

Title: “Remote Locations: Early Scottish Scenic Films and Geo-databases”

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Biographical notes:

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Abstract:

In the field of cinema history, an increased interest in social experience and context has challenged the centrality of the film and the primacy of textual analysis. The ‘Early Cinema in Scotland, 1896-1927’ research project takes a contextual approach, using geo-database tools to facilitate collaboration. This article shows how spatially-enabled methods can also be mobilized to bring issues of representation back into a cinema history project. We argue that, when the films have not survived, their geographical descriptors as recorded by trade-press reviews and catalogues offer new avenues of analysis. The article argues that foregrounding location as a significant element in the film corpus creates a new point of interconnection between film text and context. The juxtapositions and divergences between the spatial patterns of film production and cinema exhibition are connected to pre-cinematic traditions of representation. The spatial distribution also sheds light on the differences between films made for local and international consumption, reflecting on Scotland’s position in relation to discourses of modernity.

Keywords: spatial historiography, new cinema history, early cinema, Scottish cinema, cinematic cartography, Geographic Information Systems, geo-database

Remote Locations: Early Scottish Scenic Films and Geo-databases

As in many other humanities disciplines, spatial approaches have been gaining ground in film studies and cinema history, and increased attention to social and spatial contexts has challenged the centrality of the film text in current cinema historiography. This spatial turn in cinema studies is an encounter between humanistic and scientific disciplines, and the tensions between their approaches are as productive as the collaborations. The use of geo-databases as a research method plays a key role in this development. This article discusses some of the strategies developed by the Early Cinema in Scotland research team to address questions about textual representations within the conceptual and practical framework of an empirically-minded and spatially-aware cinema history project. A study of early non-fiction films from Scotland illustrates the value of location data to interrogate textual patterns even in the absence of texts, offering a way to engage with a filmography in which the films themselves have mostly been lost. Furthermore, the films can be analyzed through cartographic and database practices that foreground layering and connectivity, revealing relationships with other cultural artifacts and with different datasets.

The context for this work is an interdisciplinary research project involving five researchers, and so the collaborative dimension of GIS methods is very valuable. The implementation of database tables and relationships has followed the evolving needs and interests of the researchers, leading to productive conversations about our definitions and methods. The place of the film text within the project has been a recurring question, as the core research agenda situates our work in the territory of “New Cinema History,” an outlook that borrows its methodologies from social and cultural historians in a cumulative effort to produce “a social geography of cinema.”¹ Funded by the United Kingdom’s Arts and Humanities Research Council, the Early Cinema in Scotland project set out to address three questions:

1. What are the distinctive features of the early development of cinema and cinema-going in Scotland?
2. Given the well-documented popularity of cinema-going in Scotland in the period, what were the factors that inhibited the development of a sustainable feature film production capacity?
3. How does research on the circulation and reception of cinema in Scotland in the early years of the twentieth century add to wider debates about “the popularization of modernity and the modernization of popularity?”²

These questions will be addressed not only in the context of the economic, social and cultural history of Scotland in the early years of the last century, but in the wider context of a comparative understanding of early cinema outside the major production centres of the US and Europe: that is to say, in small countries, in minor regions, and in rural and small-town communities. This attention to institutional and social aspects places the project alongside a growing number of empirical studies of exhibition and cinemagoing, informed by an interest in what Robert C. Allen calls “the spatiality of the experience of cinema.”³ In contrast with classical theories of spectatorship and reception, empirical studies suggest that “for most audiences for most of the history of cinema, their primary relationship with ‘the cinema’ has not been with individual movies-as-artefacts or as texts, but with the social experience of cinema-going.”⁴ In this interdisciplinary scholarship the film text is no longer at the centre.⁵ A purely textual approach, in particular one that looked at “Scottish films” only, would thus be an impoverished representation of the Scottish relationship with cinema. In brief, what we find is that early cinema in Scotland was characterized by a legendary enthusiasm on the part of the

audience which, in turn, was catered for by a strong exhibition sector. What we do not find is that this enthusiasm for cinemagoing fostered a consistent or sustainable production sector, or stimulated indigenously-produced Scottish feature films.⁶

Beyond our interest in these dimensions of institutional configuration and social experience, looking beyond the text was also a pragmatic decision for our project, since only a small fraction of the films made in Scotland before the transition to sound have survived. Even if we wanted to conduct textual analysis, lateral approaches were required to address the broader questions about experience, representation, and modernity. In this article we explore Franco Moretti's notion of "distant reading" as a model for an even more distanced approach to films, a remote reading, mediated and contextualized through their spatial attributes.⁷ What we share here are provisional insights from this exploratory process of bringing textual analysis back into the fold through mapping, and reflections on the analytic practices it enables.

