive, social and technical. These elements include distinctive physical structures, spatial arrangements and rituals as well as texts and rules." (2002, 34)

Law then, is found in fragments scattered across the material-discursive entanglement that is our world, including its places, conversations and artefacts.

This material turn is not a lurch from a discourse fixated analysis to a dogmatic material-behaviourism. It is instead a call to widen the lens of analysis, in crude terms to study both the baby *and* the bathwater. Thus Benton's study (2010) argues that the imperial enclaves and corridors were formed by a combination of material and discursive associations: the soldier's gunpowder, the merchant's cloth, the preacher's sermons and the governor's legal edicts. Human culture (of which law is part) is not separate from a 'natural' world, instead humans are unavoidably entangled with the non-human, and the taxonomic determining of 'types of things' (and their boundaries) is often a function of law's role in thing- and place-formations.

Law is acknowledged by Latour as an important part of the framing of things and their associations. Thus understanding how law was seen and used by Arkwright at Cromford Mills is an important key to understanding the formation, and durability, of this place-formation (and its ability to influence other places). But whilst law has glue-like, stabilising associative properties, its adhesion can be weak. McGee (2013) urges study of the manner and efficacy of "law's makings" (McGee, 2013, 128) and their durability. Law contributes to the making of things by directing resources (e.g. grants, tax incentives, requisitions, bans, taxes etc) towards (or away from) a particular object-goal or of formation. It also 'makes' via processes that directly materialise law-sanctioned forms into the built environment: for example as boundary fences, bus lanes and buildings constructed in conformity with legally approved permits or specifications. Law is a key part of materiality (the human/non-human relational nexus), because all human-made tangible and replicable things are at least in part the outcome of law-driven associative processes which, via texts and performative practices, weave law's abstract discursive elements into objects-in-the-world.

Silbey & Cavicchi (2005) have helpfully foregrounded the under-explored relationship between law and the formation and governing of things. Using the example of the motor car, they show how a car is both an assemblage of mechanical parts and the result of an intertwined set of policy and legal processes. They emphasise that the conditions of possibility for the existence of any car are substantively set by a quiet but potent set of laws that tell us whether cars are allowed to exist, how

they should perform and what they should look like. Law then, has a fundamental ontological function, it shapes how things are, or can *be*.

*Thing-law* is law's framing of the permissibility and form of objects and the defining of their essential (or most important) qualities. Thing-law (and the law of place, or *place-law*, is a sub-set of thing-law) is part of this medley of associative and vectoral processes by which both models of places and localisations of law can travel and replicate. A study of thing-law in the spirit of Silbey & Cavicchi should show how a legal formulation (clearly a *discursive* artefact) affects (and/or is affected by) a material artefact, and how each affects the performance or proliferation of the other within the bounds of temporality and spatiality.

The following three Cromford Mills examples will seek to explicate the thing-law and place-law relationship, and show law's involvement in the localisation and translocalisation of an influential place-formation (Arkwright style cotton mills). Indeed, in its concern for tracing the making and the circulation of 'forms' of a type of place this paper will show that the boundary line between thing-law and place-law is only one of size, fixity and divisibility (i.e. places are more mutable – prone to change, variable interpretation and sub-division - than cars). And yet, both cars and factories are regularised associations of permitted artefacts – forming stabilised objects, in turn comprised of other smaller objects. Legal geographers must trace how the law is being used by human actors to allow, recognise and reproduce distinct thing- and place-types. In short, they must show how law helps to make things and places.

### **The Calico Acts, thing-law and Cromford's conditions of possibility**

As Berg (1994) notes, economic historians have argued at length about the causes of the Industrial Revolution. But one factor is often overlooked. It alone did not cause the cotton rush, but it did *allow* it. Changes to the legal status of cotton within England during the eighteenth century enabled Arkwright and his partners to make things at Cromford Mills that could be lawfully sold and circulated. Without those changes Arkwright would have had little if any reason to build his mills there, or anywhere else. Cotton's thing-law status under the Calico Acts<sup>2</sup> of the early eighteenth century had to be changed, before the cotton mill could appear as the exemplar of a new industrial place-form.

The Calico Acts show what was important to polity and society at the dawn of the eighteenth century. They represent a form of industrial regulation that at one glance appears familiar to modern eyes – an attempt to promote certain industrial sectors, and to suppress other less desirable commercial developments. However, the focal point of this legislation is alien to our understanding, with its expressed allegiance to one type of textile over another, and the surrounding atmosphere of passion and violence attaching to that divide.

In the late seventeenth century the East India Company had started to import Indian calicos (printed cotton fabrics) into England. These textiles proved to be very popular, but also came to be symbols of unpatriotic indulgence. This sentiment in part was due to the prevailing mercantilist economic creed which saw any net outflow of capital from the nation (here as payment for imported Indian calicos) as undesirable. It was also in part due to fear that the increasing popularity of cotton goods would undermine the English woollen textiles industry, a sector with both an important economic

---

<sup>2</sup> Whilst history books talk confidently of itemised 'Calico Acts' none actually bore this name, the statutes in question (although passed in an era when short titles had yet to stabilise) were the Woollen Manufactures Act 1688 c. 32; Woollen Manufactures Act 1702 c. 22; Woollen, etc., Manufactures Act 1720 c. 7; the Manchester Act 1736 and the Duty on Cotton Stuffs, etc. Act 1774 c. 72.

and deep-seated political/cultural contribution to English society. Englishness was epitomised by wool – a link embodied in the woolsack that is still the seat of the Lord Speaker of the House of Lords.

