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**British Mapping of Africa:
Publishing Histories of Imperial Cartography,
*c.1880 – c.1915***

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Abstract

This thesis investigates how the mapping of Africa by British institutions between c.1880 and c.1915 was more complex and variable than is traditionally recognised. The study takes three ‘cuts’ into this topic, presented as journal papers, which examine: the Bartholomew map-publishing firm, the cartographic coverage of the Second Boer War, and the maps associated with Sir Harry H. Johnston. Each case-study focuses on what was produced – both quantitative output and the content of representations – and why. Informed by theories from the history of cartography, book history and the history of science, particular attention is paid to the concerns and processes embodied in the maps and map-making that are irreducible to simply ‘imperial’ discourse; these variously include editorial processes and questions of authorship, concerns for credibility and intended audiences, and the circulation and ‘life-cycles’ of maps. These findings are also explored in relation to the institutional geography of cartography in Britain: the studies illustrate the institutional contingency of such factors and how this gave rise to highly variable representations of Africa.

These three empirical papers represent the first sustained studies of each of the topics. By connecting their findings, the thesis also offers broader reconceptualisations of the British mapping of Africa between c.1880 and c.1915: with respect to cartographic representations, maps as objects, and the institutions producing them. Maps did not simply reflect ‘imperial’ discourse; they were highly variable manifestations of multifaceted and institutionally contingent factors and were mobile and mutable objects that were re-used and re-produced in different ways across different settings. Map-making institutions were discrete but interconnected sites that not only produced different representations, but played different roles in the mapping of Africa. By illuminating the institutional provenance, ‘life-cycles’ and content of the maps studied, this thesis extends current knowledge of British mapping of Africa during the late nineteenth and early twentieth centuries and raises questions for further research incorporating its lessons, sources and theories.

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To my parents: thank you for your unflinching support, in all its forms. I could not have done this without you.

Declaration

I hereby declare that this thesis has been composed by me, that the work is my own, and that it has not been submitted for any other degree or professional qualification.

Amy Prior

December 2012.

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Abbreviations

Archive Institutions

BL	The British Library
IWM	Imperial War Museum
NAM	National Army Museum
NLS	National Library of Scotland
PRO	Public Records Office
RCAS	Royal Commonwealth Society Archive, Cambridge University
RGS-IBG	Royal Geographical Society (with IBG) Archives
TNA	The National Archives, Kew

Historic Institutions

BAAS	British Association for the Advancement of Science
BSAC	British South Africa Company
FO	Foreign Office
GSGS	Geographical Section, General Staff
IBEAC	Imperial British East Africa Company
IDWO	Intelligence Division/ Department of the War Office
OS	Ordnance Survey
RGS	Royal Geographical Society
RSGS	Royal Scottish Geographical Society
TSGS	Topographical Section, General Staff
WO	War Office

Other

BCA	British Central Africa
DMI	Director of Military Intelligence (War Office)
EOI	End of Issue

GJ	Geographical Journal
GTS	Great Trigonometrical Survey of India
JGB	John George Bartholomew
OFS	Orange Free state
PRGS	Proceedings of the Royal Geographical Society
SGM	Scottish Geographical Magazine

1

Introduction

“British cartographers have to contend with many adverse conditions”.¹

“The maps of the actual events of the [Second Boer] War are closely dependant for their nature upon an unpalatable sundry of concerns”.²

“You must admit that the preparation of your maps is a complicated business”.³

Introduction

In his recent edited volume on the *Imperial Map*, James Akerman sets a theme that underpins this thesis: historians of cartography, he argued, need to engage with “a far more complex and nuanced picture of imperial mapping” than is currently studied.⁴ Prompted by this heuristic, this thesis investigates the nature of British mapping during what has become known as one of the most imperialistic eras of British history: its involvement in Africa between 1880 and 1915. This period is commonly referred to as the ‘Scramble for Africa’ – abbreviated to ‘the Scramble’ – and was broadly characterised by the exploration, partitioning and conquest by European powers of nearly 90 per cent of the African continent in little over two decades.⁵ It also occurred during what is referred to as the era of ‘high imperialism’ when Britain acquired over 4,750,000 square miles of territory across the world, and authority over almost 90 million people.⁶ The overarching aim of this thesis is to question the taken-for-granted notions of ‘imperial cartography’

¹ Bartholomew 1902, p. 39.

² Maurice (Official Historian of the Second Boer War) to Ward, 23 Nov. 1905. TNA: WO 32/4760.

³ Keltie (RGS Secretary) to Johnston, 15 Mar. 1915. RGS-IBG: RGS/CB8/47.

⁴ Akerman 2009, p. 9.

⁵ Young 2010, p. 359. See also Chamberlain, 1974 and Pakenham, 1991.

⁶ Hyam 1993, p. 104. Hyam’s statistics are for the period 1874–1902.

during this era and to better understand the complex and variable nature of British maps and mapmaking of Africa during this period. It also addresses a second interrelated aim: to assess and develop new frameworks for conceiving of, and studying, cartography that embrace this complexity and variability.

The thesis consequently addresses several objectives. The first is to detail and assess extant literature from the critical history of cartography in order to assess its usefulness and its shortcomings and to establish which issues warrant further study and re-assessment. The second is to engage with contextual literature on Britain's complex relationship with Africa in the late nineteenth and early twentieth centuries in order to determine over which main 'variable' the cartography of this period should be studied for its 'nuances'. It is principally through this secondary material that I develop the subsequent objectives. It is necessary to note here, for instance, that map-making institutions located in Britain are established from this literature as the principal locus for examining the variability of maps and mapmaking.

In examining the complexity of mapping, the objectives of this thesis are to investigate what sorts of issues and concerns influenced British maps and mapmaking of Africa between *c.*1880 and *c.*1915 that are irreducible to simply 'imperial'; to engage with the 'life-histories' of the maps studied – that is, their production, circulation and use – in addition to their content; and to examine the ways in which map-making institutions functioned. In order to examine the variability of maps and mapping in these ways, the objectives of this thesis are to directly compare the above issues across map-making institutions in Britain, with particular focus on under-studied 'popular' and commercial organisations.

With the aim of making a contribution to the field regarding the conceptualisation of maps and the theories we use to study them, the thesis reviews extant literature before engaging with theories from book history and the history of science – in addition to recent cartographic theory – and evaluates their application to cartographic contexts.

Research Approach

Studying the complexities and institutional nuances of the British mapping of Africa between 1880 and 1915 presented opportunities for engaging with the era, and structuring the thesis, in several ways: chronologically across phases of the period, geographically according to institution, thematically by map content, or by stages of maps' 'life-histories' such as production, consumption and reception. These lines of enquiry have precedents in extant literature but, as I shall show, have a tendency to produce generalising overviews.

This thesis pursues a journal paper format. The main empirical chapters (5, 6 and 7) take the form of three articles which are integral in and of themselves. These examine the cartography of the commercial Bartholomew map-making firm, the mapping of the Second Boer War, and the maps associated with the eminent Africanist Sir Harry H. Johnston. The selection of these topics, and the relative opportunities each affords for investigating the "many adverse conditions", "sundry of concerns", and "complicated business" of mapping Africa, introduced in the opening quotes, are discussed in later chapters.⁷ My approach is principally informed, however, by my Collaborative Doctoral Award (CDA) from the AHRC and NLS. This funding was granted with the aim of engaging with the newly-accessible archive of the Bartholomew map-making firm held at the NLS. As a result, my empirical research begins in the Bartholomew Archive, from which I followed and compared maps and processes to other institutions and archives.

By 'cutting into' British cartography through three in-depth case-studies that stem from this archive and which analyse in detail the complexity and variability of specific phenomena, the thesis garners deeper insight into the complex nature of maps and mapmaking. Methodologies and analyses can be tailored to reflect the findings and material on each topic; direct institutional comparisons can be made rather than dividing this across chapters; and the 'life-cycles' of maps can be addressed holistically as called for by cartographic theorists (Chapter 2). At the same time, however, the thesis offers broader insight into the period through one institution, one event, and one individual.

⁷ Bartholomew, 1902; Maurice, 1905; Keltie, 1915. See footnotes 1–3.

The thesis works in a similar way to an edited volume. It does not pretend to be a complete examination of the British mapping of Africa between 1880 and 1915. The papers are separable vignettes that elucidate the sorts of institutionally contingent issues, practices and factors shaping maps and discuss their implications for our understanding of the cartography of the Bartholomew firm, Second Boer War and Harry H. Johnston specifically. These studies can then also work together to make collective conclusions about the nature of the cartography of this era more broadly. These thesis conclusions are strengthened by the breadth of topics and archives from which they are derived. Ultimately, however, the issues examined are illustrative rather than comprehensive.

The dates of my study – *c.*1880 to *c.*1915 – are so defined for several reasons. The commencement of the period known as the ‘Scramble for Africa’ has been the subject of varying attention. For Pakenham, its traits can be traced to 1870. For Robinson and Gallagher, Britain’s first act of the ‘Scramble’ came in 1882 with the occupation of Egypt. For others, only in 1883 did Europe catch ‘African fever’ sufficient to constitute a ‘scramble’; and in the eyes of many, particularly popular interpretations, this only began with the Berlin West African Conference of 1884–1885.⁸ The complex and contested nature of this ‘Scramble’ is discussed in detail in Chapter 3 but the temporal scope of this thesis begins in 1880 in order to capture its ‘pre’, or ‘early’ phase, and thus appreciate the change in cartography as Britain’s involvement in Africa gathered impetus at an alarming speed. The Bartholomew Archive is also significantly more comprehensive from 1880. The declaration of World War I (WWI) in 1914 is commonly cited as causing a relatively abrupt halt to British activity in Africa.⁹ Recent scholarship has argued, however, that whilst Britain’s engagement with Africa was fundamentally altered by WWI, it did not entirely cease.¹⁰ Defining the end of the period of study as 1915 is in recognition of this, and in order to incorporate in my analyses some of the maps produced in that year (see chapters 5 and 7).

⁸ Pakenham, 1991; Robinson and Gallagher, 1961; McKenzie, 1983; Herbst, 1989 and Goodlad, 2000.

⁹ Winterbotham, 1936.

¹⁰ See MacKenzie (1984, 1990) on the survival and nature of British interest in Africa post-WWI. See Heffernan (2002, 2009) on the continued British mapping of Africa during this conflict.

Structure of the Thesis

This thesis is divided into six main chapters. The first three develop the conceptual, contextual, methodological and archival foundations for the empirical studies. This introductory section is sizeable as it serves several requirements that result from pursuing a thesis by journal paper format. These chapters provide in-depth theoretical and contextual background in order to illustrate the academic and practical issues from which the aims of this thesis, and my approach to these, are derived. This introductory and contextual material situates the separable studies in their broader, and shared, scholarly and historical contexts and serves as a platform from which the empirical papers proceed with minimal repetition of this common background.

Chapters 5, 6 and 7 comprise the empirical studies introduced above. The papers are included in full, and almost exactly in the form in which they are submitted to the journals.¹¹ They are also presented with additional chapter introductions and conclusions. Whilst this makes the structure of these chapters, and the thesis narrative, somewhat 'clunky', it is necessary in order to make comments on the material that are required for the thesis, but not suitable for the journal articles. Specifically, these sections link the studies to each other and to the background theories/ context, and reflect on what the studies tell us about the nature of maps, mapmaking and map theory more broadly.

Chapter 2, 'Critical Histories of Imperial Cartography', is a review of literature from that 'critical' history of cartography which emerged in the 1980s. It charts the origins and changing traditions of scholarship in this field, with particular focus on studies of imperial mapping. It connects with recent work that stresses how scholarly emphasis on the power-laden provenance and agency of 'imperial cartography' since the 1980s has been to the detriment of more nuanced examinations that embrace the variability of maps and the complexity of their production, consumption and use. Drawing on these

¹¹ They deviate only in stylistic changes altered to streamline the papers within the thesis, such as: abbreviations, reference style, conversion of endnotes to footnotes, style of figures, and the inclusion of references to thesis chapters.

diagnoses and suggested correctives, I assess how extant 'critical' histories have conceived of, and studied, the British cartography of Africa produced during the late nineteenth and early twentieth century.¹² I conclude that this era is understudied, that most extant work is limited in its critical insight, and that there is much to be done to better understand the complex and nuanced nature of this mapping.

Chapter 3 introduces the context of 'Britain and Africa, c.1880 – c.1915'. Its principal functions are twofold. The first is to provide background information on the complexity of the events, politics, discourse and cartography associated with Britain's involvement in Africa between 1880 and 1915 in order to inform the in-depth and contextually-nuanced scrutiny of specific maps and mapping in the empirical chapters. The second is to establish over which main 'variable' my studies should seek to explore the diversity of maps. It introduces recent debates on the complex nature of imperial discourse and proposes that maps should be studied in the context of 'spheres' of imperialism – namely 'official', 'unofficial' and 'popular' – and the institutions within them. The final section of Chapter 3 tests this proposition by examining contextual literature on the cartography of the era in an official–unofficial–popular framework. The chapter concludes by determining that maps should be situated in their institutional contexts, whilst mindful of spheres, and that there is need for greater examination of the work of 'popular' institutions, institutional interactions, and of the *direct* comparison of maps and mapping across these sites.

Chapter 4 discusses how the thesis goes about 'Cutting' into the British Cartography of Africa'. Of particular concern is detailing the case-studies, sources and methods used. This chapter discusses the rationale behind, and relative opportunities of, the three case-studies in light of the thesis aims and information from chapters 2 and 3. It introduces how and why I draw on theories from book history and the history of science in addition to the history of cartography; and it discusses the archival materials, methodologies and limitations underpinning this work.

¹² Akerman, 2009; Edney, 2009a; Driver, 2010.

The fifth chapter investigates 'The Bartholomews' Mapping of Africa, 1880–1915'. The firm's production record is firstly examined in detail in order to understand the scope and variability of popular African cartography over time, theme, and client and in light of the nuances of British imperialism and multi-scale cartographic networks. The second part of the chapter examines how the Bartholomew firm functioned and the multitude of issues influencing its representation of Africa. It is revealed that the firm was not simply a centre of map-production. It is more aptly conceived of as 'centre of cartographic calculation' or 'dynamic locality', wherein it functioned by collating, hierarchizing and reassembling information according to site specific concerns with credibility, markets, profit-margins, and manifold authorial 'voices' as much as any 'imperial' zeitgeist.¹³ The ways in which map content reflected such issues is discussed in the third section of the paper which examines how and why the Bartholomews produced two very different representations of 1890 'Political Africa'. The chapter's conclusions reflect on the implications of these findings for our study of map-making institutions and the selection of further studies.

Chapter 6, 'Mapping the Second Boer War from Britain, 1899–1902', examines for the first time how various institutions located in Britain (rather than in South Africa) mapped one of the most important events of the era under study. The chapter considers how the British War Office, the Bartholomew firm and the *Glasgow Herald* and *Graphic* newspapers differently engaged cartographically with this conflict by contrasting these institutions' quantitative outputs, and their representations of battles, terrain and politics. It reveals how and why these 'official' and 'popular' institutions differently reported and constructed the Second Boer War through maps. Maps produced of the conflict by institutions based in Britain were not homogeneous and were not simply imperial propaganda. They were manifestations of the interaction between institution-specific stances on the war with concerns for different intended audiences, available sources and time for compilation, and perspectives on the relative credibility of governmental and field sources. The chapter's conclusions re-engage with the issue of

¹³ Latour, 1987; Johns, 1998.

institutional interaction and map circulation and consider the implications of these findings for our thinking both about maps as objects and about map-making institutions.

Chapter 7 examines the ‘‘Life-histories’ of Imperial Cartography’ through the maps of Africa associated with Sir Harry H. Johnston. The chapter uses theories of authorship from book history – principally Darnton’s notion of the ‘communication circuit’ – to examine how Johnston was not the sole author of ‘his’ maps: they were repeatedly re-authored by a host of individuals.¹⁴ My narrative reveals how Johnston’s institutionally contingent authorial relations with the British government, the RGS and the Bartholomew firm had physical effects on the content and style of ‘his’ maps owing to the different levels of authorial control afforded him and the site-specific concerns with credibility, sourcing and intended audiences. These findings are also used to reflect on the application of book history to map history, and to connect with broader theories regarding the nature of maps as objects. Chapter conclusions reflect on these findings in relation to those of the previous two studies.

A final concluding chapter summarises the arguments advanced in this thesis. The chapter synthesises the findings from the preceding sections in order to advance substantial conclusions about the nature of British cartographic representations of Africa, Africa maps as objects, and British map-making institutions between 1880 and 1915. Maps did not simply reflect any generic ‘imperial’ discourse. They were highly variable manifestations of multifaceted and institutionally contingent factors and were mobile and mutable objects re-used and re-produced in different ways across different settings. Map-making institutions were discrete but interconnected sites that not only produced different representations, but also played different roles in the mapping of Africa. These findings are discussed in relation to extant contextual and theoretical literature. The chapter finishes by reviewing the limitations of this study and by raising suggestions for further research incorporating the lessons, sources and theories examined in this thesis.

¹⁴ Darnton, 1982.

2

Critical Histories of Imperial Cartography: a Historiographical and Theoretical Review

Introduction

This chapter reviews literature from the history of cartography, particular focus being paid to extant studies on ‘imperial’ cartography and the mapping of Africa in the late nineteenth and early twentieth centuries. My concern is to appraise the existing theoretical frameworks used to investigate imperial mapping and connect with recent debates calling for a change in this approach in order to inform my empirical examinations. Contextual literature on this era and the ways in which this has shaped my research as an empirical project is the focus of Chapter 3.