The conceptual interest in the spatiality of the cinema experience advocated by New Cinema History has sometimes found a methodological correlate in the use of Geographic Information Systems (GIS). As Julia Hallam and Les Roberts have argued, geo-database tools present two significant advantages for projects engaged in a spatial historiography of audiovisual media. Firstly, GIS visualization is organized in layers, and this enables certain ways of navigating, reading, and analyzing sources, in a synchronic layering of temporalities with critical potential. Second, geo-databases turn location data into a connecting point, bringing together disparate datasets that pertain to the same places.⁸ The mash-up map as scholarly tool is a crude but effective realization of geographer Doreen Massey's idea of relational space as the dimension where historical trajectories are "thrown together" by happenstance.⁹ As Deb Verhoeven and Colin Arrowsmith argue, "[s]imply recognizing that film industries generate data with a temporal and spatial element enables the building of connections that can reveal previously obscure influences and relationships."¹⁰ This relational potential is particularly valuable for historians working on topics, regions or periods that are less well documented, and it invites transnational and comparative approaches. While effective dataset integration is still an unrealized ambition in cinema history, building compatible data structures is a key step towards that aim.¹¹

The first step for the Early Cinema project was to set up a relational MySQL database with GIS data imported from preliminary work carried out using QuantumGIS and PostgreSQL. The data fields and attributes have been defined in dialogue with other international projects, while retaining some local specificity. A common denominator of most cinema history projects involving databases is the centrality of the cinema venue. This is the case of "Going to the Show," the website developed by the State Library of North Carolina under Robert C. Allen's guidance, which documents the development of cinema exhibition in forty-five towns using fire insurance maps and newspaper sources.¹² Jeff Klenotic's work on New Hampshire exhibition history also uses venues as the primary marker, offering a sophisticated range of analytical categories on top of demographic and other base maps, and championing GIS as an exploration tool that accommodates "history from below" through grounded visualization.¹³ The Australian Cinemas Map, coupled with the Cinema Audiences in Australia database, has taken this analysis a step further, questioning the stability of the notion of venue itself, and reformulating it as a series of events linked to a point in space.¹⁴ Projects like these, and several others in development around the world, suggest that geo-spatial tools are becoming a standard component of research projects looking at the histories of cinema exhibition and reception,

embraced as a way to link up and contextualize the growing range of sources that cinema historians now employ.

Like the projects mentioned above, the Early Cinema in Scotland database design placed geographical locations, rather than film titles, as the main integrating point and the relevant attribute for visualization. Film titles would only acquire a geographical attribute by virtue of being screened at one of these places. However, as the filmography grew, it became apparent that there were many films that had significant Scottish elements, but which may never have been screened in Scotland, thus limiting the usefulness of an exhibition-led cinematic geography. One of the distinctive aspects emerging from our research was the disparity between endogenous and exogenous representations of Scotland, as the prevalence of Scottish themes and settings in international productions far outstripped local output. While only one silent feature made in Scotland survives, the amateur drama *Mairi: The Romance of a Highland Maiden* (Andrew Paterson, 1912), a review of the British and American trade journals *Bioscope*, *Moving Picture World* and *Motion Picture News* produced at least 119 feature films released between 1908 and 1927 with Scottish settings and stories.¹⁵ The popularity of Scottish literature throughout the world in the nineteenth century is key to this anomaly: the works of Walter Scott are staples for film adaptations by European companies before World War 1, and after World War 1 historical romances of Mary Queen of Scots, Rob Roy, Bonnie Prince Charlie, and Young Lochinvar are part of the diet of global cinema. As the author of a 1945 film survey for the Edinburgh Film Guild put it,

If the Waverley novels are now read less frequently, it is because their qualities are the very stuff of cinema, which can translate the romantic scene and stirring tale in a modern idiom of swift, sharp beauty keyed to the tenser spirit of the age. Where former generations found romance in Scott the present generation finds it in the cinema.¹⁶

These literary traditions, as Moretti and others have argued, had a geographic dimension, with the Highlands functioning, in Scott's historical novels and in popular legend, as a frontier territory that allows travellers to journey into the past, setting in motion the narrative wheels of the genre as well as its anthropological impulses.¹⁷ If we were to explore the continuities in the grammar and the tropes of cinematic landscape from pre-modern and romantic representational forms, we would need to understand these spatial patterns, and therefore our analytical tools—that is, the geo-database—needed to facilitate this.