The Calico Acts then, were partly a measure to protect the home-grown woollen industry against the threat of foreign fibres and fabrics, but they were also attempts to assuage anti-calico mobs, whose activities included attacking calico wearing women in the street, sometimes by throwing acid. The 1721 Act sought to co-opt the public, through a £5 bounty payable to any informer who brought a calico wearing miscreant before a magistrates. Streets, via this thing-law, became surveillance-scapes, places in which the anti-calico campaigners could continue (less violently) their defence of wool, with some statutory backing.

The Calico Acts also turned cotton into contraband. In 1700 the retail and consumption of India's printed calicos was banned and then in the face of rising imports of *unprinted* Indian calicos a further Act was passed in 1721 banning the import of calico whether printed or plain.

In 1736 the Lancashire cotton industry obtained a relaxation via the so-called 'Manchester Act' that permitted *half*-cotton goods made with a flax warp and cotton weft<sup>3</sup>. By the time Arkwright was ready to launch his cotton thread producing business in 1771 - which could produce cotton of sufficient strength that it could replace the use of flax as warp thread and thus open an era of British made *full*-cotton goods - the legal status of domestically produced calicos required urgent clarification. In other words a clear re-formulation of cotton's thing-law was needed in order for the Cromford Mills to be viable.

Arkwright and his associates petitioned Parliament for this purpose in 1774. Strutt, Arkwright's partner, pointed to the instability of cotton thing-law under the Calico Acts, highlighting that in the Manchester area printed British calico was being charged excise duty at 3d per yard, whilst in London the same fabric was being charged excise at 6d, the rate applicable to imported calicos. The petition called for the law to be clarified, and in the adventurers' favour.

The lobbying process also saw Strutt proposing to the Board of Excise that English calico needed to travel with its own embedded declaration of conformity, and the Board decided upon a requirement for three blue warp threads to run the full length of the cloth, and an indelible stamp mark to be affixed at each end declaring 'British Manufactory'. Thus the cloth would vouch for its own legality.

Here is an instance of law's materialisation - of law's concern for international trade and its effective regulation – being localised within the very body of individual rolls of cloth. And here, is Arkwright's realisation that the fortunes of his place (Cromford Mills) was entwined with the thing-law status of its products and their regulation.

### **Translocalising Cromford Mills: Arkwright's patents and the proliferation of a place-model**

For Thomas Carlyle, writing in 1847, Cromford Mills was the "Mother of all Mills" (quoted in Fitton, 1989, 229) and in his evidence to a 1816 Parliamentary Inquiry on the factory system prominent mill owner, Sir Robert Peel said of Arkwright: "we all looked up to him and imitated his mode of building" and "our buildings were copied from the models of his works" (quoted in Fitton & Wadsworth, 1958, 98)<sup>4</sup>. In this section we will consider the extent to which the thing-law (and corresponding place-law)

---

<sup>3</sup> In textile weaving the warp runs lengthwise (vertically) and the weft runs transverse (horizontally).

<sup>4</sup> One unauthorised German iteration of his model, even translocalised the name of Cromford itself. Part of Ratingen is named after Cromford, as this is where in 1783 Johann Gottfried Brügelmann erected the first cotton spinning factory on the European continent.

function of Arkwright's two patents drove, or shaped this translocalisation of his then revolutionary place-idea.

#### *How did Arkwright's place-model spread?*

Using a 1788 survey Chapman (1981, 6) shows massive expansion, from 15 or 20 mills "built on Arkwright principle" at the start of the 1780s to over 200 by 1788. These first-wave mills replicated Arkwright's cotton spinning technology, his plant's scale and built-form<sup>5</sup>. Some did so lawfully, under licence to Arkwright. Others adopted Arkwright's patented technology without authority, and faced the risk of Arkwright's periodic actions against infringers.

It appears that initially Arkwright sought to use his 1769 water-frame patent to prevent competition<sup>6</sup>. Arkwright's decision to patent was a characteristic pre-emptive, defensive measure – set in the uncertain legal terrain of eighteenth century patent law – for to fail to patent could mean exclusion from use of your own invention by another's rival patent. There is no evidence of Arkwright having licensed his technology prior to the securing of his second patent in 1775. This second patent related to a group of cotton preparation techniques (such as mechanical carding) and represented an attempt by Arkwright (by then wealthy and market dominant industrialist) to further entrench his dominance by extending his control to the preparatory stages of cotton thread production.

Arkwright's fixation with controlling competition would have a number of effects upon the physical form of both Cromford Mills, and the proliferation of Cromford-like places. Arkwright's first Cromford Mill, at five storeys - with machinery filling every floor - was a sea-change from the diffuse, home-working arrangements (and corresponding place-formations) of the day. But it was a change of scale that was exaggerated by Arkwright for his own commercial ends. His mills simply did not have to be *that* big. For Berg (1994, 241) it was actually Arkwright's patents that "enclosed the [water-frame] within a factory" – his technology could have been released for use in smaller scale ventures, but Arkwright chose not to do this. There was nothing that required Arkwright's technology to be applied only at factory-scale utilisation. Instead factory-scale adoption of his technology (and thus assurance of a faithful replication of the Cromford Mills model) appears to have been a product of his refusal to licence his technology to mills with a production capacity of less than 1,000 spindles. For its time, this required a quantum leap in the size of industrial buildings, and building and running such super-mills would require substantial capital outlays. This would deter all but the most serious of competitors, and Arkwright set his royalty rates high also. Therefore, through the terms of his licences, Arkwright forced the proliferation of Cromford-sized mills. But he also inadvertently provoked the development of unlicensed mills in Scotland and in Ireland, areas where Arkwright's second patent did not apply<sup>7</sup>.