In order to place my studies in wider context, the chapter begins by tracing the interpretive traditions in the history of cartography. The foundations of the discipline have shifted away from studying the technical history of the map as an objective mimetic artefact towards the “study of the map in human terms”.¹⁵ Four main components of that ‘new’ and ‘critical’ history of cartography inaugurated in the 1980s by J.B. Harley are identified. These may be summarised as a concern with: maps as social constructions, maps as reflecting and reproducing power-knowledge discourses, maps as effective ‘tools’, and maps as ‘texts’ to be deconstructed. The first section of the chapter also explores how this social constructivist model has been critiqued and developed, including: use of non-representational theory, reflections on the need to engage cautiously with Harley’s theories, calls for more in-depth contextual analysis of ‘sociological’ factors and cartographic ‘modes’, and recent work foregrounding the processes and practices of cartography.

The second section of the chapter examines the literature on imperial maps and mapping. The review is illustrative rather than comprehensive, not least because “the

¹⁵ Harley 1987, p. 1.

sheer magnitude if the subject is daunting”, even as it has been characterised in its broadly ‘Harleyian’ approach.¹⁶ Historians of cartography and of Empire alike have found that Harley’s concerns for maps as power-laden tools produced to establish and maintain unequal power relationships which favour the *élite* fit well with traditional understandings of imperialism. Extant studies of imperial cartography have thus been dominated by analyses of maps in relation to their power-laden ‘imperial’ provenance, textual content and agency as a tool of the state. This section consequently also introduces recent work by – principally by Edney and Driver – who argue that scholars have treated imperial cartographies as historically coherent. Their proposals for an improved approach are detailed, including concern for: the ‘life-histories’ of maps through their production, circulation and use; the provenance of maps in institutions and cartographic modes; and the ‘contradictory sources’ shaping maps beyond generic imperial discourse.

The third section considers how the cartography of Africa during the late nineteenth and early twentieth centuries has been studied and conceived of in relation to the broader critical history of cartography and evaluates this work in light of recent calls for the modification of analyses of cartography associated with imperial contexts. It finds that the era is understudied and extant literature is limited in its critical insight: there is much to be done to better understand the cartography of this era in the ways outlined by Edney and Driver.

The final section summarises the main themes of this historiography and the principal points of implication for the thesis. It concludes that – in light of this literature – my empirical studies must question the taken-for-granted nature of ‘imperial’ maps by embracing the complexity and variability of imperial cartography and discourses, “study[ing] in detail the practices of producing and consuming maps” in specific contexts, and heeding Driver’s warning of the “need to be wary of what we think we already know”.¹⁷

¹⁶ Akerman 2009, p. 5.

¹⁷ Edney 2009a, p. 11; Driver 2010, p. 156.

A Summary Historiography of the History of Cartography

“Since the 1930s the history of cartography has been slowly emerging as a subject with its own scholarly identity”.¹⁸ Traditional studies of historical cartography – before c.1980 – were dominated by an empiricist paradigm, concerned with maps as progressive and value-free statements of spatial ‘fact’. Blakemore and Harley identified three intellectual frameworks structuring the work of early cartographic historians, most crucially the ‘Darwinian Paradigm’ which assumed that “as civilization improves so mapmaking also progresses”.¹⁹ Assessments of accuracy consequently dominated interpretive readings of maps and this fostered a duality between veracious scientific and mythic artistic cartography in which the latter was often castigated. Early analyses were also characterised by a progressive and teleological narrative which implied that cartography was linearly working towards – and, crucially, was capable of – accurate mimetic representation. This paradigm reflected cartographers’ assertion of the representational veracity of maps to bolster the worth and trade of their products. It was reinforced by early historians of cartography who failed to “question the inner logic, the rhetoric, and the style of the map in the same way [they] would question the syntax of the written word”, and so overlooked the map’s discursive function. Mapmakers and scholars alike were mesmerised by the illusion of maps’ mimetic power until the 1970s.²⁰

Cartographers sought to legitimise their discipline as a ‘science’ in the 1960s and 1970s by using communication models as the dominant framework for investigation. Whilst these models encouraged analyses of maps beyond their design and production, they were criticised for their conception of map users as passively accepting the knowledge *encoded* in the map by its maker(s). In response, scholars pursued interpretations that considered how users actively *decoded* their own meanings by examining the extent of information ‘loss’ through the transmission of maps from

¹⁸ Harley 1987, p. 23.

¹⁹ Blakemore and Harley 1980, p. 17. Of the other two paradigms: ‘Old-is-Beautiful’ pertains to the fact that the interest in maps increased with their age; ‘Nationalist’ concerns the Eurocentric focus that characterised historical cartography until relatively recently.

²⁰ Harley 1989a, p. 83.

'source' (mapmaker) to the 'destination' (map-user). Emphasis was on the map as a "medium of communication" and upon "stressing the nature of cartography as a process rather than maps as a product".²¹

In later rejecting communication models, historians of cartography experimented with a broad set of theories including semiotics (understanding maps as systems of signs) and linguistic theory (conceiving of cartography as functioning like language with syntax, rules, etc).²² The associated shift in methodologies – from carto-bibliography and analysis of map design to an emphasis on archival research – had the effect of broadening the scope of the cartographic activities available to study, and revealing the humanistic tendencies of maps beyond their scientific origins. The use of communicative principles in collaboration with these other theories developed the "internal history of cartography into a subject of humanistic significance" with a focus on maps as objects in their own right. In combination, these shifts were crucial to the formation of a new "critical paradigm" of map studies evident from the 1980s.²³

The 1980s – variously termed an "epistemic break", "dramatic period of reform" and "paradigm shift" in the model of historical cartography – was an era of significant development in the field. J.B Harley described the history of cartography as being at a "crossroads" in 1980: between "its traditional work in the interpretation of the content of early maps as documents and its more recently clarified aims to study maps as artefacts in their own right and as a graphic language that has functioned as a force for change".²⁴ The positivist model of cartography's development towards mimetic accuracy, and the model of cartography as a communication system, were replaced as the field's foundational precepts, in favour of critical social theory, iconology, and semiotics.

Harley was principally instrumental in this reconceptualisation of the map and of the discipline of map history.²⁵ His numerous publications ushered in a critical phase of 'maps as social constructions'/ map 'deconstruction', replacing the former phase of

²¹ Petchenik, 1975; Harley 1987, p. 34.

²² Keates (1982) on semiotics; Head (1984) on linguistic theory.

²³ Edney 2005, p. 15 and Edney, 2009b.

²⁴ Crampton 2001, p. 235 and Edney 2005, p. 14; Harley 1987, p. 39.

²⁵ Harley wrote more than 20 papers in the 1980s and early 1990s, he died in 1991.

'maps as truth'/ 'the map-as-object'.²⁶ Even so, Harley never explicitly established a definitive research agenda: the implications of his theories have been recast by others into multiple configurations. We may identify four principal components of a Harleyian research agenda from these reinterpretations which constitute the main lines of enquiry of the new 'critical' history of cartography that emerged from the 1990s.²⁷

Firstly, whereas foregoing positivist epistemologies had 'dehumanised' the map as objective 'science'; Harley examined maps as social constructions that are fundamentally encoded with "the values and judgements of the individuals who construct them and [...] are undeniably a reflection of the culture in which those individuals live." "Our task", Harley declared, "is to search for the social forces that have structured cartography".²⁸ The 'new' history of cartography thus "looks at maps in the context of the societies that made and used them": it situates maps as social constructions and exposes the individuals, policies and projects governing their content, production and use.²⁹

In recognising maps as produced by specific groups for particular purposes, Harley revealed that the then prevailing notion of maps as providing value-free mimesis was only a 'mask' and 'cartographic illusion': maps were fundamentally "biased towards, promoted by, and exert[ed] influence upon particular sets of social relations". By accepting this, Harley argued, "it becomes easier to see how appropriate they [maps] are to manipulation by the powerful in society."³⁰ Harley invoked Foucauldian theory to argue that maps are practices and relations of power-knowledge nexi. Power arises both externally and internally. 'Internal' refers to the 'technical' power "embedded within the map text" and exerted *by* cartography. 'External' refers to the 'cultural' power exercised by map patrons *on* and *with* the map (mapmakers, the monarchy, the church, the state).

²⁶ On the relative distinctions of these phases, see Kitchin *et al.*, 2009 and Casti, 2005 respectively.

²⁷ Edney, 1996, 2005; Kitchin *et al.*, 2009.

²⁸ Dodge and Kitchin 2001, p. 75; Harley 1989b, p. 2.

²⁹ The latter quote is the aim of *The History of Cartography Project* founded by Harley and Woodward and commonly heralded as the core of the discipline. The series is structured around this notion, organising maps into temporal phases from "Prehistoric, Ancient and Medieval" mapping to the forthcoming fifth and sixth volume on the nineteenth and twentieth centuries.

³⁰ Harley 1988a, p. 277 and Harley, 1989a.

Those individuals and institutions wielding power use maps to create knowledge, which can then be used to produce political power. The second of Harley's 'tasks' is thus "to locate the presence of power—and its effects—in all map knowledge".³¹

This question of 'effects' takes us to the third of the main tenets of Harley's theories – questions of cartographic agency. For Harley, maps fundamentally create information rather than reflect it. In this construction – the inherent selective and power-ridden nature of which was concealed under the mask of empiricist objectivity and truth – maps historically acquired great agency. Harley thus "proposed a new research agenda concerned with the roles maps play in different societies [...] and that we should investigate the historical and social context in which mapping has been employed." This has become one of the main thrusts of the critical history of cartography.³²

Finally, Harley advocated conceptualising of maps as socially constructed 'texts' that "have different layers of meaning, and with different effects on society". Harley drew on the linguistic model to conceive of maps as a narrative system of signs wherein meaning could be understood in the context of the map; and the art-historical methodology of iconography to examine the meaning of the map as the result of the subjects and themes of its icons and emblems and to trace the relationship between cartography and ideology.³³ In 1989, Harley proposed 'deconstruction' as a principal methodology for historians of cartography. Derived from the work of Foucault and Derrida, deconstruction extended the application of semiotics to suggest that the social and power-laden factors 'behind' the map can be read in the signs and aesthetic of the finished map-text. Deconstruction was thus a means to "break the assumed link between reality and representation". It meant "reading between the lines" of the thick map 'text' to expose the hidden agendas, the "second text within the map", and its provenance in specific social, historical and power-knowledge contexts.³⁴

³¹ Harley 1989b, p. 13 and Wood, 2002; Harley 1988a, p. 277.

³² Kitchin *et al.*, 2009, p. 10 and Edney, 2009b.

³³ Harley 1989a, p. 84. Harley drew on Geertz's (1983) notion of 'thick texts' and his use of the linguistic model is derived indirectly from his predecessors' work on the semiotics of graphics.

³⁴ Harley, 1992, p. 2 and Harley 1989b, p. 9.

In these principal ways, J.B. Harley is heralded as inaugurating a new history of critical cartography that has, since the late 1980s, been the dominant model for historians of cartography.³⁵ Numerous scholars have since framed maps as discursive formations, examining the ideologies inherent in maps, and revealing how cartography reflects and constitutes a host of powerful and political relations including property, national identity and gender.³⁶ Whilst many scholars enthusiastically adopted the new epistemology – particularly with respect to imperial cartography as I shall show in the next section – these early works were ultimately formative and fostered a host of further reconceptualisations of the map and the discipline. This rest of this section explores the most prevalent of these developments and those which are especially pertinent to the assessment of the extant studies of imperial cartography.

Belyea and Wood have been especially vocal in their evaluations of the social constructivist critique. Both critics argue that these theories failed to fully grasp the post-structural assertion that a map exists solely as a social construction: there is no pre-existing reality that the map simply reflects. For Harley, and for scholars following in this vein, there is a real world ‘underneath’ the ‘ideological veil’ or ‘mask’ of the map which can be exposed by reading between the lines. By contrast, Wood and Belyea argue that the ‘mask’ is continuous with the map in every way: there is “no ‘veil’ behind which the map functions, no ‘hidden agendas’ by which ‘human agents’ exercise ‘duplicity’”. Harley’s contention that the agency of maps was the result of their creation and utilisation by humans consequently also misinterprets Foucault who suggests that texts’ agency is derived from their textual function, not from the ways in which they are wielded.³⁷ These critiques have been instrumental in shifting analyses away from ‘representational’ work that seeks to identify and circumnavigate the politics of

³⁵ Edney, 2005. Scholars have recently sought to expose that Harley was not as ‘stand-alone’ in his approach as analyses suggest. His work was bolstered by earlier enabling developments by men like Robinson and Woodward (Edney, 2005); concomitant research of Wood and Fels (Wood and Krygier, 2009); and broader intellectual contexts including the social constructivist work of historical and radical geographers (Crampton and Krygier, 2006). Harley was, nevertheless, instrumental in reconfiguring the history of cartography.

³⁶ Wood and Fels, 1992; Pickles, 1992, 2004.

³⁷ Belyea 1992 p. 3; Wood, 1993.

representation in order to expose the 'truth' and how maps 'lie', in favour of post-representational theory that recognises that the map is the map itself and embraces how maps did not *mirror* nature, they *produced* it.

In addition to these philosophical critiques, there is also a body of literature characterised by warnings to apply Harleyian theories of the power-laden and ideological provenance of maps with discernment. Black in particular has criticised the 'ideological school' associated with critical histories of cartography for their "post modernist interpretation of maps [which] drew on left-wing dislike and distrust of authority". The tendency of scholars to find a conspiracy in every cartographic feature, he argues, partially undermines the merits of their work. Scholars need to recognise that whilst some features reflect political discourse, others were more innocuously "a product of problems with data collection, others of problems internal to the medium of the map" that also require examination. Burnett and Pickles concur that attention to such matters would be a worthy corrective to the whole-hearted adoption of 'Harleyian' theories that characterised the 1990s and were associated with a "functionalism that reduce[d] map and mapping enterprise to a mere instrument of the powerful and the devious".³⁸

The work of Matthew Edney has been especially influential in extending and amending Harley's theories in ways that account for more of the complexities of cartography and the 'medium of the map'. In contrast to Belyea's and Wood's assertions of the over-emphasis on humans in early analyses, Edney contends that studies have insufficiently engaged with questions of anthropogenic agency. In "preserv[ing] the popular image of the map as a natural and self-evident document", he argues, studies have not truly engaged with "the manner in which a map's attributes and characteristics are defined by the culture within which the map is created or used." He calls for scholars to stop situating "'the map' as the subject of the sentence" as this "obscures the fact that the real agents in map making and in map using are us, the humans".³⁹

³⁸ Black 1997, p. 22; Burnett 1999; Pickles 2004, p. 113. See also, Pickles 1992, Wood and Fels, 1992; Crampton, 2001.

³⁹ Edney 1996, p. 188. Edney's engagements with questions of imperial cartography specifically are discussed in the next section.

Edney's concept of cartographic 'modes' is arguably his most important contribution to the field. He propounded the notion of "cartography without progress", whereby map history constitutes "a complex amalgam of cartographic *modes* rather than a monolithic enterprise". Maps are "artifactual manifestations of different cartographic modes", the mode being "the combination of cartographic form and cartographic function, of the internal construction of the data, their representation on the one hand and the external *raison d'être* of the map on the other." Modes are not linear chronological sequences and none is inherently superior. They are temporally and spatially unique sets of cultural, social, and technological relations that determine cartographic practice and output: cultural perceptions govern prevailing cartographic conventions, social requirements govern features such as map scale, and technological relations govern map production and survey. All modes are temporally and spatially unique but there are "usually multiple but distinct mapping modes operating at the same time, in the same place" in relational and interactive networks. For Edney, analysis should consider maps' fundamental situatedness in the cultural-social-technical relations of their mode(s).⁴⁰

Edney has reiterated this stance as a 'cultural' history in later papers. In this, he is joined by Jacob who propounds a 'sociology of the map'. Harley's notion of maps as 'social constructions' has been developed by both of these scholars into the idea of maps as 'cultural documents'. For Edney, analyses should investigate how the map "is constructed according to culturally defined semiotic codes; the knowledge is constructed using various intellectual and instrumental technologies; [and] the knowledge and its representations are both constructed by individuals who work for and within various social institutions". Jacob conceives of the map as situated in the centre of concentric contextual circles which include 'structural' "standards of graphical representation, drawing, geometry, text"; 'sociological' influences of "map makers, institutions, the public"; and "economic, social, political, intellectual and artistic context".⁴¹ Both Edney

⁴⁰ Edney 1993, pp. 54–58; Kitchin *et al.*, 2009, p. 312.

⁴¹ Edney 1996, p. 189; Jacob 1996, pp. 191–193. See also Buisseret, 1990; Edney, 2005; Jacob, 1992.

and Jacob thus advocate situating maps at finer resolutions than Harley proposed, and in relation to more multifaceted and contingent influences.