After Moretti's influential *Atlas of the European Novel*, a growing body of work on the spatiality of literature has continued exploring the relationships between fictional and topographic space. The best examples challenge both empiricist and dematerialized conceptions of space and place, bringing GIS practice into dialogue with the discourses and approaches developed within the humanities, and showing how, like maps, narratives produce forms of spatial understanding. Mapping the spaces of narrative fiction was also the initial point of contact between geography and film studies. However, as Peta Mitchell and Jane Stadler have noted, "literary geography and film geography are distinct traditions within geography, each with its own histories and assumptions."¹⁸ In the same essay, which refers to the *Cultural Atlas of Australia* project, Stadler and Mitchell go on to outline their proposal for an intermedial geocritical method, combining the strengths of different disciplines' spatial turns to examine how "[c]ultural narratives not only mediate and represent space, place, and location, but [are] themselves mediated representational spaces." The Cultural Atlas of Australia, consequently, surveys narrative space across novels, plays, and films, providing a model for a critical

cybercartographic method that pays attention to the multiple perspectives and imaginative geographies of fiction.¹⁹

Mitchell and Stadler's geocritical practice, by drawing on a variety of datasets and utilizing cartographic tools, connects Maltby's exhortation for a "social geography of cinema" with the more text-centred directions of the spatial turn in film studies. These textual strands have sought to understand how films invent and signify spaces, in works like Charlotte Brunson's *London in Cinema*, recognizing a mutually creative relationship.²⁰ Closer to the pragmatic motivations of a geo-database platform, the notion of "cinematic cartography" actually involves mapping, while challenging any positivist associations that the practice may evoke. In their introduction to a dedicated issue of the journal of the British Cartographic Society, Sébastien Caquard and D. R. Fraser Taylor explained that this approach turns the implicit connections between cartographic practice and film into a mode of analysis, one that "acknowledges the importance of cartography as an objective and scientifically based discipline, as well as the importance of conveying different forms of emotions and sensations about places through cinematographic language."²¹

Cinematic cartographies add another layer of complexity due to the unstable relationship between the profilmic and the diegetic space—that is to say, between location and setting.²² As Brunson points out, cinematic geographies are complicated by the fact that cinema "is, in one sense, constituted through the production of spaces. And these cinematic spaces are produced through the manipulation of other spaces and processes."²³ Mapping diegetic locations is a practice rooted in the text-centred literary tradition. On the other hand, mapping shooting locations has become an extremely popular practice—for tourism offices around the world, as well as independent enthusiasts. This distinction was adopted with the creation of two separate database attributes, so that our filmography could document both the setting and the shooting location of a film, if known. With these two location fields, the filmography became spatially-enabled. This means that we can now potentially map the films alongside the other entities in the database, and study the overlaps and divergences between their spatial arrangements. While the divergences and alleged identities between fictional settings and shooting locations deserve more detailed attention in future research, the rest of this paper focuses on non-fiction films, using the geo-database's layering abilities to explore the inter-medial and inter-textual connections that underpin representation strategies in the silent period.

While there is already a significant body of work on the relationships between fictional and topographic places in literature and narrative cinema, there are fewer examples of this approach that engage with documentary or non-fiction cinema.²⁴ Salient amongst them is the *Liverpool: City in Film* project, which geo-referenced more than 1700 film and video items including everything from newsreels to amateur productions, spanning five decades of urban change in a provincial city. Mapping this large corpus with GIS tools allowed the researchers to examine how different film genres engaged with the city, finding "a series of overlapping mosaics of the city's urban landscape" in which "specific production practices construct and project different spatial perceptions of the city."²⁵ This suggests that the geocritical approaches that have developed in relation to fictional geographies can still be necessary when looking at non-fiction films, as they offer their own spatial discourses and contribute to the production of social and cultural space, rather than simply bearing witness to it.