The patent law of the eighteenth century was vague, deriving from the residues of Crown monopoly granting powers in the wake of the 1624 Statute of Monopolies and a patent was only strong once it had survived the ordeal of a legal challenge. In 1781 Arkwright brought proceedings against nine patent infringers. One infringer, a Colonel Mordant, decided to resist and received support to do so

---

<sup>5</sup> Care needs to be taken here, as Berg (1994) shows, of the 900 cotton spinning mills in the UK in 1800 300 were of the large factory Arkwright type, whilst 600 were much smaller establishments, using rival spinning technologies. However, that Cromford Mills could spawn 300 imitators is considered remarkable in its own terms, and warrants this paper's attention.

<sup>6</sup> The patent conferred exclusive right to use that technology during the 14 year period of the patent.

<sup>7</sup> 'English' patents covered England & Wales, Berwick-on-Tweed and (on request) the colonies. But Scotland & Ireland maintained separate patent systems until 1852.

from a group of Manchester cotton spinners. Mordaunt's defence was successful<sup>8</sup>, and Arkwright's defeat encouraged others to adopt Arkwright's carding processes freely.

In 1782 Arkwright petitioned Parliament to extend his original 1769 patent, hoping to follow the example of James Watt who had successfully done so for his steam engine patent in 1775. But by the 1780s the monopoly rights attending to the hallmark inventions of the 'industrial revolution' were increasingly coming under attack. Arkwright's application was duly opposed by Manchester spinners, and defeated. In an attempt to reassert his 1775 patent Arkwright brought a new infringement case against Peter Nightingale<sup>9</sup> in early 1785, it was successful, but six months later via a writ of *scire facias*<sup>10</sup> Arkwright's second patent was declared invalid<sup>11</sup>, and a new wave of cotton mill building could begin, free of the shackles of Arkwright's patents.

It might be expected – viewing the situation through modern eyes – that Arkwright's patent documentation would have proved to be one of the main vehicles by which a knowledge of how to build an Arkwright type mill would have circulated. However, it appears that contemporary vagaries of patent law prevented this, and instead Cromford-type mills were replicated by the commercial training and assistance provided by Arkwright as part of the licensing of his technology, and by industrial espionage. The dominant way of spreading technical know-how was through seeing and doing – not through writing things down (Pottage & Sherman, 2010). For much of the eighteenth century the thing-law action of patents presented vaguely bounded, indeterminate "fuzzy objects" (Macleod, 1988, 7). Pottage & Sherman (2010) show that the notion that a patent would directly enable the replication of an invention at a new location, was itself the product of the rise of the machine age, as a notion of facsimile reproduction had not existed before and by the 1770s patent law was starting to evolve and the specificity of Arkwright's patents came under scrutiny. By his own admission Arkwright's second patent was vague – providing only partial<sup>12</sup> and opaque depiction of the inventions<sup>13</sup>. In 1778, in *Liardet –v- Johnson*<sup>14</sup> the principle was finally established that patents represented a social compact, in which the inventor shares his invention with society at large through a workable specification, in return for a period of monopoly rights. That principle saw the revocation of Arkwright's patents in *R. –v- Arkwright* (1785)<sup>15</sup>.

#### *Patents, secrecy and the enclosure of Cromford Mills*

In the wake of his 1785 defeat, and the loss of his patents, Arkwright changed tack, seemingly losing faith in the law's protection of his inventions. This turn enables us to consider how his physical management of his Cromford Mills site was a materialisation (and thus localisation) of his legal machinations.

From the outset Arkwright had had a three-pronged strategy for protecting the commercial value of his inventions, so far we have considered two of these: first, by promoting large mills which competitors would struggle to match; and secondly protecting (and enforcing) his patent rights. But the third, concerned the physical embodiment of secrecy at Cromford Mills. On this latter –

---

<sup>8</sup> *Arkwright –v- Mordaunt* (1781) unreported, K.B. (cited in *R-v- Arkwright* (1816) Dav. Pat. Cas. 61)

<sup>9</sup> *Arkwright –v- Nightingale* (1785) Dav. Pat. Cas. 37, (K.B.)

<sup>10</sup> A proceeding by which the validity of a patent may be called into question.

<sup>11</sup> *R. –v- Arkwright* (1785) 1 Hayward's Pat. Cas. 263 (K.B.)

<sup>12</sup> The trial revealed also that the specification included certain elements that Arkwright had never used in his own factories, and which – through superfluous *addition* - appeared included in order to confound any copyist.

<sup>13</sup> Arkwright had publically admitted that his specification was intentionally vague, but had claimed that this was intended to prevent his technology being replicated abroad.

<sup>14</sup> (1780) 62 Eng. Rep. 1000 (K.B.)

<sup>15</sup> 1 Hayward's Pat. Cas. 263 (K.B.)

eminently practical – instance of place-making, one of the few surviving communications penned by Arkwright is a short letter to Strutt from 1772, in which Arkwright urged Strutt to hasten to supply locks for the newly built first Cromford mill, it also shows Arkwright to be gravely concerned with providing physical security for his premises and its innovative mechanical contents: “I am Determind for the feuter [future] to Let no persons in to Look at the wor[k]s” (quoted in Fitton, 1989, 32).