In the early and mid 2000s, cartographic theorists emphasised the need for a 'denaturalising' and 'de-ontologising' approach to the history of cartography. Drawing on Edney's relational notion of modes, they argued that earlier theories were hampered by insufficient questioning of the ontological assumptions of cartography: that is, the 'foundational knowledges' regarding how the world can be known and measured. They posited that historians need to adopt an approach that historicises and contextualises the conditions and knowledges underpinning cartographic practices and proposed a range of new conceptions of maps to address these issues, including maps as 'inscriptions', 'propositions' and 'actants' rather than representations or constructions.⁴² Pickles advocates conceiving of maps as complex, multivocal and contested inscriptions. Under his hermeneutic approach, he advocates a contextually nuanced interpretation of maps that does not attempt to determine the power of maps and their ideological intent as promoted by Harley's theories, but that embraces their "multiple, institutional and contextual nature" and seeks to understand them as "unstable and complex texts that are not authored or read in simple ways".⁴³ These relatively recent theories have not become paradigmatic: the 'Harleyian' notion of maps as social constructions remains pervasive amongst historians of cartography. These theses have also arguably been limited in their attempts to destabilise the ontological security of maps. Nevertheless, they have fostered an increasing emphasis on how a "map does not simply represent the world, it produces the world" and promoted examination not only of what the map represents but "how it is produced and how it produces work in the world".⁴⁴

The most recent reconceptualisations of maps – propounded principally by cartographic theorists – promote examining maps as on-going processes and practices. Appealing to performance and non-representational theories, this body of work argues that extant studies are hampered by the fact that they "fix a maps' meaning at the

⁴² Crampton, 2003; Pickles, 2004; Wood and Fels, 2008; Kitchin *et al.*, 2009.

⁴³ Pickles, 2004; Kitchin *et al.* 2009, p. 15.

⁴⁴ Kitchin *et al.* 2009, p. 16, p. 20. On the limitations of this work, see Kitchin *et al.*, 2012.

moment of production” and thus do not account for ‘ambiguities’ or the “possibility that meanings of the spaces and identities represented in maps may be continually reproduced with changes in context”. These new theories, by contrast, propose that maps were not inherently stable but were always in a state of becoming and were “always subject to altered understandings, revisions and differing enactments” as people perpetually made and re-made maps’ meanings in particular contexts and cultures.⁴⁵ Examining historical maps as processes, however, is recognised as problematic: “historic maps are generally more an artifact in which the processes of mapping and interpretation are greatly static [*sic.*]” given the lapse of time.⁴⁶ For historians, the more applied consequences of this reconceptualisation are thus the greater accounting for the role of the reader in the *production* of new meanings, rather than assuming maps’ *imposition*.⁴⁷ My engagement with such issues is discussed in Chapter 4 after I investigate how extant studies of imperial cartography have addressed such questions (next section) and the contextual relevance of these issues (Chapter 3).

Critical Histories of ‘Imperial Cartography’

Harley’s theories arguably inaugurated “a reassessment of cartography in general and imperial cartography in particular”. His foregrounding of “the intersections between cartography and political power” and “the map’s role in asserting hegemony and justifying exploitation and also its vulnerability to manipulation as an instrument of warfare, colonization and diplomacy” have been well suited to studies of imperial maps. It is largely in response to his theories that there is now an “enormous literature on the intertwined histories of empire and cartography”.⁴⁸

Early historians had recognised the potential ‘bias’ of imperial maps with respect to the ‘distortion’ of cartographic principles and their Machiavellian deployment prior to

⁴⁵ Hanna and Del Casino Jr. 2003, p. xiv–xv; Harris and Harrower 2006, p. 4. See also Kitchin and Dodge, 2007 and Perkins, 2004.

⁴⁶ Culcasi 2008, p. 51. See also Dwyer, 2003; Parker, 2006; Crampton and Krygier, 2006. Further, historians cannot use those methodologies propounded by theorists in order to examine maps as practices such as ethnomethodology and participant observation (Kitchin *et al.*, 2012).

⁴⁷ Harris and Harrower 2006, p. 101; Culcasi, 2008.

⁴⁸ Hegglund 2012, p. 88; Edney 2009a, p. 11; Monmonier 2009, p. 68; Clayton 2003, p. 360.

Harley's work. Most analyses were measured "against a yardstick of 'objectivity'" which Harley sought to recast, however, and little attention had been paid to what these features represented, or their political implications. Studies had also hitherto only examined propaganda and advertising maps: those characterised by overt and 'deliberate' distortion. Arguably one of Harley's greatest contributions was to break down the "binary oppositions between maps that are 'true and false', 'accurate and inaccurate', 'objective and subjective', 'literal and symbolic', or that are based on 'scientific integrity' as opposed to 'ideological distortion'". In doing so, all 'imperial' maps were opened up to study as value-laden constructions, including topographic maps previously upheld as a pinnacle of objectivity.⁴⁹

Harley recognised the consonance of his theories to explanations of empire in cartographic terms. He dedicated a whole section of his seminal "Maps Knowledge and Power" paper to this subject, beginning with the assertion that "[a]s much as guns and warships, maps have been the weapons of imperialism". He called for analysis of maps beyond extant studies of "the drawing of boundaries for practical political or military containment", and advocated examining the ways in which maps: aided in the "direct execution of territorial power", were used "to legitimise the reality of conquest and empire", were deployed as "the currency of political 'bargains'" and "acquired the force of law in the landscape." Maps were not just *representations* of empire; in their provenance, content and use they became imperial *instruments*.⁵⁰

'Harleyian' questioning of the power-relations embodied in all imperial maps has been especially prevalent in extant studies. The notion that maps are fundamentally produced to benefit the powerful at the expense of the powerless are aligned to definitions of imperialism as "the influence or control of the relatively weak by the rich and powerful". Analyses of imperial cartography have consequently almost universally examined "instances in which unequal power relationships between communities produced maps that represent weaker polities for the exclusive benefit of the stronger".

⁴⁹ Harley 1988a, pp. 277–278. Analysis of propaganda maps that, at times, are remarkably 'Harleyian' in their accounts date back to the 1940s: see Quam (1943) and Thomas (1949).

⁵⁰ Harley 1988a, pp. 282–283.

From studies of Renaissance Europe to 1950s Kurdistan, cartography and imperialism have been analysed as “twin manifestations of unequal power relationships”.⁵¹

The addition of imperial vested interests to this understanding of maps as fundamentally schematising and power-laden has meant that historians of cartography pursuing a deconstructionist research agenda “have found much grist for their mill within imperial projects”. Concern for map content amongst historians of imperial cartography has almost universally centred around the non-representational examination of how imperial powers constructed maps to impose their supremacy, control and influence rather than trying to examine any underlying ‘reality’.⁵² Engagement with imperial maps has characteristically been limited, however, to a recurring set of cartographic features including colour, cartouches, toponymy, boundaries, and blank spaces.⁵³ For Monmonier, Harley’s work on how blank spaces were “positive statements, and not merely passive gaps in the flow of knowledge” was his most important contribution. Harley proposed a distinction between the ‘blank spaces’ and ‘silences’ on maps: the former being an expression of cartographic ignorance and the latter reflecting deliberate withholding of information. Analyses of both forms of cartographic ‘gap’ have found particular expression amongst studies of imperial cartography as they lent support to the imperial conceptions of land acquisition, *terra nullius* and *vacuum domicilium*: making land appear vacant and thus morally blank and so easily acquired, divided and ruled.⁵⁴ Discourses of place names or ‘cartographic toponymy’ have also been preminent amongst studies of imperial maps. The replacement of native names with British ones commonly heralding national heroes and monarchs has consistently been analysed as imprinting British control and supremacy over native territories and overwriting indigenous presence.⁵⁵ The most infamous imperial cartographic construct of all, however, has been the use of layer-colouring to depict European ownership across the world. Possessive ‘British pink’ continues to be

⁵¹ Stone 1995, p. 68; Akerman 2009, p. 9.

⁵² Edney 2009a, p. 11; Akerman, 2009.

⁵³ Pickles, 2004; Driver, 2010.

⁵⁴ Harley 1988b, pp. 58–59; Monmonier, 2009.

⁵⁵ Jacob, 1992; Etherington, 2007, Safier, 2009.

cast as one of the principal features of imperial maps, and ways in which Britain asserted its dominance through cartography. This has arguably become so “self-evident that it often does not even require illustration, let alone detailed examination”.⁵⁶

Examination of the agency of imperial maps as discursive tools that created and maintained empires have dominated extant analyses.⁵⁷ The logistical use of maps in aiding imperial conquests has been well documented before and after Harley’s critical reassessments. Maps were valuable in their fundamental organisation of information. By submitting territory to a cartographic ‘language’, maps fundamentally served as a means of organising territories into an occidental and more manageable structure. In this most ‘simple’ capacity, maps supported the direct execution of territorial power. It was only with the advent of Harleyian theory that scholars really began to question the ideological function of cartography in the construction and consolidation of Empire. Maps did not just assist Empire: they promoted, legitimised, and mythologised it.

Understanding the functions of imperial cartography necessitates engaging with the ‘foundational knowledges’ underpinning it. The agency of imperial maps, it is argued, was a product of the empiricist notion that cartography truthfully reflected the ‘reality’ of Empire. Proclamations of scientific accuracy and objectivity by cartographers bolstered this view and the contemporaneous “unquestioning acceptance of cartographic messages” and assumption that “once data enters into the form of the map, it instantaneously acquires the aura of fact and reality” disguised the political motivations and content of imperial cartography. This lent maps the authority and agency to make empire seem natural and indisputable throughout the vast and varied ‘imperial’ era.⁵⁸ Indeed, Edney argues that the very notion of cartographic mimesis was an imperial construct and that ‘empire’ and ‘map’ were mutually constitutive: “[t]he empire exists because it can be mapped, the meaning of empire is inscribed into each map”.⁵⁹

⁵⁶ Driver 2010, pp. 147–148.

⁵⁷ On this characteristic of the literature, see: Buisseret, 2003; Casti, 2005; Edney, 2009b.

⁵⁸ Monmonier 1995, p. 1; Hegglund 2012, p. 88; Edney, 2009a.

⁵⁹ Crampton 2003; Edney 1997, p. 2. Huggan (1989) also argues the concept of maps as ‘coherent’ and as ‘uniform’ is a creation of colonial discourse.

The full scope of the agency thus afforded imperial cartography is vast and beyond the remit of this overview. Burnett, however, offers a sophisticated summary of those most frequently cited findings:

by ordering chaotic spaces maps created imperial places; by making distant places visible they satisfied the scopic and gnostic drives of a conquering people; by abetting territorial control in practical ways they made colonies into large-scale Benthamite panopticons; by providing a textual base map they enabled European nations to inscribe their ambitions on inaccessible places; by making places portable they conformed to (and even exemplified) the Latourian notion of the immutable mobile [and they were] texts that composed the imperial archive.⁶⁰

The capacity for imperial maps to *create* realities and thus enact and legitimise conquest and empire has been one of the most widespread forms of agency attributed to imperial cartography. For Turnbull, imperial maps could take on “the meaning of territory, and its importance in that culture” because maps were metaphors for both territory and the “culture in which it was created.” Multiple scholars have sought to expose how maps *became* the imperial territory as they were the constructions through which regions were comprehended, organised and manipulated. This conception of maps engages with post-structural theory in its suggestion that “territory does not precede a map, but that space becomes territory through bounding practices than include mapping.” That is, maps and territories are co-constructed. Maps created a different imperial ‘reality’ which existed solely because of the map yet the perceived prestige and ontological status of cartography meant that its claims were accepted as correct and preordained. Imperial territories were thus divided, and lands were claimed, we are often told, using only a line on a map.⁶¹

In *Mapping an Empire*, Edney examines the interlocking histories of cartography and imperialism with respect to the Great Trigonometrical Survey of India (GTS). His work is heralded as one of the key texts with respect to his empirical demonstrations and

⁶⁰ Burnett 2001, p. 6.

⁶¹ Turnbull 1991, p. i; Harley, 1988b; Wood and Fels, 1992; Edney, 2009b.

extension and refinement of theories in imperial contexts.⁶² For Edney, “Imperialism and mapmaking intersect in the most basic manner. Both are fundamentally concerned with territory and knowledge”: “maps came to define the empire itself, to give it territorial integrity and its basic existence.” Edney extends the agency and power of imperial cartography into several domains. He developed Harley’s concerns with the power of the object (map), to include the process of cartography (mapping and surveying) as inherently power-ridden practices. The very presence of survey staff, instruments and offices imposed British domination over Indian lands and populations. Drawing on the idea of Bentham’s ‘panopticon’, Edney argues that the survey fundamentally represented British control and discipline over India. In its ‘scientific’ ideology, the survey created a sense of British ‘mastery’ over India: surveying was to ‘know’ the real India and knowing equated to ruling. The GTS also became an emblem of the Enlightenment scientific ideals of mathematical process and ‘hierarchical organization’; of the scientific and democratic ‘imperial Self’ as triumphant over the irrational ‘imperial Other’; and of the potential of Indian territories to become rational and ordered politically as well as cartographically. For Edney, and for Heggland drawing on his work, maps were a metaphor and agent of British imperial and epistemological supremacy.⁶³

Edney also advocates analysis of the role played by maps in the constitution and organisation of the ‘imperial archive’ by “transform[ing] a land of incomprehensible spectacle into an empire of knowledge”. The imperial archive served materially as a body of apparently truthful and reproducible knowledge that was perpetually drawn on in the formulation and consolidation of Empire. It also had a more ideological function, previously propounded by Richards, as “a fantastic representation of an epistemological master pattern, a virtual focal point [...] for empire.” Imperial cartography and the imperial archive were mutually constitutive. Maps provided the perfect means for refining, objectifying and showcasing the extent of knowledge about the British Empire and were thus “good instances of the texts that composed the imperial archive”. The

⁶² Edney, 1997. There are, however, more critical Indian cultural reviews of Edney’s work.

⁶³ Edney 1997, pp. 1–2, p. 34; Heggland, 2012.

archive also shaped the perceived needs and standards of cartographic activity: maps were produced in the dominant model of the archive – in the case of the GTS, rigorous triangulated topographical mapping. Both Edney and Richards ultimately found the archive as an all-encompassing entity to be a ‘fantasy’, but this did not negate its symbolic impact: it served as a “mythology of knowledge that played a global role in consolidating the British Empire as a secure symbiosis of knowledge and power”.⁶⁴

Edney’s study is most commonly cited for its illustration of the crucial and varied role played by cartography in establishing and consolidating the British Empire, and its demonstration of the extent to which such cartographic projects were not as value-free as their contemporaries may have us believe.⁶⁵ In relation to this thesis, however, Edney’s study is instructive with respect to the way in which he shows that the GTS was not simply ‘imperial’. Edney exposes the process and maps of the GTS as the result of the complex, fluctuating interface between science and imperial/ colonial ideology, differently aligned to a range of concerns including nationalism and Christianity over the course of the survey. They were also ultimately the results of negotiation, mediation, and contestation between surveyors, governors and investors, not just of colonisers and the colonised.

Edney is one of the few historians of cartography to pay attention to these more chaotic and practical – and less classically ‘imperial’ – characteristics of this cartography. The paucity of such insight has recently been diagnosed in both Edney’s paper on “The Irony of Imperial Mapping” and Driver’s article “In Search of the Imperial Map”. Whilst analyses of imperial cartography have changed in their focus since the rejection of the empiricist paradigm and scholars have appraised maps in their ‘imperial’ contexts, such maps remain just that: imperial. For Edney, neither imperialism nor cartography “possesses innate characteristics that permit us to delineate it unambiguously”, both terms are highly contingent and discursively defined, and yet historians of imperial cartography have regarded both phenomena as self-evident categories that are “constant

⁶⁴ Edney 1997, p. 2; Richards 1993, p. 11; Burnett 2001, p. 6; Richards 1993, p. 32.

⁶⁵ Burnett, 2001; Pickles, 2004; Heggland, 2012.

across cultures". For Driver, scholars have aligned their studies only "with a certain version of what empire was about" and universal conceptions of the power-laden content and function of maps. Extant studies may have questioned the underpinnings of imperial maps generally, but they have failed to appreciate the inherent variability and contingency of this cartography and have tended to erroneously attribute all features of the map as 'imperial'. Progress towards developing our understanding of imperial cartography has arguably stalled: both Edney and Driver thus propound new approaches to the study of imperial cartography.⁶⁶

Edney argues that imperial cartography cannot be reduced to a coherent 'imperial' mode: maps need to be viewed in light of the contingent constellations of contexts in which they are made and used. Further analysis is not needed to consider the ontology or definitions of these maps, or even further deconstruction of their content, he argues. Rather, studies need to pay "careful attention to the technologies and techniques variously employed in making, circulating and using maps"; to consider "the communities and institutions who participated in each discourse, who commissioned and consumed maps, by examining the ways in which maps circulated as artifacts – both physically in space and within certain social groups – and were stored, archived, and reproduced"; and to come to terms "with the practices and conventions of reading and using maps". Edney recognises that single studies may not be able to address all such questions, but ultimately propounds that studies would do well to foreground questions of how maps were "produced, circulated and consumed" rather than the typical focus on the generic power-relations of the 'finished' map content. He also argues that studies should account for the ways in which these processes and contexts are dependent "on the particular social and cultural context", or cartographic modes, in which they take place and thus consider the variability of imperial mapping rather than assuming that the content, scales, methods, conventions, *raison d'être* and technologies of this cartography were historically, and indeed spatially, coherent.⁶⁷

⁶⁶ Edney 2009a, p. 12, p. 71; Driver 2010, p. 156.

⁶⁷ Edney 2009a, pp. 43–44, pp. 17–18. See also Edney, 2011.