Perhaps, riding on the continuing influence of an indexical paradigm, the relationship between a place and its representation in non-fiction is taken for granted. However, as a selective and fragmentary view of the world, and as an accumulation of intelligible discourses, non-fiction

films construct narratives of place adapted to different functions. One of the dominant forms of discourse during the early period is the travel film.²⁶ Before the emergence of the term documentary, and its association with a more self-conscious rhetoric of realism, early cinema placed as much stress on the medium's evidentiary value as in its imaginative possibilities. What Tom Gunning has called the "encyclopedic ambition" of early cinema promised to bring all the world to viewers in metropolitan centres.²⁷ The travel film or "scenic" was thus one of the first film genres to emerge, and it took pride of place in the programmes of early travelling exhibitors, and then as part of the varied assemblies of films shown in nickelodeons and picture houses. As late as 1913, out of the more than 600 films released in the UK in a month, almost ten per cent were catalogued as travel films or scenic films.²⁸ While their length was significantly below the mean, the sustained production of short travel films, mainly by British and European companies, ensured the survival of the "varied programme" that exhibitors believed audiences wanted.²⁹

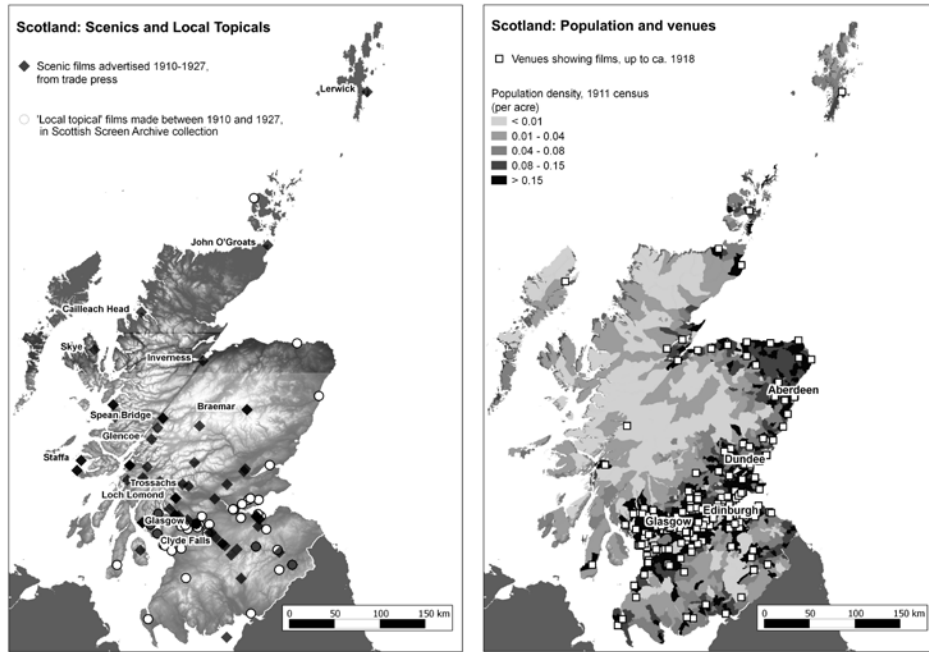
The travel film, as Ivo Blom points out in his study of the work of filmmaker Anton Noggerath in Iceland, draws on the popularity of travel writing in the eighteenth and nineteenth centuries.³⁰ Like Iceland, Scotland was a favored topic for early modern travel writers, with the Highlands figuring as an accessible wilderness, a margin of Europe and of the British Empire that could be reached by train. Furthermore, the European Grand Tour that was fashionable for the British aristocracy and aspirant bourgeoisie had become too dangerous in the tumultuous conditions of the Revolutionary and Napoleonic Wars. The legitimacy of the Scottish Highlands as an alternative Grand Tour, as well as the pacification of the area a hundred years after the last Jacobite rebellion, were confirmed when Queen Victoria established a private residence at Balmoral in 1852. Landscape painting, by JMW Turner, for example, for Scott's "Poetical Works" in 1831, and in particular the very popular work of Sir Edwin Landseer, had consolidated the alliance between visual style, literary representations and ideological constructions of the Highlands connected to an aesthetics of the sublime and a rugged exoticism. Lantern lecturers had access to photographic sets such as those produced by George Washington Wilson, a native of Banffshire who attracted both royal patronage and international acclaim for his artistic and technically skilled views, available commercially as single and stereoscopic prints from the 1860s.³¹ The geographical interest of Wilson's work, as Charles Withers has argued, needs to be understood against a background of "historical and literary associations [that] drew tourists and artists both" to particular locations such as Loch Lomond, the Trossachs and Glencoe.³² This long history of visual and descriptive representation is engaged again in early non-fiction films about Scotland.