Chapman (1967) suggests that it is likely that Arkwright’s partner, Strutt also shared his concern for physical secrecy, pointing out that Strutt’s own Derby hosiery mill had been constructed without windows – the sole illumination being provided by skylights, to deter the industrial espionage of onlookers. Indeed Chapman sees the choice of factory form (with production processes and apparatus centralised into a single controllable place, rather than distributed across multiple venues) as motivated by a desire to ‘build’ a place of secrecy, a physical strategy developed in the face of the vagaries (and costs) of the patent system.

But there was also another reason why Arkwright and his partners wanted to make Cromford Mills a secure, defensible place. Arkwright was haunted by fear of the mob. In 1768 spinners had attacked inventor James Hargreaves’ spinning jennies in Lancashire. Arkwright had left Preston around the same time and chosen Cromford because of its remote location, and the fact that it was not in an established textile producing area (but still fairly close to the hosiery trade centred around Nottingham, the source of Strutt’s fortune).

During its first 20 years of operation Cromford Mills came increasingly to represent a “gated community” (Atkinson & Blandy, 2007) physically manifesting both Arkwright’s realisation that patent rights-alone would not protect his business, and his fear of the threat of proto-Luddite<sup>16</sup> mobs. It is particularly notable that in the period 1785 (the year he lost his patent protection) to 1791, satellite buildings sprang up around the perimeter of the site, each joining to their neighbour to ultimately form an enclosed compound, accessible only through a portcullis-like gate with attendant gatehouse (Menuge, 1993; Palmer & Neaverson, 1998). And this fortification featured an absence of ground floor level windows at exterior street level, to prevent in-lookers and attackers alike.

In addition to industrial espionage, violent protest by those disadvantaged by socio-technological change in the textile industry was an occupational hazard for the early factory masters. Arkwright had direct experience of angry mobs. In 1779 his plans to build a mill in Lancashire had been thwarted when rioters attacked his part-built Birkacre mill, in Chorley, Lancashire and burnt it to the ground. The mob had then threatened to march on Cromford. In defiant response Arkwright announced that they would be met there by an improvised local force who would defend the Mill compound with 1,500 small arms, a battery of cannon and 500 polearms.

In this instance, Arkwright chose not to entrust his site’s security to legal prophylactics (such as injunctions, or to petition for protective legislation as Strutt would later do in 1788). But Arkwright was by no means anti-law, and showed no hesitation in recourse to it when it suited him. In the aftermath of the Chorley attack he sought legal advice on whether a claim for compensation under the 1714 Riot Act could cover lost stock in addition to damage to buildings<sup>17</sup>. And Arkwright’s question was essentially one of thing-law: how was the Act viewing Birkacre Mill? As a set of buildings, or as a place of manufacture, with valuable artefacts there additional to the buildings?

---

<sup>16</sup> ‘Proto-’, because The Luddites, and their famous attacks on mechanical looms, would not appear until the 1810s, but occasional riots against aspects of textile mechanisation had been a feature of the late 1700s.

<sup>17</sup> A subsequent petition by Arkwright to Parliament seeking compensation for the attack was unsuccessful.

Following the attack in Chorley (and death threats he had received from Manchester), Arkwright decided to abandon his plan to build mills in Lancashire. But even the East Midlands were not without unrest. Strutt had experienced attacks upon his hosiery business' sites Nottingham, and would later be instrumental in a campaign that successfully lobbied Parliament for the Protection of Stocking Frames etc Act 1788 which – as a further instance of textile related thing-law - defined hosiery looms and framework knitting frames as worthy of special protection in the face of frame breaking and theft by local Nottinghamshire hosiery weavers. The 1788 Act exhibits a preoccupation with attempting to control what weavers might do to weaving apparatus loaned to them as part of the traditional 'outworking' system. It sought to reach into 'private' homes of weavers, in pursuit of the regulation of things that they might have there. Such legislative protection was simply not needed for an Arkwright factory, for his machines were in the relative safety of their owners' establishment<sup>18</sup>.

#### *Journeyman, migration and the normativity of Cromford Mills*

But – as we have seen – Arkwright struggled to control the proliferation of illicit copies of Cromford Mills. Whilst extraordinarily large, Cromford Mills' buildings were of a 'time-less' block form, built by local craftsmen well versed in the stout form of water-powered corn mills and the machinery within them was a collection of gears, wheels and axles. No surprise then that Arkwright advertised for clock-makers and wheel-wrights to help build his first mill. This was not high technology that could only be mastered by staff initiated through years of apprenticeship. Arkwright knew – from his own experience – that a place such as his could be built by anyone, using existing craft skills. Surviving indentures show that Arkwright sought to impose confidentiality clauses and sureties upon his workers – fearing the replication of Cromford Mills through his trained staff moving elsewhere. And there is considerable evidence that despite such clauses, rival mills were indeed established by former Arkwright staff, sometimes with his blessing, and at other times not. Indeed, one of Strutt's employees – Samuel Slater – who had learnt the workings of Strutt's Arkwright-style cotton mill at Belper, left Derbyshire for the United States in 1789, and there founded North America's first cotton mill at Pawtucket on Rhode Island in 1791, thereby transplanting the Arkwright mill to a new continent.