Edney's paper is the first chapter in Akerman's edited volume *The Imperial Map* and appears to have infused many of the other contributions: the chapters examine much more of the complexity and variability of imperial mapping than has typically been studied, and reflect more critically on the 'imperial' nature of this cartography. This is exemplified in Safier's corrective of Harley's assertion "that entire populations of Ameridians were eliminated with the stroke of a single pen" in the Portuguese maps of Iberoamerica: he proposes that it is more plausible to see the 'blank spaces' and removed native names as a contextually-specific "process whereby information was ingested and reincorporated into other forms". Whilst individual papers are informative, the volume is particularly valuable in the way its contributions work together to, for the first time, "paint a far more complex and nuanced picture of imperial mapping which defies any attempt to reduce it to a single framework". The temporal and spatial coverage of this 'picture' is vast but it illustrates that there is much work to be done to examine the complexities and nuances of imperial cartography at smaller scales.⁶⁸

The differences between the new approach advocated in Driver's paper and the previous 'Harleyian' epistemology are exemplified in their different conclusions on the nature of the Imperial Federation Map (Figure 2.1). In 1988, Harley had pronounced it an exemplar of imperial cartography. By exploring those textual features omitted in Harley's analysis, and the specific cultural context of its production, Driver shows that the Imperial Federation Map was more particular and peculiar than archetypically 'imperial': it was a product of multifaceted concerns, individuals and forces. Harley's miscalculation, and many since him, arose as he based his argument on universalised notions of empire and cartography and paid insufficient attention to the specific context in which the map was made. His comments were "almost entirely detached from any consideration of the contradictory sources" also shaping the map. The correctives advanced by Driver are two-fold. The first is to examine imperial maps as "objects with a life-history". This has parallels with Edney's typology but Driver puts greater emphasis on maps' making than Edney's – and others' – concern for map consumption: his in-

⁶⁸ Safier 2009, p. 156; Akerman 2009, p. 9.

depth examination of the Imperial Federation League attests to the need to examine the intricacies of maps' provenance and production. The second is to address questions of variability and the need to account for pragmatic and logistical contextual factors which, Driver argues, extant analyses have quelled in their attempts to pin down the nature of imperial cartography. Scholars need to examine the "different kinds of image depicting various aspects of the imperial experience in cartographic form", embracing the "diverse archival record" of late-nineteenth century imperial cartography.⁶⁹



Figure 2.1. "Imperial Federation: Map Showing the Extent of the British Empire in 1886", *The Graphic*, 24 July 1886. Courtesy of the Norman B. Leventhal Map Center, Boston Public Library.

The correctives propounded by Edney and Driver correspond to developments in the discipline more broadly (previous section) which have largely been overlooked by historians of imperial cartography. Both authors reassert the need to better situate maps at scales approaching a 'cultural history' and 'sociology of the map' which extant studies of imperial cartography have not addressed.⁷⁰ In arguing that we cannot presuppose the inherently imperialistic nature of cartography and must consider the 'contradictory'

⁶⁹ Driver 2010, pp. 148–156. Biltcliffe (2005) and Heffernan (2009) have also remarked on the under-studied complexities of the Imperial Federation Map (Figure 2.1).

⁷⁰ Edney, 1993, 1996; Jacob, 1992, 1996.

sources and other factors shaping maps' content and function, Edney and Driver corroborate the calls of scholars like Black and Crampton.⁷¹ The correctives also connect with the recent shift towards understanding the 'processes' of cartography including production, circulation and consumption in order to really understand the nature of this cartography.⁷² Let me turn now to the extant critical histories of the late nineteenth and early twentieth century cartography of Africa, and evaluate these studies' content and approach in relation to these calls for change.

Critical Histories of the Cartography of Africa, c.1880–c.1915

Extant studies of the British cartography of Africa produced between 1880 and 1915 have been small in number and – in light of Edney's and Driver's critiques – limited in depth of analysis. Braun attributes this to "the great geopolitical (and epistolary) messiness of the period, and the sheer confusion attendant upon the introduction of cheap lithography and pulp paper by the mid-nineteenth century and the subsequent deluge of printed maps of every description". This 'messiness' has caused many scholars to shy away from studying the era and has meant that those studies that have engaged with this cartography have been characterised by a broadly 'contextual approach', studying what was produced and by whom – the details of which are examined in Chapter 3 – rather than critically engaging with how we should conceive of this cartography.⁷³

The few historians of cartography that have specifically addressed this era have focused almost exclusively on maps depicting the political partition and European subjugation of Africa associated with the 'Scramble for Africa', and have – like the field more generally – pursued a predominantly 'Harleyian' epistemology. The dominance of these foci probably reflects Harley's claim in 1988 that the "scramble for Africa [...] has become almost a textbook example" of his theories regarding the "power effects" of maps. In the same year, Jeffrey Stone propounded a different reconceptualisation of

⁷¹ Black, 1997; Andrews, 2001; Crampton, 2001.

⁷² Perkins, 2004; Del Casino Jr. and Hanna, 2006; Harris and Harrower, 2006; Edney, 2011.

⁷³ Braun 2008, p. 19. These reasons pertain to the literature on maps of Africa after c.1850. Braun also attributes this paucity to the "map-trade bias in favour of earlier maps".

European mapping during the late nineteenth century. Stone argued that, from the mid-1880s, European maps and mapping of Africa underwent such rapid and extensive change that this era should be conceived of as 'revolutionary' in the history of cartography. For Stone, the shift in British policy from informal imperialism to systematic colonialism from the mid-1880s provided the catalyst for a cartographic 'revolution' as cartographic requirements shifted from 'imperial' to 'colonial'.⁷⁴ Both of these theses have informed the last two decades of analyses of the European mapping of Africa produced during the late nineteenth and early twentieth centuries. Whilst Stone's work has frequently been cited to highlight the significance of this wider era, however, his hypothesis on the disjuncture of 'imperial' and 'colonial' mapping is not evident in others' views of this period (Chapter 3) and the details of his claims have largely been overlooked: Harley's theories regarding the 'Scramble' have been much more prevalent. It is nevertheless worth reflecting on what these few critical histories have told us about the nature of British maps and mapping during the period of study.

The principal focus of nearly all of these extant studies has been in illustrating how maps and "mapmakers participated in the conquest and colonization of Africa". We have been informed how maps and surveys assisted the British acquisition and maintenance of African territories by providing geographical information on villages, terrain, roads and resources in a reproducible format that facilitated troop movements, planning infrastructure and commercial activities.⁷⁵ It is the ideological functions of this cartography, however, that have received most scholarly attention in the past two decades. Scholars have almost universally studied these maps as sets of unobjective power-laden discourses that "largely ignore[d] the scientific results obtained by explorers but reflect[ed] the various concerns of Europe".⁷⁶

Most studies cite the contemporaneous belief in the veracity and objectivity of cartography as the reason why maps were so influential in this period. Cartographers repeatedly brought out new and improved maps of the 'Dark Continent' in the decades

⁷⁴ Harley 1988a, p. 292; Stone 1988, 1995.

⁷⁵ Bassett 1994, p. 316; Stone, 1988, 1995; Donaldson, 2008. Details are discussed in Chapter 3.

⁷⁶ Bridges 1994, p. 12.

prior to 1890 (Chapter 3). This progressive ‘filling-in’ of the ‘blank spaces’ left by previous eras fostered a narrative of linear cartographic improvement and objective accuracy consistent with dominant empiricist and positivist models of map interpretation at the time. Cartography was thus well placed in “the world of nineteenth-century science, [wherein] the credibility of claims to empirical knowledge was said to depend on accurate observation above all else.” The resultant prevailing assumption amongst Victorian and Edwardian map-users, we are told, was that “they were viewing objective and accurate representations of reality”, and that “cartographers were applying scientific principles in their work”. This ‘internal’ power embodied and celebrated in the maps of Africa gave rise to a “readership that generally believed what it saw.”⁷⁷

The political representations and agency of cartography associated with the partition of Africa have received particular emphasis. Bassett explicitly and entirely adopted Harley’s theories to study how – in their representation of political boundaries and their decorative and authoritative character – maps sanctioned, celebrated, and facilitated the European conquest of West Africa. Maps were fundamentally “an exercise of power, linked to the will to dominate and control” and were thus “instruments and representations of power”.⁷⁸ The Berlin Conference in West Africa (1884–1885) – during which, it is claimed, European powers divided Africa amongst themselves – has received particular attention. It arguably exemplifies the “increasingly arrogant cartographic imagination” in Europe, wherein imperial powers divided Africa between them through a set of maps that represented and implemented their power. Pickles declared the event the pinnacle of “gross cartographic hubris” given how the maps facilitated and enacted the subordination of so many according to the interests of so few.⁷⁹

Extant studies have also exposed how ‘imperial’ discourse pervaded all aspects of the maps and how – through the use of “color, cartouches, vignettes, boundaries, and blank spaces” – they created a variety of images of Africa that served the European states

⁷⁷ Driver 2000, p. 51; Bassett 1994, p. 333.

⁷⁸ Bridges 1994, p. 12; Bassett 1994, p. 316.

⁷⁹ Pickles 2004, p. 108, p. 113; Bassett, 1994; Donaldson, 2008. Reinterpretations of the nature and ramifications of this conference are discussed in Chapter 3.

for whom they were made and “expressed both the practical value of and the ideological justification for imperialism”. The use of cartographic ‘silences’ that erased native presence in Africa and the deployment of European place-names that imposed and naturalised British control have become common features of literature focused on the cartography of the ‘Scramble for Africa’.⁸⁰ Like critical histories of imperial cartography more generally (above), recent studies have extended the functions attributed to cartography. Etherington and Stiebel draw on gender theories to illustrate how maps promoted Africa as a space of promise, available for penetration and exploitation by the ‘European male’. Drawing extensively on Edney’s work, Donaldson has examined how the process of surveying contributed to the British Empire in Africa. British boundary surveys of the Congo were, he argues, “clear expressions of what Edward Said referred to, in defining imperialism, as ‘act(s) of geographic violence through which virtually every space in the world is explored, charted and finally brought under control.’”. The internal power of cartography was such that surveys and maps could substitute for physical control, he contends: boundary-making was initially enacted and “conceived through the geopolitical lens of small scale mapping” rather than on the ground. When this abstract definition was no longer “a sufficient expression of territorial power [...] border landscapes had to be surveyed and the boundaries marked in the field”: the practice of cartography – in the form of surveying – thus served as a demonstration of British power and control in Africa.⁸¹

These critical histories demonstrate the power-laden context and agency of British maps of Africa, but they have also corroborated Edney’s and Driver’s diagnoses of the shortcomings in the literature on imperial cartography. In particular, these studies have adopted a restricted and uniform notion of imperialism during the late nineteenth and early twentieth centuries and engaged with a ‘traditional’ interpretation of the ‘Scramble for Africa’ (discussed in Chapter 3). That is, extant studies are characterised by a lack of engagement with the variety of issues and ‘contradictory sources’ shaping

⁸⁰ Bassett 1994, p. 322; Stone, 1995; Etherington, 2004, 2007.

⁸¹ Donaldson 2008, pp. 477–478, p. 486.

Britain's engagement with Africa, and the maps under study. The nature of the 'imperialism' which is, we are told, reflected in and reproduced through the maps under study is rarely defined and always consistent: it is merely assumed to be the dominant discourse underpinning the maps. Bassett's analyses, for example, are based on an undisclosed consideration of 'imperial' that was apparently the same across each of the European nations he studies, and the 45-year temporal span of his analyses. Indeed, Bassett's paper is used as Pickles' typical example of those studies that see maps only as "monolithic tools of power" as it fails to consider factors other than simplistic definitions of imperial zeitgeist in its conclusions. Whilst Stiebel and Etherington consider a different aspect of imperialism with respect to gender, their analyses still presuppose a constant discourse wherein African territories were exclusively female and Europe was inherently the dominant male.⁸² The tendency to reduce maps to being simply 'imperial' is exemplified in Stone's thesis. Despite his expansive examination of African cartography (see also Chapter 3), Stone ultimately summarises the cartography of the whole era as "bold utilitarian devices to facilitate the imposition of colonial authority on the ground, as well as the 'intellectual tools for legitimising territorial conquest'". There is no indication of how this authority or conquest differed between and within the multiple settings investigated.⁸³ As I shall show in Chapter 3, the 'imperialism' of this era, and the nature of the 'Scramble', were highly complex and contingent on a host of other issues. Most extant studies of cartography, however, address these issues in relation to simplistic notions of territorial expansionism and imperial 'adventure'.

Recent studies have adopted more nuanced approaches and consulted some of the other influences shaping maps beyond 'imperial discourse'. Etherington acknowledged that the cartographic 'silencing' of African populations may well reflect the fact that "the original mapmakers erred through honest ignorance" and that the use of place names reflect a host of logistical issues and practices in the field in addition to politicised rhetorics read into these constructs. Ultimately, however, his work is

⁸² Bassett, 1994; Stiebel and Etherington, 2007.

⁸³ Stone 1995, pp. 228–229, citing Monmonier 1991, p. 90.

predicated on maps as power-laden discourses. Donaldson also discusses how the design of British surveys of the Congo reflected developments in the discipline of geography and financial concerns in addition to imperial discourse. These issues remain underdeveloped overall, however, and there is much to be done to better understand the 'contradictory sources' and other factors shaping British maps of Africa during the period 1880 – 1915.⁸⁴

Heffernan's study of British and French newspaper mapping of Africa in this period represents the most significant and recent caveat to this historiography. He identifies different imperial themes embodied in these maps – including 'adventure and warfare' and 'commerce and trade'. He also examines maps with respect to broader, and shifting contemporaneous concerns – including Britain's inability to 'modernize' their relationship with their territories in the early 1900s, 'social imperialism' and European competition – rather than identifying uniform expansionist 'imperial' discourse. In doing so, Heffernan is one of the few scholars to highlight that early twentieth century maps of Africa were not "straightforward imperial propaganda". They did not necessarily engender or reflect imperial concerns: most of the maps studied "had no obvious ideological content at all". His conclusions connect with those of Edney and Driver: studies must embrace the "unexpected and unpredictable" nature of this era and "defy the more conspiratorial interpretations" of an all-pervasive unquestioned 'imperialism'.⁸⁵

Analyses of the 'processes' of imperial cartography are almost entirely absent in these analyses. Donaldson declared his study one of the first to examine the surveying practices associated with the partition of Africa and the "under-researched processes" by which African boundaries were "physically marked on the ground" but the processes by which maps were produced, circulated and consumed during this era have not been analysed. Stone's analyses come the closest to engaging with these topics. One of the strongest elements of his thesis is his commitment to illustrating the distinction between imperial and colonial cartography not just in the 'external' change of map content, but

⁸⁴ Etherington 2004, p. 85; Etherington, 2007; Donaldson, 2008.

⁸⁵ Heffernan 2009, pp. 263–264. Heffernan's is the only chapter pertaining to this era in Akerman's book. His work on the 'Scramble' is part of a broader study covering the period 1875–1925.

also in map function and process. Imperial maps that characterised the earlier era functioned for “the prosecution of commercial activities”, extolling the “potential of various parts of the country.” Colonial maps, by contrast, served as “a functional administrative tool” for locating and planning colonial infrastructure and were thus characterised by less “instrumentally-derived precision”, greater inaccuracy, more emphasis on local features such as resources and populations, and all in closer detail than their ‘imperial’ counterparts. Imperial maps were typified by topographic overviews and sketch maps, whereas colonial cartography consisted predominantly of cadastral survey which reflected “the change from imperial to colonial control”.⁸⁶ Whilst Stone thus garners more in-depth analysis of the nature of cartography during this era than most of his contemporaries; the ‘map’ remains the subject of most of his sentences – as highlighted by Edney (above) – and the anthropogenic processes of making and using maps during this period are repeatedly overlooked.⁸⁷

Conclusions and Implications for Research

The emphases of the ‘critical’ history of cartography that has developed since the 1980s – on the agency and power of maps as produced and wielded by the élite, and on the content of maps in relation to power-knowledge discourses rather than empiricist questions of accuracy – have been well suited to the interpretation of maps in imperial contexts. They have apparently been so compatible that these theories have remained pervasive in studies of imperial cartography at the expense of adopting more progressive analyses experienced in the discipline of the history of cartography more broadly. Despite developments in how we conceive of maps, “the imperial rhetoric of control, governance, management of territory and creation of new imperial landscapes remains the same”, and studies continue to make “widespread assumptions about the role of the map in the visual culture of the British Empire in perhaps their most reductive

⁸⁶ Stone 1988, pp. 61–62. Stone also argues that previous emphasis on the Enlightenment era as ‘revolutionary’ was the result of scholars studying only map ‘form’ which gave this ‘illusion’. Accounting for ‘process’ and ‘function,’ he argues, exposes this era as only ‘transitory’.

⁸⁷ Donaldson 2008, p. 471; Edney 1996, p. 188

form”.⁸⁸ Maps associated with the ‘Scramble for Africa’ have been deemed a particularly ‘textbook’ example by historians of cartography. These maps have almost exclusively been seen as produced by European powers with the sole aim of silencing natives, imposing and enacting expansionism, legitimising conduct on the African continent and serving to establish and maintain an all-pervasive, if ambiguous, late-Victorian British ‘imperialism’. Whilst these extant studies have extended our understanding of the nature of maps in general and the power-laden contexts and agency of British maps of Africa, this chapter has illustrated the limitations of extant studies and how the criteria for examination of imperial cartography need to change.