Our database, which is still growing and does not claim to be comprehensive, includes at the moment eighty-five travel, educational, and interest films shot in Scotland and offered to the British trade by production companies of various origins and nationalities. Almost half of these were described as scenics, and include titles like *A Holiday in the Highlands* (Barker, 1919), *Mountains and Glens of Arran* (H&B, 1915), and *The Bonnie Isle of Skye* (Kineto, 1913). On a discursive level drawn largely from the trade press, the titles and descriptions suggest a continuity between pre-modern and Romantic literary traditions and the emergent conventions of cinematic landscapes. Thus, for instance, the Bioscope review for *The Bonnie Isle of Skye* talks of the "romantic and mystical beauty" of the Western Islands, and the invocation of "Caledonia, stern and wild" (from Scott's *Lay of the Last Minstrel*) appears in the trade descriptions of both *Scottish Scenery* (1914) and *Prince Charlie's Country and the Western Highlands* (1914).³³ Practically, however, the corpus of films on which these continuities can be established is severely incomplete; like most productions of the nitrate era, the majority of the films is lost.

This creates a different challenge for our attempt to engage with the filmography on a textual level. Trying to study how these films conveyed representations of Scotland, without being able to see most of them, requires a new approach, and spatial tools can offer some answers.

To borrow Moretti's influential idea, setting and location are two elements that can be read "distantly."³⁴ Using the British trade journal *The Bioscope*, we collected the descriptions of Scottish-themed non-fiction films offered for UK distribution every week. These descriptions, while typically embellished and often equivocal, do, in the majority of cases, name locations. It is one of the interesting inflections of reading distantly or remotely through the trade press that the locations that are identified are those that are already known, that are already "mapped" on the tourist agenda and can be invoked in the selling of the film: the Spean Gorge, the waterfalls of the River Clyde, Loch Katrine. This plotting of locations, if framed effectively, gives us some foothold for an investigation of meaning-making strategies in early film representations of Scotland, and allows us to compare their geographical patterns to those in other texts and to situate them in relationship to a broader context. We are not simply reading landscape off the film, but off an imagined map, a "branded" landscape, drawn from nineteenth-century tours and tour guides, that pre-exists the film. While this is very much still work in progress, some of the findings start to show the potential of this geo-database treatment for addressing textual questions.

In the last section of this paper, we discuss a corpus of thirty-nine non-fiction films made in Scotland between 1910 and 1927, and advertised in *The Bioscope*. A quarter of these films mention the Highlands in their title. The trade journal descriptions name seventy-five locations in total, which have been mapped manually. This exercise allows us to understand these films in relation not only to other films, but, importantly, to other dimensions of our research: demographic data, exhibition venues, and the locations of other topical and fictional films. At the core of this analysis is a very simple methodology: using Quantum GIS, we layer various types of data, from the topographic and demographic profiles to the places named in scenic and local topical films. Appropriate use of transparency and labelling allows us to explore overlapping data points and test hypotheses quickly and iteratively. Given the diversity of the primary sources, this is of necessity a work of bricolage, bringing together different time-scales and levels of accuracy. The overlapping temporalities marked in Figure 1 reflect the limits of the sources: Census dates, trade journal runs, and archival holdings. The problematic way in which spatial visualization seems to conflate time is a well-rehearsed discussion amongst digital humanists.³⁵ As an exploratory tool, however, we retain the generative power of the "mash-up" map, with the caveat that a fuller historical explanation would demand a closer breakdown of the layers, their relationships, and the longitudinal changes within each dataset.



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Figure 1: Locations of scenic films and local topical films compared to geographical distribution of cinema venues.

Historical boundary data: Scottish Civil Parishes 1890 (digitized from Black's Atlas), via EDINA Census Support. Census data: Southall, H.R., Gilbert, D.R. and Gregory, I., *Great Britain Historical Database: Census Statistics, Demography, 1841-1931* [computer file]. Colchester, Essex: UK Data Archive [distributor], January 1998. SN: 3707, <http://dx.doi.org/10.5255/UKDA-SN-3707-1>.