But in taking such steps, these employees were merely continuing a trend of licit and illicit translocation of textile mills, for in scale and form Cromford Mills was actually itself a replication of the Lombe brothers' 1722 silk mill at Derby, which itself was based upon an illicit appropriation of Italian silk spinning technologies. Indeed the story of the establishment of non-native textiles (like silk and cotton) in England, is one of opportunistic migration – of people carrying knowledge (recalling here Benton's vectors) - seeking out enclaves that best suited them, places where existing conditions were conducive to commercial success. Thus Arkwright had sought out Derby and Nottingham for their prominence in silk and hosiery, and those textile trades had migrated to those towns because of the break-down of trade guild controls that had, until 1728 concentrated this production into the Huguenot centres of London. That control had been declared unenforceable in a case before Nottinghamshire magistrates, who had refused to recognise the restrictive apprenticeship and production control ordinances of the London Company of Framework Knitters.

---

<sup>18</sup> But law would not be absent inside the mills – owners devised their own rules to keep their workers attentive to their tasks, and Bentham's design for the *Panopticon* in (1791) reflected a widespread belief that workers aggregated within factories would need overseeing, and workplace rule systems were developed locally and iteratively in order to discipline the factory.

But just as the early factory masters had sought out places in which they could found their new business free of guild or other legislative control, so they would in turn create their own normative orders for their new place-formations. Strutt's sons conceded (defensively) before a Parliamentary Inquiry on factory working conditions in 1816 that the operating arrangements at their own Silk mill at Derby were based upon the mill design and operational management laid down at the Lombe mill 100 years previously, and which – in their view - had become determinative of local practice since that time. Sir Robert Peel – a very influential cotton mill owner of the generation that followed Arkwright and Strutt – would similarly point back to Arkwright's operating practices to justify his own operating arrangements at the same inquiry.

Peel also sought to legislate his view of the normativities of factory operation<sup>19</sup> by promoting the 1802 Health & Morals of Apprentices Act, which for the first time set national place-law standards requiring every room in a factory to be whitewashed at least twice per year, imposing controls on ventilation and temperature, and a stipulation that the Act's requirements should be displayed by poster within the factory – a localisation and materialisation of the law's command within those places. Peel's initiative instigated a process that would see the factory place-formation increasingly becoming the subject of a statutory place-law, via the Factory Acts<sup>20</sup>.

### **Multiple places in the same space: doing battle with lead at Cromford Mills**

The thing-law of cotton spinning was not the only place-forming law at work at Cromford in the late eighteenth century, and the fate of Arkwright's place would come to be entwined in the overlapping place-formations of this other place-law. For, in choosing to found his mill in the lower stretches of the Peak District, Arkwright was venturing into an area which had been a nationally important lead mining field for over 1,500 years, and which had accordingly accumulated its own complex – and highly localised – legal provisions governing the searching for lead, and the possession and drainage of mine workings. Cromford was steeped in lead, and it was no great surprise that Arkwright's son would marry into a family with interests in Derbyshire lead mines and a local smelting mill or that his daughter's husband's family would be lead merchants. In choosing Cromford Arkwright was imbricating his cotton world with that of lead, its thing-law and rival place-formations.

Writing in his *Natural History*, sometime before AD 77, Pliny the Elder had remarked that lead was so plentiful in certain parts of Britain that laws had been passed there to control the rate of extraction. These ancient local laws may have provided the basis for the local lead mining customs subsequently developed by the Anglo Saxons, which in turn were confirmed by a Royal Inquisition in 1288. This local mining law code remained extant law throughout the Cromford Mills' cotton producing phase<sup>21</sup>.

Local customs gave everyone a free right to search for lead within the locality. If a vein of lead was found, the customs stipulated a process by which the validity of the claim could be substantiated, and the spatial extent of the mine possession determined. This was a process led by an ancient office holder, the Barmaster and his jurymen. The miner would prove the tangibility of the vein by producing to the Barmaster a 'Freeing Dish of ore'. The physical extent of the mine-grant was then measured out by chains, staked out by the Barmaster upon the surface of the land, setting the

---

<sup>19</sup> Peel's bill proposed this control for cotton mills only, but it came to encompass other mills as it passed through Parliament.

<sup>20</sup> Cotton Mills & Factories Act 1819; and the Factories Acts of 1831, 1833, 1844, 1847, 1850, 1856 and many more thereafter.

<sup>21</sup> The local codes were re-affirmed via statutory consolidation in the Derbyshire Mineral Customs and Mineral Court Act 1852.

bounds for the 'place' so formed. The miner was also required to make and deploy scale wooden models of a mine headstock winch (a 'possession stowe') at the boundaries of the grant. Anyone coming upon these man-made artefacts upon the moorland would know that the strata beneath was in possession to a miner: in other words that they had encountered a 'place' (a mine possession) that had been formed from by the Barmaster's legally endorsed performative acts. But the grant of these places was conditional. The mine would be forfeited if left unworked – and the Barmaster would periodically visit the mines and mark the stowes if he found them unoccupied. Three successive marks would trigger forfeiture (turning a bounded place back into inchoate subterranean space).

In parallel to its place-forming rubrics, the local lead-law imposed powerful place-shaping contingencies upon the local area. According Chapman (1967) there were approximately 100 mine shafts and more than 100 veins being worked in the vicinity of Cromford when Arkwright arrived at there in 1771, and the threat of encroachment upon Cromford Mills could not be discounted for, as Kirkham (1969, 34) reports, the customary rights entitled locals to "dig, delve, search, subvert, and turn all manner of grounds, lands, meadows, closes, pastures, meres, and marshes" for lead ore, and to follow a vein wherever it led. This potentially imperilled any land in the area, but a few protected land-use types had appeared over the centuries and Arkwright was able to protect threatened portions of his estate from undermining by hastily planting an orchard there.