The literature discussed in this chapter illustrates that future work should neither be focused on the amply-demonstrated agency of cartography, nor attempt to redefine the ‘imperial map’. Studies need to examine maps in ways that embrace their complexity and variability and challenge their ‘taken-for-granted’ imperial nature. This chapter has introduced two main research trajectories that my work addresses in this regard. The first is to better situate maps in ways that account for their multifaceted ‘cultural’ and ‘sociological’ contexts; doing so for multiple sites and ‘modes’ should expose the variability of imperial maps and mapmaking.⁸⁹ The second is to examine the ‘processes’ of cartography and maps as “objects with a life-history”, considering their production, circulation and consumption, and paying particular attention to the complexities of imperialism and the ‘ambiguities’ and ‘contradictory sources’ which complicate understanding maps as simply ‘imperial’.⁹⁰ Chapter 4 develops a fuller methodology and interpretive framework that addresses these issues and also incorporates the contextual findings discussed in the next chapter.

⁸⁸ Kitchin *et al.* 2009, p. 12; Driver 2010, p. 147.

⁸⁹ Edney, 1996, 2009a; Jacob, 1992, 1996; Driver, 2010.

⁹⁰ Driver 2010, p. 154; Edney, 2009a; Black, 1997; Hanna and Del Casino Jr., 2003.

3

Britain and Africa, c.1880–c.1915: a Contextual Overview

Introduction

Drawing upon recent calls for historians of cartography to analyse more critically the ‘imperial’ contexts in which maps were produced, circulated and used (Chapter 2), this chapter provides detailed background on the events, imperialism and mapping associated with Britain’s engagement with Africa between 1880 and 1915 in order to inform the in-depth and contextually-nuanced scrutiny of specific maps and mapping in later chapters.

The first half of the chapter gives an overview of the principal events and political context of the era before exploring Edney’s ahistorical contention of the discursive nature of imperialism (Chapter 2). It examines Britain’s relationship with Africa between 1880 and 1915 in order to investigate which factors need to be considered when analysing the related cartography. My argument reveals how studies of the ideologies, policies, events and artefacts of this era have increasingly shifted away from mono-causal explanations and notions of a unified ‘Scramble for Africa’, towards understanding these phenomena as manifestations of complex constellations of multiple factors. Recognition of the complex and mutable nature of imperialism has triggered multiple studies exploring how its characteristics were contingent upon manifold variables. Particular attention is paid in the literature, and in this chapter, to how British imperialism – and associated artefacts such as books and images – differed dependent on the institutions in which they were made and whether these institutions were ‘official’, ‘unofficial’, or ‘popular’.

The second half of the chapter covers the cartographic context of the late nineteenth and early twentieth century British cartography of Africa, although the history of hydrographical mapping of the African coastline is not examined. In Chapter 2 I presented insights into the agency, power, and content of the British ‘imperial’ maps of Africa from the *conceptual* perspective of critical histories of cartography. This chapter is now concerned with more *contextual* questions. Some of this contextual insight is derived

from those works discussed in Chapter 2, reflecting the blurred distinction between these bodies of literature. The majority, however, is from a second set of studies which have examined more instrumental histories of mapping with a focus to analysing what was produced and by whom, as opposed to deconstructing maps' power-knowledge relations and assessing their agency.⁹¹ I address this literature in relation to the ideas of 'official, 'unofficial' and 'popular' institutions. This reflects the nature of the literature which has tended to be institution-specific. I introduce the variability of this era by elucidating how different spheres and institutions were associated with different sorts of mapping. Together with the foregoing section and Chapter 2, the section serves as a contextual overview informing and supporting the later empirical studies.

In the final section, I summarise the main themes of the literature and raise three main issues which inform my case-studies. These are: the need for greater examination of the mapping of 'popular' mapmakers/ commercial publishers; the scope for more direct comparison of maps and mapping across the different institutions and settings; and the need for improved understanding of the interrelations between these institutions.

The 'Scramble for Africa' and the 'big theory' of Imperialism

Prior to the 1880s, Britain's involvement in Africa was restricted to peripheral portions of the 'Dark Continent' including the Cape of Good Hope, Natal, Zanzibar and a few commercial territories between Gambia and the Niger Delta. Exploitation and exploration of the interior was conducted through agreements with native chiefs aided by explorers and missionaries, most famously David Livingstone. This engagement was characterised more by informal influence than direct control. Britain had established an "'open door' for trade through collaboration with local leaders", sustained with "the threat of 'gunboat diplomacy'": its African empire was low-cost and informal.⁹²

This situation changed rapidly in the final two decades of the nineteenth century. Britain began its occupation of Egypt and long-standing control of the Suez Canal region

⁹¹ Delano-Smith (1996), Edney (2005), and Braun (2008) also make this distinction between these two literatures of the history of cartography; it is recognised, however, as a highly fluid division.

⁹² Goodlad 2000, p. 31. See also Hopkins, 1980.

in 1882, although, like most European nations in the early 1880s, Britain had no “clear idea of what territory they wished to acquire in Africa, or indeed whether they wished to acquire any at all”. The ‘critical period’ of 1884–1885 was one in which Gladstone’s Liberal government shifted away from its initial apathy and committed Britain to the acquisition of influence and protectorates. In 1884 protectorates and crown colonies were established in East, West and South Africa (Table 3.1). British policy remained chaotic, however, characterised by “indiscriminate grab and bewildered politicians and public”.⁹³

The Berlin West Africa Conference (hereafter Berlin Conference), called for by Portugal and organised by von Bismark the first Chancellor of Germany, was held between 15 November 1884 and 26 February 1885. This conference, coupled with the shift to Lord Salisbury’s Conservative Government (1885–1892) have traditionally been interpreted as the beginning of Britain’s committed involvement in the partition of Africa, wherein representatives from the major European powers, the Ottoman Empire and the USA partitioned Africa using little but lines on a map (Chapter 2).⁹⁴ Recent interpretations by historians of imperialism have, however, stressed how the conference was convened to regulate European rivalries and to establish and mediate European trade of African resources rather than to partition the continent. Pakenham argues that too much agency has been attributed to the *General Act of Berlin* ratified after the conference: “none of the thirty-eight clauses [...] had any teeth. It had no set rules of dividing, let alone eating, the cake.” Nevertheless, the Berlin Conference continues to be interpreted as a pivotal “prelude to the partition of Africa”.⁹⁵ Britain’s involvement was characterised by drawing lines on a map, conducted in the drawing rooms of European capitals – as we have seen in Chapter 2 – more than ostensible occupation, but it gathered momentum and organisation during the later 1880s and in the 1890s. The extent of British territory and influence in Africa expanded at an unprecedented rate: those countries occupied by Britain during between 1882 and 1912 (Table 3.1) contained more than 30% of Africa’s population.

⁹³ Chamberlain 1974, pp. 91–92.

⁹⁴ Salisbury was briefly out of office in this period (Feb. – July 1886). See Table 3.1.

⁹⁵ Pakenham 1991, p. 254; Stone 1995, p. 77. See also Fage, 1969 and Hargreaves, 1984.

Table 3.1.⁹⁶ Britain and Africa, 1880 – 1915: events and territorial change

	Events	Territorial change
1880	<ul style="list-style-type: none"> • First Boer War (Dec. 1880 – Mar. 1881). • Gladstone commenced his second Liberal government (until 1885). 	
1881	<ul style="list-style-type: none"> • French invasion of Tunisia. • Egyptian nationalist coup. 	<ul style="list-style-type: none"> • End of First Boer War, British abandoned attempts to federate South Africa.
1882	<ul style="list-style-type: none"> • Stanley working in the Congo, making treaties for King Leopold of Belgium's International African Association. • Egyptian Crisis 	<ul style="list-style-type: none"> • British occupied Egypt, lasted until 1914. • Controlled Suez Canal region (until 1956).
1883	<ul style="list-style-type: none"> • Beginning of 'Madhist War'/ British 'Sudan Campaign'. 	
1884	<ul style="list-style-type: none"> • Beginning of Berlin West African Conference (Nov. 1884 – Feb. 1885). • Siege of Khartoum • Nile (Gordon Relief) Expedition (Sept. 1884 – Jan. 1885) • Edward Hewett sent to Oil Rivers region by Gladstone to establish local treaties. 	<ul style="list-style-type: none"> • Basutoland annexed to Cape Colony • Bechuanaland Protectorate established. • Transvaal became "Independent South African Republic" (previously a colony). • British Somaliland Protectorate established.
1885	<ul style="list-style-type: none"> • Treaty and General Act of Berlin signed. • General Gordon killed in Khartoum after Madhist Revolt. • Lord Salisbury (Conservative) succeeded Gladstone as Prime Minister. 	<ul style="list-style-type: none"> • British Bechuanaland Crown Colony • Protectorate of Brass, Bonny, Opobo, Aobh and Old Calabar established (from Bight of Benin and Bight of Biafra). • Niger District Protectorate under the Royal Niger Company
1886	<ul style="list-style-type: none"> • Gladstone returned to power (Jan) and resigned in June. Salisbury replaced him. • Witwatersrand Gold Rush • Royal Niger Company chartered. • Emin Pasha Relief Expedition (1886–1889) 	<ul style="list-style-type: none"> • Niger River Delta Protectorate under the Royal Niger Company. • Boundary Commission in E. Africa to demarcate British & German spheres.
1887	<ul style="list-style-type: none"> • (King) Jaja of Opobo exiled from Britain. 	<ul style="list-style-type: none"> • Lagos Protectorate established.
1888	<ul style="list-style-type: none"> • Imperial British East Africa Company (IBEAC) chartered. • Decision to build East Africa Railway 	<ul style="list-style-type: none"> • Matabeleland Protectorate under the BSAC • Sierra Leone declared a colony (previously part of British West Africa)
1889	<ul style="list-style-type: none"> • British South Africa Company (BSAC) chartered. 	<ul style="list-style-type: none"> • Mashonaland Protectorate under the BSAC • Shire Districts British protectorate

⁹⁶ Sourced from MacKenzie, 1983; Lonsdale, 1985 and Pakenham, 1991.

1890	<ul style="list-style-type: none"> • Rhodes' pioneer column to Rhodesia • The Brussels Act. Conclusion of the conference on slave trade • Stanley returned to Britain. 	<ul style="list-style-type: none"> • Anglo-German Heligoland Treaty. • Uganda occupied by IBEAC
1891	<ul style="list-style-type: none"> • Anglo-French declaration 	<ul style="list-style-type: none"> • 'Oil Rivers' Protectorate established (from Protectorate of Brass, Bonny, Opobo, Aobh and Old Calabar). Known as 'Niger Coast Protectorate' (1893-1900). • 'Nyassaland Districts' Protectorate. Known as "British Central Africa".
1892	<ul style="list-style-type: none"> • Gladstone defeated Salisbury in general election. 	
1894		<ul style="list-style-type: none"> • Uganda Protectorate (provisional protectorate from 1893). • Gambia Protectorate established.
1895	<ul style="list-style-type: none"> • Jameson Raid in Transvaal (Dec. 1895 – Jan. 1896) • Ashanti War (Dec. 1895 – Feb. 1895) • Salisbury's cabinet replaced Rosebery's collapsed government. 	<ul style="list-style-type: none"> • British East Africa Protectorate (from territory leased to the IBEAC in 1888). • Bechuanaland joined with Cape Colony. • Mashonaland and Matabeleland protectorates united as South Zambesia then South Zambesia united with North Zambesia as Rhodesia under the BSAC.
1896	<ul style="list-style-type: none"> • Kitchener's Sudan campaign (1896–1898) • Building of Uganda railway commenced. 	<ul style="list-style-type: none"> • Sierra Leone expanded by addition of protectorate in colony hinterland.
1898	<ul style="list-style-type: none"> • Fashoda Incident (Anglo-French) 	
1899	<ul style="list-style-type: none"> • Chamberlain bought out Niger Company • Outbreak of the Second Boer War (Oct.) • British Somaliland raided by 'Mad Mullah' 	<ul style="list-style-type: none"> • Sudan Anglo-Egyptian condominium • Ceded territory from Niger Co. and Niger Coast Protectorate combined as 'Northern' and 'Southern' Nigeria protectorates.
1900	<ul style="list-style-type: none"> • Ashanti War (1900–1901) • Second Boer War on-going • Salisbury's Conservative government won the 'Khaki Election'. 	<ul style="list-style-type: none"> • Independent Transvaal Republic re-annexed as a British Colony (Self-governing after 1906). • Independent Orange Free State re-annexed as a Colony.
1901	<ul style="list-style-type: none"> • First train on Uganda railway travelled from Mombasa to Lake Victoria (Dec.). • Edward VII succeeded Queen Victoria. 	
1902	<ul style="list-style-type: none"> • End of the Second Boer War • Salisbury retired as Prime Minister, replaced by Balfour (Conservative). • House of Commons began debates on the Congo atrocities. 	<ul style="list-style-type: none"> • Swaziland Protectorate (previously protectorate under the Transvaal). • Ashanti Territories (British Colony since 1874) part of Gold Coast Colony.

1904	<ul style="list-style-type: none"> • Anglo-French <i>Entente Cordiale</i> colonial agreements 	
1905	<ul style="list-style-type: none"> • Moroccan/ Tangiers Crisis (Mar. 1905 – May 1906) 	<ul style="list-style-type: none"> • Uganda Colony established.
1906	<ul style="list-style-type: none"> • Algeciras conference (Jan. – Apr.) • Balfour replaced by Campbell-Bannerman (Liberal) as British Prime Minister. 	
1908	<ul style="list-style-type: none"> • Shire Highlands Railway was completed. • Campbell-Bannerman replaced by Asquith (Liberal) as British Prime Minister. 	
1910	<ul style="list-style-type: none"> • Union of South Africa established as a dominion (May). 	<ul style="list-style-type: none"> • Cape Colony part of Union of South Africa (British Colony since 1806). • Natal part of Union of South Africa (had been a British Colony since 1856). • Orange River Colony and Transvaal part of Union of South Africa.
1911	<ul style="list-style-type: none"> • Agadir/ Morocco crisis 	<ul style="list-style-type: none"> • North East and North West Rhodesia amalgamated to create Northern Rhodesia
1914	<ul style="list-style-type: none"> • Outbreak of World War I (July) • Britain's first shots of WWI fired in Togo.⁹⁷ 	<ul style="list-style-type: none"> • Egypt officially a Protectorate. • German Togoland occupied by British and French almost immediately during WWI.
1915	<ul style="list-style-type: none"> • Fighting against Germans in Cameroon. • The 'East African Campaign' lasted the duration of WWI – impacting parts of Mozambique, N. Rhodesia, British East Africa, Uganda, and the Belgian Congo. 	

Only from the 1890s did the 'paper' phase of treaty making by soldiers and officials such as Cecil Rhodes, Frederick Lugard and Harry H. Johnston give way to 'real' conquest in which Britain committed to the serious 'rule' of its newly-acquired territories.⁹⁸ Informal imperialism was replaced with more formal control as more officials, troops and expatriates were despatched to these regions to establish tangible British presence, assess resources, and develop infrastructures for effective administration. Britain also engaged in numerous conflicts during this later period many

⁹⁷ Paice, 2010.

⁹⁸ On the division between 'paper' and 'real' conquest see Young, 2010. See also Wesseling (1996) on the different stages of 'divide' and 'rule'.

of which were costly financially and to British troops, reputation and pride (Table 3.1). The Second Boer War between Britain and the Boer Republics in southern Africa cost over £200 million – roughly 14 per cent of Britain’s national income in 1902.⁹⁹ Most of Britain’s ‘partitioning’ was conducted before 1900 (Table 3.1) and Britain continued to consolidate its rule until 1914. During WWI, much of Britain’s resources were diverted from Africa to Europe but remaining troops, civilians from British territories, and even Boers, fought against German colonial forces, particularly in East Africa, until the end of the war. In 1919, German territories were divided predominantly between Britain, Belgium and France.¹⁰⁰

It is not clear why Britain became so extensively and rapidly involved in Africa from the 1880s. In 1891 Prime Minister Lord Salisbury declared, “I do not exactly know the cause of this sudden revolution. But there it is.”¹⁰¹ The causes of this ‘revolution’ remain unresolved over 120 years later: “[t]here is no agreement among historians as to when it began, or who began it.”¹⁰² Most historians do now concur, however, that Britain’s involvement in Africa in the period c.1880 – c.1915 is most accurately understood as an assemblage of events, reflecting a complex and chaotic array of discourses and concerns.

Until the 1980s, scholars tried to explain Britain’s involvement in Africa as a cohesive ‘Scramble’ and interpreted the events listed in Table 3.1 as all resulting from singular, or very few, factors. Contemporary explanations foregrounded economic factors, predominantly the role of ‘modern capitalism’.¹⁰³ The 1950s/ 1960s were dominated by defensive and competition explanations which represented British policy as the containment of rivals’ expansion into Africa and ultimately “the extension into the periphery of the political struggle in Europe”.¹⁰⁴ From this, Robinson and Gallagher’s ‘Egyptocentric’ strategic argument conceived of the ‘Scramble’ as an initial decision to

⁹⁹ Parsons 1999, p. 79. See Chapter 6.

¹⁰⁰ Strachan, 2004; Paice, 2010.

¹⁰¹ Lord Salisbury, May 1891, quoted in Harrison 1991, p. 211.

¹⁰² Hyam 2010, p. 99.

¹⁰³ Hobson 1902; Chamberlain 1974.