To begin with the most general observation, mapping the locations of these scenic films against population density – as per the 1911 Scottish census – reveals a sharp divergence. As the scenic films gravitate towards the Western and Central Highlands, there is a preference for sparsely populated areas. While Edinburgh and Glasgow are sometimes mentioned, they tend to appear as points of departure for a scenic voyage rather than as “scenes” in themselves. The River Clyde, which runs through Glasgow and whose shipbuilding industry produced over twenty per cent of the world's mercantile ships (by tonnage) during its boom years at the turn of the century, is represented in three of the scenic films.³⁶ However, the picturesque waterfalls to the east of the manufacturing area and the open estuary to the west are privileged over the cranes and molten steel at the centre of the industry. It was not until the Documentary Movement between the 1930s and the 1950s that industrial Scotland would be pictured heroically.

The preference for sparsely populated locales has another corollary in the minimal overlap these films have with the geography of the expansion of cinema. Put simply, most of the places depicted did not have a cinema; the films were not meant to be shown there. While itinerant non-theatrical exhibition was common in rural Scotland, and so it is not impossible that films were shown somewhere in the vicinity, there is a sharp distinction between films intended for national and international distribution and the extended practice of local topical filmmaking. There is no mention in the *Oban Times*, for example, of two scenics or interest films, *Highland Games at Oban and Dunoon* (Kineto, 1911) and *Oban on Regatta Day* (Kineto, 1913), being exhibited in the area. While they may or may not have been screened there, they were made by a major UK production company, aimed at an international rather than a local audience, and they did not attract local attention. The local film has been defined by Stephen Bottomore as one that expects “considerable overlap between the people appearing in the film and those who watch it.”³⁷ These local topicals were crowd films: a practice initiated by travelling exhibitors, and adapted later by cinema managers needing to add the irresistible attraction of seeing yourself on screen to their programmes. Whether they nominally documented a gala day, parade, or news event, the camera was always turned on the audience, as this would guarantee their attendance at the show.³⁸ Very few managers and operators had the skills and equipment to shoot and develop local topicals, so they were mostly commissioned from newsreel agents based in Glasgow or Edinburgh. It is thus not surprising that their geographical distribution favors the central belt of Scotland, which was both densely populated and very well provided with cinemas. Although we do not have time to develop the argument here, while it is part of the definition of the local topical film that it be familiar, everyday and recognisably local, it is part of the definition of the scenic film that it be, in some sense, exotic, removed from the everyday, and taking its significance from an already imagined space.

Away from the heavy industry and the booming centres of population, most of the places filmed as scenic were connected to the railway or the ferry system – exotic but accessible. In part due to the material determinants of access, cinematic tourism echoed the geographical preferences of earlier tourist narratives. The falls of the Clyde, Loch Lomond and the Trossachs, and parts of Stirlingshire and Perthshire were as popular with filmmakers as they had been with literary visitors in the eighteenth and nineteenth centuries. In her *Recollections of a Tour Made in Scotland, A. D. 1803*, Dorothy Wordsworth recounts a meandering circuit starting in the Lake District, following the Clyde Valley and taking William and Dorothy Wordsworth, and, for part of the journey, Samuel Taylor Coleridge to the West and Central Highlands, ranging from Glen Coe in the North to the Gaelic-speaking areas of the Trossachs and Loch Katrine just thirty miles North of Glasgow. Their tour ends in the scenic area of the Borders, south of Edinburgh, where they are escorted by Sir Walter Scott. Drawn to waterfalls and gorges, Dorothy Wordsworth’s descriptions expect and evoke the sublime in the bleak landscape. While a fuller discussion of the overlaps and divergences between literary and cinematic tours is the subject of a different article, the simple exercise of mapping and juxtaposing different categories from the existing records, and layering cartographic data from different texts, starts to reveal how forms of cinematic discourse and modes of address are constructed by relation to space and place.

Scotland’s complicated position in relation to modernity emerges in the contradictions between endogenous and exogenous forms of representation. Annie Morgan James argues, in her essay on Scottish landscapes in post-war cinema, that “the Highlands as cultural artefact define Scottishness, and in cinema the perpetual landscaping of Scotland intensifies the rurality of this stateless nation.”³⁹ This is, however, only true of outward-facing forms of representation,

intended for an international rather than a local market. The rurality and grandeur of the Highlands is itself a discursive product: the production of an image of Scotland for a world imaginary. The fact that the geographic markers used in this analysis are taken solely from the trade descriptions of the films reminds us that this is advertising material. Its function is not to provide a shot-by-shot list of locations, but to sell the place and the journey, making explicit and implicit connections with existing horizons of expectations.