The Cromford area was also underlain by an extensive network of mine drainage tunnels and their outfalls. One such drainage tunnel - Cromford Sough (completed in 1651) discharged to the River Derwent in the vicinity of Arkwright's site Arkwright had chosen this mine drain, rather than the River, as his mill's main power source, attracted perhaps by its lower likelihood of freezing and its rate of flow. The early stages of the Industrial Revolution were fuelled by water power but there were finite limits to water power, and the industrial expansion led to overcrowding, and a wave of litigation: Getzler (2004) identifies over 200 reported cases between 1770 and 1870. Arkwright would find the viability of Cromford Mills threatened by two such disputes over access to these mine drainage waters.

In order to power his second mill (built 1776) Arkwright made a goit, a diversionary channel tapping the existing course of the sough, and in doing so caused some mines to flood in periods of high rainfall. In response the miners enlisted self-help remedies, attacking Arkwright's penstock, thereby bringing the new mill to a halt. The sough owners then took up the miners' cause, and Arkwright responded by enclosing his goit. The dispute dragged on for five years, and eventually went to arbitration in 1785, a year which again proved to be his nadir, for he lost on basis that he could give no proofs for his claim to a right to access and alter the sough. In the face of this Arkwright negotiated terms with the sough owners for a water supply for his second mill.

But this proved only to be a temporary solution. In 1772 work had commenced upon a deeper level mine drain, the Meersbrook Sough. In 1836 that scheme was completed and the sough owners gave notice to Arkwright's son to terminate their agreement. In response he brought a case to challenge this termination<sup>22</sup> arguing that in having acquired the freehold to the Cromford Mills site in 1789<sup>23</sup> a possessory title over the Cromford Sough and its water supply had been acquired. But the claim was unsuccessful, it being held that possessory rights could not apply to water flowing in an artificial

---

<sup>22</sup> *Arkwright and another –v Gell and others* (1839) Exch of Pleas 5 M&W 203; 151 ER 87 (Ex.)

<sup>23</sup> Arkwright and his partners had initially developed the site on a piecemeal basis, leasing successive parcels as the site grew bigger, extension by extension.

channel. By 1846 the water supply had diminished to an unproductive trickle and cotton spinning ceased forever at Cromford Mills.

Subsequently the site was used for a variety of unremarkable commercial uses, each subsequent use forming another (work)place identity for the site and its buildings: two laundries, warehousing, brewing, a fish farm, a pigment plant and now heritage centre. Law can be traced at various thicknesses and with a variety of spatial effects within those subsequent place-formations, but space and focus prevent us turning to those here.

### **Place-law in the rise and fall of Cromford Mills**

Cromford Mills was for a time the oligoptica of the early cotton industry, with law providing some of the glue binding that network and holding it stable around the hub of Cromford Mills. For Latour (2005, 181) oligoptica are controlling nexuses – but unstable, for it eventually becomes too costly to maintain all of their necessary interconnections to other places. The managerial view from those places is always more limited than appears to be the case by those who think that they are, and will always be, at the centre of things. Eventually, the connections break, and a site that once structured the world around it becomes a backwater. It is left behind in the wake of newer associations and their place-formations.

Whilst Cromford Mills – for a couple of decades – achieved a position of ‘centrality’, the irony is that Arkwright had originally chosen Cromford because it was conspicuously ‘out of the way’, and somewhere where he could get on with his project away from the existing strictures and structures of the Lancashire textile industry. This remote position was not well provided for – and Arkwright had to develop the existing hamlet, transforming Cromford into an early instance of what would later be lauded (or decried) as a “factory-colony” (Chapman, 1967, 159) in order to attract and retain textile related labour there. To achieve this he built industrial housing, a church, shops and an inn to provide a venue for commercial negotiation. He also supported the construction of a canal, blasted a new road through the valley’s rocky outcrops, and commissioned his own stately home, overlooking the estate that he had amassed at Cromford.

Arkwright was a social climber – and when his wealth permitted this, set himself up as a self-made lord of the manor (and he purchased the Cromford manorial rights in 1789). It is not an exaggeration to say that Arkwright (and his son) *made* Cromford, they certainly made it their place – and law and the accumulation of property rights were a core part of achieving that. Over time a landed estate was accumulated there, and when the Arkwright family decided to leave the village in 1924, the auction of their estate lasted for two days, the portfolio extending to 1,140 acres and including agricultural holdings, private houses, factory and business premises, smallholdings, numerous cottages, freehold ground rents, mining properties and quarries, valuable licensed premises, sporting rights and woodlands<sup>24</sup>, in something resembling the dismantling of a feudal estate.

Fitton & Wadsworth (1958) point admiringly to Arkwright’s authorship of both Cromford Mills and its wider settlement, without the aid or hindrance of any municipal authority (and certainly no planning or building regulations control). In one sense Cromford Mills might therefore be seen as a place not sculpted by law, but only if we look for the laws that are paramount in place-formation in our own era, for the dynamics of place-formation there were riven by the law of water, of lead and

---

<sup>24</sup> Source: ‘Cromford village in Derbyshire’ website: [http://www.cromfordvillage.co.uk/crom\\_his.html](http://www.cromfordvillage.co.uk/crom_his.html) (accessed 30 April 2015).

of cotton. And underlying all of this was the eternal stabilising force of property law, and the world-making tool-kit of contract law.