¹⁰⁴ Fieldhouse 1961, p. 205; Taylor, 1954; Barraclough, 1967.

occupy Egypt in 1882 in order to secure the Suez Canal from which a series of domino effects acted ultimately to strengthen Britain's hold over Egypt and access to India.¹⁰⁵ These mono-causal explanations are typically limited in geographical or temporal relevance.¹⁰⁶ Recent interpretations, by contrast, have increasingly propounded that Britain's involvement in Africa between 1880 and 1915 was characterised by a divergent sequence of events – reflecting a host of different “economic, social and political tensions” and motives, and involving a range of individuals and institutions – rather than any integral or unified ‘Scramble’.¹⁰⁷ The term nevertheless continues to be used as short-hand for Britain's rapid and extensive involvement in Africa during the period c.1880 – c.1915.

Traditional definitions of British imperialism during the late nineteenth and early twentieth centuries – as merely territorial or strategic – are now seen as too restrictive. MacKenzie propounds an alternate conception of imperialism as a constellation of ‘ideological clusters’. He contends that British imperialism during this period comprised “renewed militarism, devotion to royalty, an identification and worship of national heroes, together with a contemporary cult of personality, and racial ideas associated with Social Darwinism”, and he has examined how these clusters are reflected in propaganda, popular culture, the natural world, hunting, and conservation.¹⁰⁸ Numerous scholars have since stressed how the practice and ideology of British imperialism towards Africa reflected a variety of contemporary concerns: masculinity and adventure, nationalism and national identity, liberal economics and free-trade principles, citizenship, and race.¹⁰⁹

¹⁰⁵ Robinson and Gallagher, 1961.

¹⁰⁶ For example, the economic explanations do not explain Britain's interest in the commercially unpromising East and North regions of Africa and the policy of rival-containment was effectively abandoned from the early 1890s, rendering the competition thesis moribund for most of the period. See Goodlad (2000) for a fuller summary of the relative strengths and weaknesses of these theses.

¹⁰⁷ MacKenzie 1983, p. 42–43.

¹⁰⁸ MacKenzie 1984, p. 2 and 1992a. See MacKenzie, 1984, 1986, 1990, 1992b, 1997, respectively.

¹⁰⁹ Green, 1980; MacDonald, 1994; Thompson, 2005; Porter, 2006; Gorman, 2006; Bush, 1999 and Koivunen, 2009, respectively.

By pluralising these definitions of imperialism, scholars have highlighted how these ‘clusters’ were bound up with other discourses and concerns that, whilst not traditionally ‘imperial’, are nevertheless crucial in understanding the nature of the era. Porter has encouraged scholars to consider how not all aspects of late nineteenth century Britain were “manifestations of a deeper-rooted imperial mentality”, and to analyse the “other common discourses in Victorian and later British society, which were more pervasive than the imperial ones, but which many more empire-centred researchers ignore”. What we conceive of as ‘imperial’ during this era is inseparable from those background conditions and concerns commonly deemed beyond our attention. Imperialism needs to be seen as both influenced by, and influential upon, a host of other issues which include: Christianity, reputation, funds, racial discourse, and logistical factors ranging from the discovery of quinine as an antimalarial agent to the advent of cheap lithography. Imperial policies and artefacts derive from this interaction.¹¹⁰

Conceiving of imperialism as a mutable convergence of conditions has increasingly invoked questions of its contingency. Thompson has advocated that historians move away from reinterpretations of a ‘big theory’ that try to pigeon-hole the nature of the period towards a stance wherein “there is no ‘big theory’: no uniform imperial impact, no joined-up or monolithic ideology of imperialism, no single source of enthusiasm or propaganda for the empire, no cohesive imperial movement”.¹¹¹ Imperialism, and people’s engagement with it, has been shown to vary with class, African and British region, political stance, and time between 1880 and 1915.¹¹² Particular attention has been paid to how the nature of imperialism differs across different ‘spheres’ and types of institution. This variable is foregrounded in my analyses as it is especially well-aligned to the conclusions of Chapter 2 calling for greater examination of the contingency of imperial cartography in relation to the sites in which maps were made and used.

¹¹⁰ Porter 2006, p. 309; Porter, 2008. On quinine, see Young (2010); on lithography, see Braun (2008).

¹¹¹ Thompson 2005, p. 241.

¹¹² Price, 1972; Porter, 2006; Thompson, 2005.

Historians of this era have increasingly differentiated between 'official', 'unofficial' and 'popular' spheres of imperialism. This tripartite distinction arose in response to Robinson and Gallagher's study which examined only the work of the government and thus solely the 'official' sphere. Their conclusions thus gave "the impression that partition was carried out by a few statesmen acting almost in isolation". Kiernan diagnosed this reliance on official documents as a discipline-wide "delusion of archive-searchers" wherein it is believed that answers only come from the "intoxicating atmosphere" of governmental collections.¹¹³ Whilst the government was unquestionably influential, studying just the 'official' experience tells only part of the story.

Since the late 1960s, scholars have sought to highlight the importance of institutions and individuals that comprised the 'unofficial mind of imperialism'. This was located in "commercial pressure groups and the intellectual advocates of wider Britain" including institutions such as the RGS, Royal Society, British Museums, and chartered companies like the BSAC and IBEAC (Table 3.1). These 'unofficial' institutions were instrumental in influencing policy. Through its vocal members and close professional, social and family links with Whitehall, the 'unofficial' sphere "set the dominant tone of British expansionism".¹¹⁴

A third exploratory sphere for examining Britain's relationship with Africa has emerged in the past 30 years – that of 'popular imperialism' – pertaining to the attitudes of the Victorian and Edwardian British public. Until the 1980s, we were told that the Victorians were "indifferent to imperialism" and that their engagements with the events and debates in Africa were characterised only as "brief, aberrant (and indeed disputed) burst[s] of jingoism".¹¹⁵ Studies evidenced the public's lack of ideological allegiance, their ignorance of British territories, their ambivalence towards decolonisation, and the absence of issues to do with the British Empire in government election campaigns.¹¹⁶ MacKenzie has been instrumental in resurrecting 'popular imperialism' in the minds of

¹¹³ Hopkins 1968, p. 583; Kiernan 1964, p. 265. The pertinence of this issue to my own archival research is discussed in Chapter 4.

¹¹⁴ Hopkins 1968, p. 583; Driver 2000, p. 84. See also Cain and Hopkins, 1987.

¹¹⁵ MacKenzie 1984, p. 1.

¹¹⁶ Robinson and Gallagher, 1961; Pelling, 1968; MacKenzie, 1984; Porter, 2006.

imperial scholars who, he argues, have overlooked it owing to “an excessive concentration on the *effects* of Britain on the Empire”. He and other scholars have since examined the prevalence and nature of popular imperialism by examining both the popularisation of empire and the ubiquity of imperial imagery in popular culture. The notion that “British popular culture was dominated by an imperial ideology has received much support in recent years”, with “surprisingly few” challenges to this view.¹¹⁷

These spheres were associated with different “cultural, social, economic and technical relations” and have been shown to have differently engaged with Africa.¹¹⁸ Perhaps most pertinent to my study, these different spheres have been associated with different representations of Africa. Dritsas has shown how British institutions across various spheres, including the ‘official’ British Foreign Office and a network of ‘unofficial’ establishments such as the Royal Society, RGS and British Museum differently promoted and protected their own interests when documenting the Zambesi Expedition (1858–1864). Blunt’s study of the work of Mary Kingsley exposed how Kingsley played different “political games on a number of levels” depending on whether she was working with “the public sphere of lectures, press coverage and publications”, “the official sphere of the Colonial Office” or the “unofficial sphere of many individuals and companies with widely ranging interests”. Ramamurthy has contended that the variability of British advertising reflected whether it was produced under the auspices of the Government or by commercial advertising companies.¹¹⁹ These various representations of Africa have thus been exposed as contingent upon different ‘ideological clusters’, motives, processes and other factors specific to each sphere, and the institutions within them, rather than any universal ‘imperialism’.

To paraphrase Edney’s work on cartographic modes (Chapter 2): Britain’s engagement with Africa between c.1880 and c.1915 should be read as a “complex amalgam” of these spheres and institutions, rather than “a monolithic enterprise” or unified ‘Scramble’. These findings, and the calls for scholars to reflect on the pervasive

¹¹⁷ MacKenzie 1984, p. 2. Original emphasis. Porter, 2006; Jones 2006, p. 287.

¹¹⁸ MacKenzie 1983, p. 37.

¹¹⁹ Dritsas, 2010; Blunt 1994, p. 125; Ramamurthy 2003.

“big theory” of imperial uniformity and to “break down Britain's imperial experience”, closely parallel the work of Driver and Edney questioning the ‘coherence’ of imperial cartography.¹²⁰ The following section reviews the literature on the cartography of this era in relation to official, unofficial and popular spheres and institutions.

Cartographic Context: British Mapping of Africa, c.1880 – c.1915

The British mapping of Africa underwent significant changes during the nineteenth century. The era of ‘classic exploration’ in which ‘geographical’ discovery of the African interior was the primary motive for mapping the continent dominated the first half of the century. This was associated with a lot of cartographic information being brought back to Britain, the majority of which was assimilated and disseminated by the RGS. The duration of this ‘classic’ epoch is contested: Stone proposes that it culminated in the 1850s with Livingstone’s trans-Africa journey; Bridges argues it was sustained in East Africa until c.1876.¹²¹ In the era that followed, mapping contributed to broader British projects aligned to the ‘blessed trinity’ of commerce, civilisation and Christianity. Entrepreneurs, explorers and missionaries working in Africa sent cartographic knowledge back to Britain in addition to the results of the expeditions organised by the RGS. Cartography benefited from a symbiotic relationship with these individuals and institutions as they all required, and facilitated, the opening-up of Africa to British trade and exploitation.¹²² The accuracy and style of maps derived from such data were highly variable but the era was characterised by “speculative cartography, gradually tamed by accurate observation”. The increased investment in cartography during this era was abetted by the ‘new geography’ that emerged from c.1870 that championed the role of geography, and by association cartography, in serving “the interests of imperialism in its various aspects including territorial acquisition, economic exploitation, militarism and the practice of class and race domination.”¹²³

¹²⁰ Edney 1993, p. 54; Thompson 2005, p. 241.

¹²¹ Stone, 1995; Bridges, 1987.

¹²² Hargreaves, 1984; Stone, 1995; Driver, 2000.

¹²³ Bridges 1987, p. 11; Hudson 1972, p. 141. See also Bell *et al.*, 1995 and Driver, 2000.

The role played by the British government in this cartography, however, was marginal. The notorious parsimony of the Treasury extended to cartography and the Foreign, Colonial and War offices were unwilling, and poorly disposed, to take on the burden of mapping Africa in sufficient depth of detail. The process and impetus for improving Britain's maps of Africa principally fell to others: the RGS was especially instrumental in advancing the quantity and quality of maps and mapping throughout the nineteenth century. By 1880 – the start of my period of study – mapmakers and officials inherited maps of questionable accuracy but which were free from the notorious 'gaps' that characterised earlier cartography. There was also an established network of 'unofficial' societies and individuals, particularly the RGS, striving for improved maps of Africa.¹²⁴

Stone's identification of substantial change from the mid-1880s (discussed in Chapter 2) – wherein maps shifted in style and content owing to the change in 'cartographic requirements' that accompanied the increase in British territory and the adoption of formal imperial policy – is supported by contemporaneous commentaries. John George Bartholomew declared in 1890 that "now the European States have divided Africa among themselves, we may expect they will immediately map their territories thoroughly", and that "the compilation of the map of Africa will be a task requiring the constant attention of the cartographer for a long time to come." General Chapman's 1895 paper on the "Mapping of Africa" presented to the International Geographical Congress in London elaborated on this change:

the class of map which used formerly to suffice, fails to meet the requirements of the present day. Before the partition of Africa occurred the question whether a place in the interior of Africa lay east or west of a certain meridian was a matter of purely academic interest; now, uncertainty as to the position of such a place may easily bring about a grave misunderstanding, and even armed conflict.¹²⁵

¹²⁴ Bridges, 1987; Stone, 1995.

¹²⁵ Stone, 1995; Bartholomew 1890a, pp. 575–578; Chapman 1895, p. 571.

These diagnoses of change do not, however, qualify the spheres and institutions over which these changes were enacted: they leave the reader to assume that the cartographic ‘revolution’ was more universal across the spheres and institutions in Britain than was likely the case.¹²⁶ My aim is not to support or refute these chronologies however: what Stone’s and others’ work in this section offer, is a contextual backdrop to my in-depth studies (Chapters 5–7) that introduces the era and the ways in which various ‘official’, ‘unofficial’ and ‘popular’ institutions engaged in Africa’s mapping.

‘Official’ mapping

With the exception of boundary surveys and preliminary reconnaissance surveys of Britain’s new territories, little ‘official’ mapping of Africa had been achieved in the five years following the Berlin Conference. By 1890, Britain found itself with theoretical control over large newly-acquired territories, most of which had barely been mapped. Reviewing the state of European mapping in 1890, Bartholomew declared that whilst roughly 40% (4,775,000 square miles) of Africa was covered with “General Mapping, largely approximate”, a third (3,800,000 square miles) remained unexplored. With the exception of long-standing ‘settler colonies’ such as Cape Colony, or those regions that had a history of central government, no survey organisations were established or available to produce systematic mapping.¹²⁷ Royal Engineers were despatched to conduct boundary and reconnaissance surveys (predominantly of mineral rights) but they were perpetually hampered by logistical problems: the boundaries to be surveyed were commonly too vaguely delimited and rife with unknown obstacles, Government training given by the Ordnance Survey was notoriously insufficient and outmoded, and early surveys were rushed and sub-standard owing to the perceived need for speed yet Whitehall’s reluctance to fund the work.¹²⁸

¹²⁶ Stone (1995) only suggests that ‘imperial’ maps were made predominantly by ‘explorers’, and ‘colonial’ maps by ‘officials’, but neither of these categories is adequately defined.

¹²⁷ Bartholomew 1890a, pp. 575–578. The remaining quarter was comprised of 1.7% “Detailed Survey” (200,000 square miles), 3.8% “Topographical Mapping” (440,000 square miles) and 20.0% “Detailed Route-Survey” (2,300,000 square miles). See also Collier and Inkpen, 2001.

¹²⁸ Close, 1905; Collier, 2006, 2011.

Colonel Thomas H. Holdich, a superintendent of the Frontier Surveys in British India, was one of the most vocal contemporaneous commentators. His presentation to the Geographical Section of the British Association for the Advancement of Science (BAAS) in August 1891 was the first of several speeches by prominent figures debating the state and future of British mapping of Africa. He summarised that there was “no indication of the existence of any general scheme of survey (although such a scheme may exist), but only of scattered patchwork efforts here and there, which, being unconnected and carried out in a variety of methods and scales, would tend rather to the confusion than the advancement of exact geography in Africa”.¹²⁹ Such disorganisation and unpreparedness were consistent impediments to British ‘official’ cartography throughout the era. Collier and Inkpen highlight disunity within this sphere – at the scale of government departments – as a crucial, but understudied, feature of the era. “Different ministries concerned with the colonies had different priorities”: the Treasury promoted low-cost cadastral mapping to aid colonies to generate revenue from mining and agriculture; the War Office desired accurate topographic maps to aid the security of the colonies; the Colonial and Foreign Offices wanted simple administrative maps to aid the efficient consolidation and administration of British territories.¹³⁰

By 1895, the government had still only produced very few ‘general’ maps based on reliable triangulation. Those that were available comprised “Algeria and part of Tunis, small portions of Egypt, parts of Eritrea, parts of the Cape Colony, and part of British Bechuanaland”, but the British were indebted to French and Italian surveys for much of this work.¹³¹ Most of the government’s cartography was in the form of sketch maps produced by administrators and consuls despatched to Africa by the Foreign and Colonial Offices with the task of mapping new and potential territories in addition to the diplomatic work. Geodetic surveying had been carried out in South Africa since 1840, and this “colonial network of primary triangles” was extended from the work of Sir David Gill (Astronomer of the Cape of Good Hope) who produced a geodetic survey of

¹²⁹ Holdich 1891, p. 596. For more on the BAAS, see Withers, 2010.

¹³⁰ Collier and Inkpen 2001, p. 2.

¹³¹ Chapman 1895, p. 572.

Cape Colony and Natal between 1883 and 1892. For most of the continent, however, Britain was dependent on maps from astronomical observations, route-sketches made by Government officials and independent travellers, and the work of the RGS. Not all of these could be relied upon in the same way for their accuracy.¹³²

General Chapman, Director of the Intelligence Division of the War Office (IDWO), proposed a three-fold classification for 'new' map requirements in 1895 that depended on political interest and antecedent occupation. Class one constituted those countries worth colonising and required detailed "topographical maps completed by survey sections and based upon a reliable triangulation". Class two referred to 'rapidly' triangulated surveys (i.e. with only a theodolite) for settling boundaries with uncolonisable territory. Class three would be administrative maps of "fairly good accuracy" by government officials for regions deemed unsuitable for colonization (the greatest proportion of the continent). Geodetic and topographical work was declared preferable but triangulation of existing farm and land surveys was also deemed adequate for administrative work. Chapman's proposals were formally adopted by the International Geographical Congress but little actually came of them.¹³³ There was an increase in 'class two' boundary surveys at the end of the nineteenth century but this reflected political necessity rather than Chapman's calls. Although the maps derived from these surveys were of limited scope and value, they arguably represented "the first organized mapping of the continent", some ten years after the Berlin Conference.¹³⁴

The British Government's cartographic progress was still meagre by the turn of the twentieth century and its inadequacies were dramatically exposed during the Second Boer War (1899–1902). The maps available to British troops fighting in this conflict were famously "worse than useless" and were identified by the *Royal Commission on the War in South Africa* as a significant contributing factor to the British losses (see Chapter 6).¹³⁵ Claims of fiscal and temporal limitations were commonly invoked to excuse the poor

¹³² Temple-Horne 1896, p. 414; Stone, 1995.