The strongest imaginary at play in this commoditized Scottish geography is the Highlands as a vaguely defined, but powerfully symbolic territory, a European border with wildness and pre-modernity. The Highlands remain in these films, and in many feature films from the period, as an obstinate example of imprecise geography. As both literary and cinematic cartographers have shown, the geographies of fiction are often imprecise (as compared to the coordinate data expected by GIS software), and even when place names are given, the relationship between a place in a novel or narrative and that place in the world is complicated. Researchers working in the “Literary Atlas of Europe” project describe the uncertainty introduced by literary geographies as “a combination of subjectivity, vagueness and ambiguity (caused by the conceptualisation of literary places) on the one hand, and averaging, completeness and continuousness (resulting through the acquisition method of those literary objects) on the other hand.”⁴⁰ In other words, it is difficult to create appropriate literary maps because places in literature are either imprecise or made up, while conventional cartography expects precise coordinates and sharp boundaries. A similar contradiction emerges in relation to film, with significant differences. Maurice Tourneur’s *The White Heather* (1919), for example, featuring a wreck off the coast of the Scottish Highlands, and commended in *Bioscope* for the vividness and accuracy of its “British atmosphere,” was filmed in Los Angeles Harbor. While narrative setting may be as defined or uncertain as in literature, the uncertainty regarding shooting location is only a contingent one. The indexical root of photographic representation means that there is always a very precise location—although we might not know what it was. From an empiricist perspective, therefore, the imprecision of this geography is merely a technical problem: it is possible to envision an image-recognition algorithm that matched the Highland landscape views to their coordinates, or an archival trove with the shooting diaries of all the camera operators involved. It is almost certainly more productive, however, to think through this imprecision and to work with it rather than strive to eliminate it.

The tension between the perceived finality of a point on a map, and the fluidity of socially produced space, is a well-known point of contention, but also a creative force for humanities scholars working with digital methods. In the field of cinema history, a similar voltaic arc can be sparked between more text-centred and/or theoretical approaches, and the empirical and archival work that has challenged previous generalizations. The collaborative, data-sharing, linking and layering abilities of digital tools encourage exploratory, mash-up methodologies rather than competitive monotheism. In the context of the Early Cinema in Scotland project, an uncomplicated geo-database structure has enabled and encouraged us to engage with textual aspects as well as social and institutional issues. It allows one researcher’s work with demographics and exhibition history to interact with another’s investigation of film locations and literary precedents, or to help understand production patterns as both discursively and materially determined. Thus, multiple, possibly contradictory stories can be woven into new forms of historical narrative that do not erase difference or seek synthesis. Rather, they retain some of the imprecision and messiness of the social and cultural world sharpened and held in tension with a methodical and critical engagement with technology.

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- ¹⁵ *Bioscope* was consulted on microfilm at the National Library of Scotland. For the American trade journals, our research was immensely facilitated by their availability via the "Media History Digital Library," accessed January 7, 2015, <http://mediahistoryproject.org/>.
- ¹⁶ Norman Wilson, *Presenting Scotland: A Film Survey* (Edinburgh: Edinburgh Film Guild, 1945), 8. It is worth noting, however, the Scott novel that has never been adapted for cinema is *Waverley* itself.
- ¹⁷ Franco Moretti, *Atlas of the European Novel* (London: Verso, 1998), 37-38.
- ¹⁸ Peta Mitchell and Jane Stadler, "Redrawing the Map: An Interdisciplinary Approach to Australian Cultural narratives," in *Geocritical Explorations: Space, Place and Mapping in Literary and Cultural Studies*, ed. Robert T. Tally, (New York: Palgrave Macmillan, 2011), 53.
- ¹⁹ "Cultural Atlas of Australia," accessed January 5, 2015, <http://www.australian-cultural-atlas.info/CAA/index.php>.
- ²⁰ Charlotte Brunson, *London in Cinema: The Cinematic City since 1945* (London: BFI, 2007)