## Conclusion

Cromford Mills is an exemplar of Latour's maxim that "the world is ... brought *inside* ... places and then, after having been transformed there ... pumped back *out* of [their] narrow walls" (Latour, 2005, 179, italics in original).

Whilst both the actions of Arkwright and the influence of Cromford Mills are atypical, and few industrialists have ever engaged in such sustained and well documented lobbying and litigating, or produced industrial places that were so directly replicated, the atypical extremity of Arkwright's industry-forming story, and the influence of Cromford Mills as an emergent place-model, helps us – via sharp relief – to witness processes of localisation and translocalisation that would be harder to spot in more mundane circumstances. Through Arkwright's plethora of place-making efforts we see the ways in which law enables a place to stabilise (and prosper) through the *localisation* of law's command and permission in specific spatial circumstances. We also see how law has the power to crush or alter any place. In the campaigning against the Calico Acts we see the role of lobbying around *thing-law*, the all-important framing of the matter that will matter at a particular place (Barad, 2007). In the proximate influence of the place-formations of Derbyshire mining laws we see the multiplicity of place-law, and its tensions and resolutions.

Also, even through the spatio-legal place-making machinations described in this case study took place over 200 years ago, they are surprising time-less in their feel. There is nothing particularly 'eighteenth century' about the strategic dilemmas and tactical choices that the early factory masters wrestled with, or in the ways in which we have seen law being used tool-like in some situations or left 'on the shelf' in favour of some other solution in others. In the case study we have seen elements of the law (and the case study reminds us that 'the law' is not a coordinated, monolithic system, but rather a swarm of only loosely associated discursive elements and pragmatic applications) sometimes present as enabling Arkwright's project, and at others presenting challenges to it, challenges to be met sometimes by a legal solution, sometimes by some other manoeuvre, in each case rationally selected.

We see also the spatiality and mobility of both material items and business people, for these – even in the eighteenth century – were constantly in motion. For Arkwright to 'go-to-law' entailed physical journeys to places *of* law (Nottingham or London), and others of manufacture or commerce. Things and people act as carriers – vectors of law – seeding places with ideas from elsewhere (*translocalisation*), such that places replicated via a *localisation*. And here we can summon Latour's words once again, viewing Arkwright in constant motion, busying himself with the creation and replication of his law-refracted place- and thing-formations, for: "the answer provided by fieldwork will bring attention back to a local site and re-describe them as some dishevelled arrays of connections through which vehicles (carrying types of documents, inscriptions, and materials) are travelling via some sort of conduit." (Latour, 2005, 177). Within that circulation Arkwright was mobilising (or reacting to) law, giving it an energy through his pragmatic noticing of it. Arkwright's movement did not just circulate a place-form, it also added energy to relevant law elements, by particularising them, deploying them to matters of his and others' concern. It was this movement – this acknowledgment of law's role and relevance – that gave (or acknowledged) the force of law. In short, law itself was industrialised through its being em-placed at Cromford.

This article draws upon the 'awkward' realism of new materialists like Barad (2007), to view places as a type of thing, a complex form that is part ideational and part the messy product of localised socio-material relations and accommodations. Such forms have a relatively stable identity and durability, and they can replicate. But they are also vulnerable to the flux of local contingencies. As the case study has shown, both local material instantiations (i.e. Cromford Mills, an early cotton spinning mill founded in a Derbyshire hamlet near Matlock) and generalised ideational expressions of the place-form (i.e. cotton mills as a place-form expressed in legal discourse) change over time. Depending upon the level of analysis such change over time can be seen to present a degree of uniformity in the trends that they reveal (i.e. that cotton mills got bigger, and more institutional) or that every instantiation was inherently different (based upon a micro-level analysis of local specificity). This article's analysis has sought a middle path – one that connects these two poles – it has sought to show how local adaptation in turn influences replication of the form, and how law plays a role within this.

Twenty-first century place-forms are just as wrapped up in the necessary processes of localisation, translocalisation and the dilemmas of law's attempt to impose categorical orderliness upon emergent place-forms. Layard (2010) illustrated her 'law of place' by showing the shaping force of law in the arrangement of a new shopping centre and Silbey & Cavachi (2005) showed the place-shaping effects of powerful normative conventions governing the composition of a museum. This case study shows such processes to have both order and instability at their heart, each arising and enduring within the complexity of interactions at stake in any localisation of a place-form, and any translocalisation of any originating place. And it has shown that these interactions present a surprisingly wide spectrum of heterogeneous legal elements (in the case study those concerning patents, public order, lead mining, customs tariffs and property law) which each individually are constantly jostling to be reconciled with the equally jostling and heterogeneous forces of technological change, local morphology and the ebb and flow of public attitudes and desires.

This then is how law makes place: it contributes towards the making and replication of place-forms, but with varying degrees of influence and always entangled within a constellation of other localising and translocalising non-law factors.