¹³³ Chapman 1895, p. 572; Stone, 1995.

¹³⁴ Collier, 2009; Liebenberg 2011, p. 2.

¹³⁵ Close 1905, p. 118; *Royal Commission on the War in South Africa*, 1903.

quality and quantity of these maps and the government's cartographic inadequacy more generally; cost was particularly off-putting for a frugal Treasury used to the parsimony of informal imperialism. The 'Indian System' solution propounded by Holdich in 1891 and 1901 – wherein he proposed conducting a series of surveys collated and triangulated by Europeans, but delegating most mapping to native labour and locally established survey departments – was not seen as feasible.¹³⁶ Insufficient training, resources and coordination, coupled with a focus on cadastral mapping in local offices meant that this mapping was either not performed, or was of very poor quality. British mapping bodies were not available, or equipped to step-in where colonial institutions failed.¹³⁷

Whilst the focus of much of the literature has been on the Government's failures, the coverage, quantity and quality of their output did improve during this era. The IDWO became the biggest contributor of maps of British territories.¹³⁸ The IDWO began to publish a chronologically numbered series of intelligence maps from 1882. These covered a range of topics from officials' routes to war maps to systematic large scale series. They were used extensively by the Colonial and Foreign Offices and occasionally by the Admiralty. Some were sold to the public. Jewitt has catalogued the first 2000 maps of this series (1880–1905) and concluded the "most widely covered area is unquestionably Africa".¹³⁹

The IDWO produced maps from the fieldwork of survey office staff in Africa but also, from the 1890s, increasingly constructed maps by using boundary commissions as a framework, "into which existing topographical information could be fitted." These maps

¹³⁶ Holdich, 1891, 1901.

¹³⁷ Collier 2006, p. 3; Collier, 2011. Whilst the OS was no longer a military mapping organisation, it remained Britain's principal map-agency and was responsible for Britain's military mapping and printing bulk stocks of War Office overseas cartography. It was too committed to mapping Britain to aid mapping Africa, however, and the War Office and Army lacked personnel.

¹³⁸ Hills, 1908; Winterbotham, 1936.

¹³⁹ Jewitt 1992, p. xv. This department underwent several name changes. It was known as the "Intelligence Department of the War Office" from Jan. 1881 until June 1882, when it changed to the "Intelligence Branch". In Jan. 1888 it became the "Intelligence Division" from which it was regularly abbreviated to "IDWO" from 1893 to 1904. In Feb.1904 the Directorate for Military Operations was created as a branch of the Department of the Chief of the General Staff, in which the former Intelligence Division became "M.O.4" – Topographical Section, abbreviated to TSGS (Topographical Section, General Staff). This was changed once more to GSGS (Geographical Section, General Staff) from Apr. 1907. When referring generally to this department I use "IDWO" – the name used for the longest period between 1880 and 1915.

were compiled from almost any geographic knowledge that Government officials could get hold of, and were of notoriously limited accuracy and variable quality. These early 'compilation maps' were ultimately "utilitarian cartographic document[s]" used for their content rather than their quality but they arguably represented "the most important cartographic product" of the era. The disordered process of compiling maps, and the variety in the subject matter, scale, quality and content of the IDWO series reflects the opportunistic nature and lack of cohesion that characterised governmental cartography until the early twentieth century.¹⁴⁰

Most scholars agree upon the fact of a relatively abrupt shift into a new era of cartography following the Second Boer War. From c.1905, the British Government produced a series of large-scale "proper plane-table topographical surveys" which were arguably the government's "first real topographic maps" of Africa and increasingly produced maps that emphasised terrain, settlements and infrastructure. This marked a significant departure from the previous route traverses and opportunistic compilation maps.¹⁴¹ A number of enabling factors were conducive to this shift. The need for good uniform maps to aid the "ownership, development, and taxation of land" with centralised government control and inter-colonial cooperation was recognised across the government offices following the Second Boer War, and the 'official' perception of cartography shifted from the early perspective of minimalistic necessity to a "small scale, geopolitical perspective, in which gaining geographical knowledge of the African landscape was of greater importance than maintaining an actual physical presence".¹⁴² Inter-departmental collaboration was enhanced as the TSGS become geographical advisor to the Foreign and Colonial Offices and the Colonial Survey Committee was established in 1905 which issued instructions and inspectors from Whitehall to govern which types/ scales of maps that should be produced.¹⁴³ Colonel Charles Close also

¹⁴⁰ Liebenberg 2011, pp. 2–3; Liebenberg 2003, p. 931. On compilation maps, see also Stone, 1984.

¹⁴¹ Liebenberg 2003, p. 933; Stone, 1995; Collier, 2011.

¹⁴² Hills 1908, p. 392; Donaldson 2008, p. 473.

¹⁴³ On the Colonial Survey Committee, see Collier, 2006 and Board, 2006. The requirement for properly organised survey departments with triangulated surveys either based on, or adjusted to,

reformed the IDWO's survey training from 1904, replacing outmoded OS techniques (the use of sextant and artificial horizons) with 'Indian methods' used for the GTS in India (theodolites and plane tables).¹⁴⁴

Different African regions had different chronologies and experiences of this surveying. These differences were usually economically determined. The Gold Coast was the only colony to be fully mapped at a scale of 1:125,000 by August 1908 owing to its available revenue for staff generated through mineral resources. Other colonies struggled to raise sufficient funds and so lagged in their cartographic work.¹⁴⁵ British East Africa, Uganda and the Orange River Colony had established topographical survey projects by 1908, but Major Hills warned that Britain could expect only compilation maps in the near future for most other territories. The persistent reliance on cadastral surveys amongst colonial officials in these regions also hampered the progress of topographical mapping. Nevertheless, by 1913 the government had produced 1:1 million and 1:250,000 series of all African territory then under the British flag.¹⁴⁶

By the outbreak of WWI, Britain had substantially improved its cartographic coverage of British Africa since Bartholomew's analogous review from 1890 (above).¹⁴⁷ According to Winterbotham, the British Government had published topographical maps "[r]esulting from reliable survey and including boundary commissions and local surveys" covering a further 480,000 square miles of British African territory. Whilst a much larger region was still only covered by "compilation maps" that were below the standards of the professional surveyor, they were still "a significant advance on previous cover".¹⁴⁸ One of the principal means of coordinating this new material was the mapping

the geodetic network was advocated especially strongly as the extant *ad hoc* cartography had caused complications in compilation.

¹⁴⁴ Liebenberg 2003, p. 933; Collier, 2011.

¹⁴⁵ Studies of this later era have consequently tended to be colony-specific, see Stone, 1995; Liebenberg, 1997; Board, 2006; Collier, 2011.

¹⁴⁶ Hills, 1908. Winterbotham, 1936; Stone, 1995. Winterbotham had previously been a Royal Engineer, head of the GSGS and an Inspecting Officer to the Colonial Survey Committee.

¹⁴⁷ Winterbotham 1936, p. 294. Whilst the summaries of Winterbotham and Bartholomew can be read against each other to garner some degree of change experience, it is highly problematic to accurately compare them as neither author defines their methodology or the respective categories.

¹⁴⁸ Winterbotham 1936, p. 298; Stone 1995, p. 88.

of the Arc of the 30th Meridian. Following the Second Boer War, Gill had used the British Government's embarrassment to acquire funds for an extension of the geodetic survey he had conducted between 1883 and 1892. This was commenced in 1906, the plan being to produce a chain of geodetic triangulations running the length of the country along the 30th meridian that would form a 'backbone' of precisely determined positions from which surveys could be based. Whilst this signalled a significant development, progress was slow: the survey was only completed in 1955.¹⁴⁹

The Government struggled to maintain its cartographic endeavours with the onset of WWI. Most Royal Engineers were recalled to Britain or deployed for different duties. Remaining staff were hard-pressed and reverted back to quick-fix cadastral cartography and compilation maps. By the mid-1930s, most colonies' surveys had not recovered their "pre-War usefulness" but lay neglected and out of date.¹⁵⁰

'Unofficial' mapping

The use of the term 'unofficial imperialism' to describe those discourses, activities and artefacts associated with influential institutions and individuals outwith 'official' governmental engagements has translated from studies of imperialism (above), into the domain of the history of cartography. It has been used most extensively by Stone and by Bridges with respect to the RGS. The RGS has received substantially more scholarly attention than other 'unofficial' institutions – reflecting the society's engagement with debates on how to map Africa; the richness of the RGS archives; and the fact that its publications afford valuable documentation of their maps, meetings and discussion.¹⁵¹

The RGS had a well-established infrastructure for mapping Africa by the start of the period of study, including: its own map curators (from 1878), a successful journal with widespread readership, a lecture series, private funding, and an expansive library of available maps and information gathered from its sponsored expeditions and the

¹⁴⁹ Liebenberg 1997, pp. 131–132; Avraham and Berger 2006, p. 63.

¹⁵⁰ Winterbotham 1936, p. 294.

¹⁵¹ Driver, 2011.

'African Exploration Fund'.¹⁵² By 1880 the Society was Britain's premier source for accurate and up-to-date maps of Africa.¹⁵³ For Stone, however, the role of the geographical societies in mapping Africa was drastically reduced in the new era of cartography ushered in by the Berlin Conference:

the urgency and magnitude of the task and above all, its different character in terms of the actual map requirements of the colonial governments themselves, meant that the role of geographical societies during the colonial period was much less significant than previously. Moreover, the sort of map which they had previously sponsored or promoted [route-traverses and small-scale maps depicting geographical features], did not match the new colonial function.¹⁵⁴

Despite this prognosis, however, the RGS remained influential. By the outbreak of WWI it was "easily the largest and wealthiest geographical society in the world." The number of new members and the readership of its publications – which consistently mapped Africa – continued to rise during this era.¹⁵⁵ Extant studies have showcased a variety of ways in which the RGS contributed to Britain's late nineteenth century cartography of Africa. It loaned survey instruments to Governmental officials, supplemented some expeditions, and "record[ed] the detail of minor exploration within the colonial territories", particularly the work of Governmental officials affiliated to the society.¹⁵⁶ It provided training courses to explorers in Africa and in 1910 this course was recognised by the Colonial Office as the best training for governmental personnel.¹⁵⁷ The society also

¹⁵² On the Africa work of the RGS prior to 1880, see Bridges, 1985, 1987, 1994. On the Society's *Hints for Travellers* series see Collier and Inkpen, 2003 and for a full history of the 'African Exploration Fund' that finished in 1880 see Bridges, 1963.

¹⁵³ Helly, 1965; Bederman, 1992.

¹⁵⁴ Stone 1995, pp. 81–82. Chapman (1895) also proposed a new role for geographical societies during this era, including promoting district maps rather than route-traverses, collating data to establish a reference grid for triangulations, and fostering relations with European societies. Like his proposals more broadly, however, little came of his instructions in practical terms.

¹⁵⁵ Heffernan 1996, p. 507; Freeman, 1976. The publications of the RGS were: *Proceedings of the Royal Geographical Society (New Series)* (1879–1892), *Supplementary Papers* (1882–1893); and the *Geographical Journal* (1893–)

¹⁵⁶ Stone 1995, p. 81.

¹⁵⁷ Collier and Inkpen, 2003. The courses commenced in 1879; on their contents and development, see Reeves, 1933.

served as one of the principal forums through which the national approach to mapping was debated.¹⁵⁸ Finally, in its promotion of cartography as a science in order to bolster the value of geography, the Society consolidated the truthful reputation of maps and prompted the British Government to produce more accurate cartography.¹⁵⁹

In these functions, the RGS “began to foster a sort of unofficial imperialism” of its own which became the most influential cartographic ‘unofficial imperialism’ of this era: much of the pressure and proposals for the government to invest in good cartography arose as suggestions from this ‘unofficial mind’.¹⁶⁰ The Society was especially influential as its “metropolitan focus” and location “close to the centre of political and imperial power” meant that it became “a flourishing social and intellectual centre for the geographical and imperial élite”. The lists of fellows include wealthy and influential members from the upper classes, and attendees at the Society’s meetings included senior governmental officials. By 1914, the RGS Council attendance list “was a veritable roll call of Britain’s imperial establishment and included several men closely associated with the intelligence community”.¹⁶¹

The RGS was joined by several provincial geographical societies from the 1880s.¹⁶² The Scottish (from 1887 Royal Scottish) Geographical Society (RSGS), founded in 1884, had especially firm foundations in African exploration, principally through A.L. Bruce (David Livingstone’s son-in-Law). Its meetings and magazines were dominated by events in Africa during this era. Studying the Aberdeen branch of the RSGS, Bridges argues that too much weight has been given to the disciplinary developments of geography in these societies at the expense of disclosing their work in imperial and, particularly, Africanist discourse.¹⁶³ With the exception of this Scottish branch, however, these geographical societies struggled to find their place in this new order: they did not,

¹⁵⁸ Bridges, 1976, 1987. The talks of Holdich, Hill and Winterbotham (see above) were discussed, and later published, by the RGS.

¹⁵⁹ Donaldson, 2008. For more on the relationship between the RGS, the institutionalisation of geography as a discipline, and imperialism; see Bell *et al.* 1995; Driver, 2000 and Withers, 2010.

¹⁶⁰ Bridges 1987, p. 11.

¹⁶¹ Heffernan 1996, p. 507. Holdich and Close were RGS Council members for example.

¹⁶² The Scottish and Manchester branches were founded in 1884. They were followed by Tyneside in 1887, Liverpool in 1891, Southampton in 1897 and Hull in the early twentieth century.

¹⁶³ Freeman, 1976; Bridges, 1985.

MacKenzie contends, make any substantial contribution to cartography, geography, or governmental or commercial policy during this era.¹⁶⁴

Whilst it is recognised that the RGS and RSGS engaged with the events and debates in Africa through talks, funding and publications, almost nothing has been written about what was mapped, how and why. Bederman's study of E.G. Ravenstein's "A Map of Eastern Equatorial Africa" between 1877 and 1883 suggests that the Society had different conceptions and approaches to mapping than did the government. The fact that this map took six years to complete reflects the diligence and obsession for which Ravenstein was renowned but also the strong views held by the RGS with regards to the appearance, scale and accuracy of the map. These concerns, and in particular the RGS' willingness to invest such time and money into cartography in the early 1880s, contrasts sharply with the chaotic approach of the IDWO detailed above.¹⁶⁵ There is, in short, much more to be done to understand how and why geographical societies produced their maps, and how these differ from those of the government.

The 'unofficial' cartographic sphere comprises more institutions and individuals than geographical societies alone. The proliferation of parties and institutions interested in mapping Africa beyond 'official' governmental work was a significant by-product, Stone argues, of the 'cartographic revolution' of the mid-1880s. He only briefly introduces the cartographic work of 'unofficial' Africanists, however, and argues that, with the exception of dutiful individuals such as Halford MacKinder and David Livingstone, the work of missionary societies, commercial companies and wealthy travellers was characterised by "little contribution to knowledge in any form, geographical or otherwise" as they "had little inclination to go to any great lengths to record geographical features" and generally lacked the "skills or motivation in the use of survey instruments". Even if such cartography was consulted, its utility rapidly diminished from the 1890s, Stone maintains, as it did not keep abreast of the reformed cartographic requirements in the wake of the Berlin Conference.¹⁶⁶

¹⁶⁴ MacKenzie, 1995.

¹⁶⁵ Bederman, 1992.

¹⁶⁶ Stone 1995, pp. 66–67.

Braun has recently sought to salvage missionary maps from Stone's historiographical dismissal. Maps produced by missionaries and missionary societies contributed important topographical, social, political and cultural information to the 'colonial project': they were used extensively by British officials in Africa until the late 1880s, he argues, and until the early 1900s in those regions over which Britain did not seek direct control. Whilst 'unofficial' maps like these may have been imperfect, the needs and chaotic approach of the Government were such that they "much desired whatever geographical knowledge they might possess".¹⁶⁷

'Popular' mapping

Little has been written regarding how institutions within the popular sphere – such as commercial mapmakers and newspapers – mapped Africa in the late nineteenth and early twentieth centuries. Akerman identifies this as a characteristic of the discipline more broadly, stating that historians of cartography need to be reminded "that imperial mapping finds expression in public discourse as well as governmental circles".¹⁶⁸ This dearth probably reflects the paucity of sources, particularly relative to the more abundant archives of government departments and academic institutions.¹⁶⁹ Given what has been exposed, however, about the situatedness of maps (Chapter 2), the variability between spheres of imperialism (above), and the propagation of imperialism in popular culture (above), we cannot assume that the cartography of the 'popular' sphere was necessarily the same as 'official' and 'unofficial' mapping.

Nineteenth-century commercial publishers benefited from the cartographic advancements during the era of 'classic' exploration and its aftermath; the constant need for 'new' maps ensured that, during the nineteenth century, "map compilation of remote and newly discovered areas remained a source of enormous public interest" and a "lucrative commercial venture".¹⁷⁰ What happened to commercial publishers after 1880,

¹⁶⁷ Braun 2012, p. 251; Driver, 2000.