- ²¹ Sébastien Caquard and D. R. Fraser Taylor, "What is Cinematic Cartography?" *The Cartographic Journal* 46, no. 1 (2009): 7.
- ²² Mitchell and Stadler, "Redrawing the Map," 58.
- ²³ Brunson, *London in Cinema*, 7.
- ²⁴ Or with non-fiction writing, for that matter. Ian Gregory's research on historical travel writing and tourist guidebooks of the Lake District, which has geo-referenced 80 texts to explore how the region has been represented, is a pioneering example. See "Lakeland Geo-text Explorer," accessed January 5, 2015, <http://www.lancaster.ac.uk/fass/projects/spatialhum/geotext/>.
- ²⁵ Julia Hallam, "Mapping the 'City' Film 1930-1980," in *Locating the Moving Image*, eds. Julia Hallam and Les Roberts (Bloomington: Indiana University Press, 2014), 177. See the project database at "Mapping the City in Film," accessed May 18, 2015, <https://www.liv.ac.uk/architecture/research/cava/cityfilm/>.
- ²⁶ Tom Gunning, "'The Whole World Within Reach': Travel Images Without Borders," in *Virtual Voyages: Cinema and Travel*, ed. Jeffrey Ruoff (Durham: Duke University Press, 2006), 25.
- ²⁷ Tom Gunning, "Early Cinema as Global Cinema: The Encyclopedic Ambition," in *Early Cinema and the "National"*, eds. Richard Abel, Giorgio Bertellini, and Rob King (New Barnet: John Libbey, 2008).
- ²⁸ "The Cinema Film Register," *The Cinema and Property Gazette*, April 2, 1913, 61-66.
- ²⁹ Ian Christie and John Sedgwick, "'Fumbling Towards Some New Form of Art?': The Changing Composition of Film Programmes in Britain, 1908-1914," in *Film 1900: Technology, Perception, Culture*, eds. Annemone Ligensa and Klaus Kreimeier (New Barnet: John Libbey, 2009), 159.
- ³⁰ Ivo Blom, "The First Cameraman in Iceland: Travel Films and Travel Literature," in *Picture Perfect: Landscape, Place and Travel in British Cinema before 1930*, eds. Laraine Porter and Briony Dixon (Exeter: Exeter Press, 2007), 68.
- ³¹ Charles Withers, "Picturing Highland Landscapes: George Washington Wilson and the Photography of the Scottish Highlands," *Landscape Research* 19, no. 2 (1994): 73.
- ³² Withers, "Picturing Highland landscapes," 71.
- ³³ "The Pick of the Programmes: What we Think of Them," *Bioscope*, October 9, 1913 and March 26, 1914.
- ³⁴ Moretti, *Distant Reading*, 67.
- ³⁵ In cinema history specifically, this "flattening" of sequential events was one of the objections offered by Robert C. Allen against Ben Singer's account of Manhattan nickelodeons. See Robert C. Allen, "Manhattan Myopia; Or, Oh! Iowa!" *Cinema Journal* 35 no. 3 (1996): 77.
- ³⁶ Neil K. Buxton, "The Scottish Shipbuilding Industry Between the Wars: A Comparative Study," *Business History* 10, no. 2 (1968): 119.
- ³⁷ Stephen Bottomore, "From the Factory Gate to the 'Home Talent' Drama: An International Overview of Local Films in the Silent Era," in *The Lost World of Mitchell and Kenyon: Edwardian Britain on Film*, ed. Vanessa Toulmin, Simon Popple, and Patrick Russell (London, BFI: 2004), 33.
- ³⁸ See, for instance, from the Scottish Screen Archive's collection, *Arrival at Whitehart Hotel, Campbeltown* (1914) <http://ssa.nls.uk/film/0795>, or many of the films made by Mitchell and Kenyon for travelling exhibitors in the North of England, such as *Preston Egg Rolling* (1901) <http://player.bfi.org.uk/film/watch-preston-egg-rolling-c1901-1901/>, accessed January 5, 2015.
- ³⁹ Annie Morgan-James, "Enchanted Places, Land and Sea, and Wilderness: Scottish Highland Landscape and Identity in Cinema," in *Representing the Rural*, eds. Catherine Fowler and Gillian Helfield (Detroit: Wayne State University Press, 2006), 186.
- ⁴⁰ Anne-Kathrin Reuschel and Lorenz Hurni, "Mapping Literature: Visualisation of Spatial Uncertainty in Fiction," *The Cartographic Journal* 48, no. 4 (2011): 298.