## References

- Atkinson, R. & Blandy, S. eds. (2007) *Gated Communities: International Perspectives*. Routledge: London.
- Barad, K. (2007) *Meeting the Universe Half-Way: Quantum physics and the entanglement of matter and meaning*. Duke University Press: Durham.
- Bennett, J. (2010) *Vibrant Matter: a political ecology of things*. Duke University Press: London.
- Benton, L. (2010) *The Search for Sovereignty – Law and Geography in European Empires, 1400-1900*. Cambridge University Press: Cambridge.
- Berg, M. (1994) *The Age of Manufactures 1700-1820 – Industry, innovation and work in Britain*. Routledge: London.
- Blake, W. (1811) *Milton a Poem*, William Blake: London.
- Blomley, N. (2003) 'From 'What?' to 'So What?': Law and Geography in Retrospect' in Holder, J. & Harrison, C. *Law and Geography – Current legal issues volume 5*. Oxford University Press: Oxford, 17-34.
- Blomley, N. (2007) 'Making private property: Enclosure, common right and the work of hedges' *Rural History* **18**: 1-21.
- Blomley, N. (2011) *Rights of Passage: Sidewalks and the Regulation of Public Flow*. Routledge: London.
- Blomley, N. (2014) 'Learning from Larry: Pragmatism and the habits of legal space' in Braverman et al eds, *The Expanding Spaces of Law – a timely legal geography*, Stanford Law Books: Stanford, 77-94.
- Braverman, I. (2012) *Zooland: The institution of captivity*. Stanford University Press: Stanford.
- Braverman, I. et al. (2014) 'Introduction: Expanding the spaces of law' in Braverman et al. *The Expanding Spaces of Law – A timely legal geography*. Stanford University Press: Stanford, 1-29.
- Butler, C. (2005) 'Reading the production of suburbia in post-war Australia', *Law Text Culture*, **9** (1) 11-33.
- Chapman, S. D. (1967) *The Early Factory Masters* David & Charles: Newton Abbot.
- Chapman, S.D. (1981) 'The Arkwright Mills – Colquhoun's Census of 1788 and Archaeological Evidence' *Industrial Archaeology Review* vi, 1, Winter 1981-82 pp. 5-26.
- Delaney (2010) *The Spatial, the Legal, and the Pragmatics of World-Making: Nomospheric Investigations*. Routledge: London.
- Foucault, M. (1995) *Discipline and Punish: the birth of the prison*. Vantage: New York (Translated by Alan Sheridan).
- Fitton, R.S. (1989) *The Arkwrights – Spinners of Fortune*. Manchester University Press: Manchester.
- Fitton, R.S. & Wadsworth, A.P. (1958) *The Strutts and the Arkwrights 1758 – 1830: A study of the early factory system*. Manchester University Press: Manchester.
- Getzler, J. (2004) *A History of Water Rights at Common Law*. Oxford University Press: Oxford.

- Graham, N. (2011) *Landscape: Property, Environment, Law*. Routledge: London.
- Hobbs, D. (2002) 'Going down the glocal: The local context of organised crime', *The Howard Journal of Criminal Justice*, **37**(4) 407-422.
- Hodder, I. (2012) *Entangled: An archaeology of the relationship between humans and things*. Wiley Blackwell: Oxford.
- Hogg, R. (2002) 'Law's other spaces', *Law/Text/Culture*, **6** 29-38.
- Kirkham, N. (1968) *Derbyshire Lead Mining Through the Centuries*. D.Bradford Barton: Truro.
- Latour, B. (2005) *Reassembling the Social: An introduction to Actor-Network-Theory*. Oxford University Press: Oxford.
- Layard, A. (2010) 'Shopping in the public realm: A law of place.' *Journal of Law and Society*, **37** (3) 412-441.
- Lefebvre, H. (1991) *The Production of Space*. Blackwell: Oxford (translated by Donald Nicholson-Smith).
- Lemire, B. (2011) *Cotton*. Berg: Oxford.
- MacLeod, C. (1988) *Inventing the Industrial Revolution – the English Patent System, 1660-1800*
- McGee, K. (2014) *Bruno Latour: The Normativity of Networks*. Routledge: Abingdon.
- Markus, T.A. (1993) *Buildings and Power – freedom and control in the origin of modern building types*. Routledge: London.
- Massey, D. (2005) *For Space*, SAGE: London.
- Melossi, D. & Pavarini, M. (1981) *The Prison and the Factory: Origins of the Penitentiary System*. Macmillan: London.
- Menuge, A. (1993) 'The cotton mills of the Derbyshire Derwent and its tributaries', *Industrial Archaeology Review*, **XVI**, 1: pp. 38-61.
- Miller, D. (2009) *Stuff*. Polity: Cambridge.
- Mitchell, D. (2003) *The Right to the City: Social justice and the fight for public space*, Guilford: New York.
- Olsen, B. (2013) *In Defense of Things: Archaeology and the ontology of objects*. Alta Mira: Plymouth.
- Palmer, M. & Neaverson, P. (1998) *Industrial Archaeology: Principles and Practice*. Routledge: London.
- Philippopoulos-Mihalopoulos, A. (2011) 'Law's Spatial Turn: Geography, justice and a certain fear of space.' *Law, Culture and the Humanities*, **7**, 187-202.
- Pottage, A. & Sherman, B. (2010) *Figures of Invention: A history of modern patent law*. Oxford University Press: Oxford.
- Silbey, S. S., & Cavicchi, A. (2005) 'The Common Place of Law: Transforming Matters of Concern into the Object of Everyday Life.' In Latour, B. & Weibel, P. eds. *Making Things Public: Atmospheres of Democracy*. MIT Press: Cambridge. 556-565.

Whatmore, S. (2006) 'Materialist returns: practising cultural geography in and for a more-than-human world', *Cultural Geographies*, **13** (4) 600-609.