¹⁶⁸ Akerman 2009, p. 9; Schulten, 2001.

¹⁶⁹ Kiernan, 1964; Scully, 2010.

¹⁷⁰ Liebenberg 2011, pp. 1–2.

however, is not documented. None of the officials commentating on the state of British cartography in Africa – Holdich, Chapman, Hills and Winterbotham – made any mention of the work of map-publishers. This sphere is also almost entirely absent in Stone’s work; he merely proposes that future studies should take “into account map makers other than the professional officers of government survey departments” and academic institutions.¹⁷¹

Other scholars afford us glimpses into this popular cartography. Jewitt notes that the IDWO worked with “the firms of Johnston, Bartholomew, Judd, and Dangerfield” to produce large volumes of map sheets such as the Africa 1:1 million and 1:250,000 series in the early 1900s (above). The IDWO also made use of some commercial publications in their ‘compilation’ maps although the types and quantities of these popular sources are not qualified. Bassett and Porter’s study tracing the cartographic representation of the fictional ‘Kong Mountains’ in West Africa interrogates the maps of multiple map publishers from 1511 to 1934 and concludes that in the 1890s/ 1900s these commercial outlets were dependent on other institutions’ sources and were commonly slow to update cartographic developments on their own maps.¹⁷²

The exception to the lack of work on popular cartography during this era has been Heffernan’s examination British and French national newspaper maps, introduced in Chapter 2. Heffernan’s focus is the representation of the “new colonies” of Britain and France in which British newspaper mapping of the ‘Scramble for Africa’ features prominently. Until the early 1900s, cartographic coverage of Africa in the *Times* and *Illustrated London News* newspapers was rare and dominated by maps concerned with ‘imperial adventure and warfare’. After c.1909, newspaper maps were more abundant as technical capacity improved and editors were more willing to fund the additional production costs. Content also shifted; maps began to foreground questions of ‘imperial commerce and trade’. Heffernan’s work is examined in greater detail, with respect to my findings, in chapters 5 and 6. His article, however, illustrates the importance of

¹⁷¹ Stone 1995, pp. 72–75, p. 102.

¹⁷² Jewitt 1992, p. xvii; Bassett and Porter, 1991.

newspapers in producing cartographic imagery of Africa: “they were probably seen, albeit briefly, by more people than any other kind of cartography created in this period.” His findings also confirm that popular cartographic coverage of Africa during the late nineteenth and early twentieth centuries (albeit of only one type of institution) differs from that of ‘official’ and ‘unofficial’ institutions’ coverage in quantitative output, style and coverage. As Heffernan notes, newspaper maps not produced “for the state” were shaped by different discursive and logistical factors and, as a result, constitute “an altogether different kind of cartographic archive”.¹⁷³

Conclusions and Implications for Research

This chapter has illustrated how Britain’s engagement with Africa between c.1880 and c.1915 has been explained and characterised in multiple ways. Imperialism during this era was not simply the ideology of British territorial expansionism as has too often been assumed in the literature on maps (Chapter 2). Recent developments in studies of this period conceive of imperialism as a complex set of ‘ideological clusters’ interacting with a multitude of ‘common’ discourses and inseparable from broader concerns. Imperial discourses, artefacts and policies have been exposed as contingent upon manifold variables, particularly across ‘unofficial’, ‘official’ and ‘popular’ spheres and associated institutions. My work has heeded these findings in accounting for the complexity and contingency of the political context of this era rather than interpreting the era as simply the ‘Scramble for Africa’ (Chapter 2).¹⁷⁴

The British cartography of Africa associated with this period was characterised by great variation and change. My empirical studies are situated in the context of this variability, but they also recognise the paucity of maps and the anxiety and ambiguity with regards to the best means of improving Britain’s cartography of their rapidly-expanding African territories. By organising the extant literature in an official–

¹⁷³ Heffernan 2009, p. 298, p. 261.

¹⁷⁴ Kennedy, 1984; Kiernan, 1964; Louis, 2006.

unofficial–popular framework, informed by the above findings, this review has begun to illustrate how the various spheres differently engaged with mapping Africa. It also confirms that situating maps at the resolution of these ‘spheres’ would be too coarse a level of analysis to capture the institutional variability evident from juxtaposing the literature, most notably between various governmental offices and different societies. Maps need to be situated in the institutions in which they were made, whilst mindful of these broader spheres.¹⁷⁵ Whilst the focus of this chapter was to provide a contextual overview, these findings corroborate Chapter 2 by illustrating how there was no coherent imperial or cartographic ‘mode’ in Britain during the late nineteenth and early twentieth centuries: the era was characterised by an assortment of maps and ways of ‘acting cartographically’ that are distinct in their content, scales of inquiry, cartographic conventions, ‘*raison d’etre*’ and provenance both over time, and across institutions.

In addition to providing a contextual backdrop to the in-depth empirical studies, this chapter has raised three principal issues warranting greater investigation. The first is the need for greater examination of maps produced by ‘popular’ institutions. The history and historiography of popular imperialism differed from that of official and unofficial imperialism yet concern for how this is manifest in maps has not permeated the history of cartography. Heffernan’s stand-alone examination of newspaper cartography attests to the need for more work on these institutions. The second is to argue that there is more to be done to examine institutions’ interactions with respect to quantities, dates, usage and ramifications. Some investigations hint at this issue: the overlap of personnel in the RGS and government offices indicates the permeable nature of institutional distinctions; Jewitt highlighted that the IDWO worked with non-‘governmental agencies’ in the compilation of maps; and Bederman exposed how the RGS made use of commercial and governmental cartography in producing Ravenstein’s map.¹⁷⁶ The paucity of maps and desperation for them until the early 1900s probably necessitated much more sharing and re-use of maps across different institutions and spheres than is currently supposed.

¹⁷⁵ Collier and Inkpen, 2003; Blunt, 1994.

¹⁷⁶ Jewitt, 1992; Bederman, 1992.

Finally, the literature highlights the need for *direct* comparison of maps and mapping across institutions. Most studies have been institution-specific, yet this review highlights how multiple institutions were working on issues concomitantly. The few studies that have offered direct comparisons – including Bassett and Porter’s investigation into different institutions’ representation of the Kong Mountains and Heffernan’s comparison of British/ French and daily/ weekly newspaper cartography – have been fruitful.¹⁷⁷ The arrangement of secondary-sourced literature in this chapter exposes some broad differences in the ways in which different British institutions and spheres mapped Africa during the late nineteenth and early twentieth centuries but this should not detract from my subsequent empirical analyses of institutional variability. To mirror Naylor’s comments on the history of science, this section serves the preliminary purpose of confirming that the British mapping of Africa “can be understood geographically” at the scales illustrated. This is not “an end in itself”, however, but “the basis upon which rich empirical stories can be built”: there is much primary analyses to be done to actively compare phenomena across different institutions in order to understand how and why maps differed.¹⁷⁸ My papers are these empirical narratives: chapters 5–7. The methodological and archival details which underpin them are discussed in the next chapter.

¹⁷⁷ Heffernan, 2009; Bassett and Porter, 1991.

¹⁷⁸ Naylor 2005, p. 2.

4

'Cutting' into the British Cartography of Africa: Case-studies, Sources and Questions of Method

Introduction

This chapter unites the parallel bodies of theoretical and contextual information detailed in the foregoing chapters and bridges this background literature to my empirical papers. The first section clarifies how the three empirical studies – of the Bartholomew firm, the Second Boer War, and Harry H. Johnston – variously address the theories from Chapter 2 and the contextual issues arising from Chapter 3. The second section introduces the theoretical frameworks used in these empirical studies. Chapters 2 and 3 have discussed what is lacking in extant literature and what is now required, but they do not develop methodologies *per se*. This section thus introduces how and why my studies draw on theories from book history and the history of science to address those issues that Chapter 2 indicated to be underdeveloped in the history of ('imperial') cartography. It illuminates the links between these three disciplines and discusses the main theories informing my studies, broadly aligned to Mayhew's fourfold typology of print production, authorship, audience and dissemination, and communication. The third section discusses the archives and sources used in this thesis. It details the contents, relative merits, and notable absences of these repositories; discusses my method of archival interrogation; and reflects on how the content and omissions of these repositories shaped my research, principally with respect to the paucity of information on map use and reception.

The Three 'Cuts': an Institution, an Individual and an Event

In undertaking studies that engage with the institution-specific conduct and content of British mapping of Africa, there are opportunities to cut into the era in several ways: by

African region,¹⁷⁹ by the representation of specific phenomena,¹⁸⁰ through the work of an individual,¹⁸¹ through one institution or one map,¹⁸² or in relation to an event.¹⁸³ This thesis uses three different methods rather than pursuing a consecutive theme. It examines the British cartography of Africa between 1880 and 1915 through one institution, one event and one individual in order to garner a range of insights into the era.

These studies, which make up chapters 5, 6 and 7 respectively, are designed to address the issues raised in chapters 2 and 3. To combine and reiterate, these chapters demonstrated the need to: better situate maps more thoroughly in their institutional context, with a particular focus on institutions in the ‘popular’ sphere; examine institutional variability through direct comparison, whilst also addressing the interactions between them; and consider the complexity of maps/ mapmaking by embracing the multitude of issues influencing cartography and by examining questions of production, circulation and use in addition to map content.

In studying the mapping of the Bartholomew firm, Chapter 5 directly addresses the dearth of literature on the work of institutions within the ‘popular’ sphere, and on commercial mapmakers in particular (Chapter 3). The selection of the Bartholomew firm for study was informed by my CDA which promoted making use of the firm’s archive (see introduction). The Bartholomew Archive, detailed below, offers unrivalled and hitherto largely untapped sources on British commercial map-publishing at the turn of the twentieth century.¹⁸⁴ In addition, J.G. Bartholomew, director of the firm between 1888 and 1920, was vocal in reviewing and discussing African cartography in and from the 1890s and the firm featured in the few recent accounts of commercial cartography

¹⁷⁹ Colony-specific studies include: Stone, 1995; Liebenberg, 1997; Board, 2006; Collier, 2011.

¹⁸⁰ Examples of specific phenomena include: Bassett and Porter (1991) on the Kong Mountains and Ramamurthy (2003) on race.

¹⁸¹ Whilst pertaining to individuals active prior to my period of study, studies conducted through individuals include: Bridges (1976) on W.D. Cooley, Stiebel (1998) on Thomas Baines and Liebenberg (2006) on Henry Hall. See also Blunt (1994) on *Mary Kingsley* (Chapter 3).

¹⁸² Exemplified by Bederman (1992) on the RGS and E.G. Ravenstein’s East Africa map and Driver (2010) on the Imperial Federation League and Map.

¹⁸³ See Heffernan (1996) on RGS–Governmental relations during WWI for example.

¹⁸⁴ On the value of the archive, see Fleet and Withers, 2009 and Scully, 2010.

(Chapter 3).¹⁸⁵ The study also addresses further issues raised in chapters 2 and 3: it considers the variability of the types of maps produced by the Bartholomews; it examines the firm's relations with networks of other institutions; it illuminates the multitude of issues shaping their output; and it investigates how such institutions functioned in making, circulating, and using maps rather than focussing only on map content. Chapter 5 also informs the selection of topics for chapters 6 and 7.

Chapter 6 investigates the cartography of the Second Boer War (1899–1902). This conflict was chosen owing to the fact it was associated with a substantial increase in mapping by the Bartholomew firm (Chapter 5). The significance of this event is also indicated by extant literature (Chapter 3). The paper addresses most of the issues raised in the introductory chapters: it situates maps and mapping at an institutional scale; it incorporates more 'popular' institutions in the form of the Bartholomew firm and two newspapers; it compares the content, methods of production and circulation of these 'popular' maps with the 'official' War Office's coverage; and it examines how these institutions were connected in the sharing and re-use of information and of maps.

Chapter 7 examines the maps associated with the renowned Africanist Sir Harry H. Johnston (1858–1927). He was selected for study as he was one of the Bartholomew firm's most famous clients and the maps bearing his name stand out in both style and content compared to the rest of the firm's printing records (Chapter 5). Attendant correspondence in the Bartholomew Archive also highlights how Johnston worked with the British Foreign Office, War Office and RGS to produce maps. His maps thus cover some of the most significant cartographic institutions introduced in Chapter 3 across all three spheres, and represent an important opportunity for exploring the sorts of institutionally contingent issues men like Johnston faced when producing their work. As with Chapter 6, institutional variability and interactions are foregrounded through direct comparison of the outlets with which Johnston worked. Studying mapmaking through an individual affords us a different perspective on the era than through an event, and

¹⁸⁵ See Bartholomew, 1890a, 1890b, 1893, 1902. For brief citations on the firm's work on Africa, see Bassett and Porter 1991, p. 75; Stone 1995, p. 398 and Liebenberg 2011, p. 2.

this chapter has, in consequence, a strong focus on the redactive processes of mapmaking and on maps as objects with 'life histories'.

Theoretical Frameworks: Map History, Book History and the History of Science

Given that these three chapters are designed to address issues that have hitherto largely been overlooked by historians of (imperial) cartography, there are no studies or pre-existing models to follow. Whilst Edney, Driver and other cartographic theorists have raised the need for greater study of the production, circulation and consumption of maps (Chapter 2), they do not advance any interpretive frameworks to do so. My studies thus look to other bodies of literature for theories and models.

The potential for the application of book history to map history has been broadly highlighted by several scholars.¹⁸⁶ These fields are united in their analyses of 'texts' (in the Harleyian sense) and, more broadly, in their shifts away from traditional literary and visual interpretations of their objects of study as data sources, towards a concern for books and maps as socially constructed objects, the provenance and use of which demand greater examination. As well as this general consonance, theories from book history are especially pertinent to the aims of this thesis.

Historians of the book have increasingly brought a 'geography' to their analyses. This is well suited to examining the institutional contingency of maps in this thesis. Rejecting Eisenstein's 1979 notion of the ahistorical and ageographical 'fixity' of print, book historians have increasingly analysed "the ways in which different times and spaces have distinct systems of authorship and book production". There are now numerous studies exploring how these 'print cultures' and 'dynamic localities' gave rise to historically, spatially and socially contingent products.¹⁸⁷ Commencing with Febvre and Martin's *The Coming of the Book* in 1958, book historians have also increasingly examined books as "historically-embedded products whose modes of authoring,

¹⁸⁶ Crampton, 2001; Pickles, 2004; Edney, 2009a, 2011.

¹⁸⁷ Eisenstein, 1979; Mayhew 2007a, p. 25. On 'dynamic localities' see Johns, 1998 and for a recent summary of the literature on this 'geography of the book', see Ogborn and Withers, 2010.

production, dissemination and reception are vital sources of insight”.¹⁸⁸ The field of book history has also developed more theories which aid in tracing the ‘life-cycles’ of texts in comparison to the history of cartography which has only relatively recently seen a resurgence in calls for greater analyses of the ‘processes’ of cartography after the rejection of communication models in the 1980s (Chapter 2).¹⁸⁹

Over the past 15 years, historians of science have also increasingly and fruitfully turned their attention to investigating how scientific process and output are expressions of the location of endeavour and how these supposedly ‘universal’ activities and knowledge can be highly provincial. There is now a plethora of studies by historians of science and historical geographers countering previous notions of science and geography as placeless or transcending spaces, in favour of situating their knowledge and practice as ‘cultural formations’ at multiple scales. Theories from the history of science are consequently also considered for their application to cartographic contexts in order to aid investigation of the sites in which maps were made, and their ‘historical geographies’.¹⁹⁰

Mayhew’s framework for a historically and geographically sensitive ‘denaturalisation’ and ‘historicisation’ of printed evidence is especially relevant to my work. He illustrates which elements of texts’ ‘life-cycles’ need to be studied for their ‘historical geography’ – namely, the ‘production of print’, ‘authorship’, ‘audience, dissemination and reception’ and ‘communication’ – in order to “re work and to inflect our narrative certainties”. In this, his aims resonate with my objectives of analysing the institutional contingency and ‘life-histories’ of maps [rather than Mayhew’s texts], and of questioning what we think we know about British cartography during Africa’s partition.¹⁹¹ Mayhew’s typology is thus used here to introduce the sorts of interpretive frameworks underpinning my empirical work. It offers an approximate analytical route-

¹⁸⁸ Febvre and Martin, 1976 (English translation); Mayhew 2007a, p. 25.

¹⁸⁹ Crampton and Krygier, 2006; Kitchen and Dodge, 2007; Edney, 2011.

¹⁹⁰ Livingstone 2003, 2005, 2007; Naylor, 2005; Ogborn and Withers, 2010; Withers, 2010. Burnett (1999) has attested to the potential association of the history of science with the history of cartography.

¹⁹¹ Mayhew 2007a, pp. 33–34; Edney, 2009a; Driver, 2010.

map rather than a prescriptive model: the focus of each chapter reflects what was found to be significant to understanding that phenomenon and what was available in the archives.

For Mayhew, examining the ‘production of print’ not only requires situating texts in temporally and spatially contingent ‘publishing contexts’, but also investigating how such sites *worked* to produce certain content. In developing this point, I turn to Johns’ theory of ‘dynamic localities’ from the field of book history and Latourian ‘centres of calculation’ from the history of science to examine how map-making institutions differently functioned to produce specific maps. These theories are central to my study of the Bartholomew firm (Chapter 5) and run through chapters 6 and 7. Mayhew also specifies which sorts of issues require examination in order to better understand how sites functioned and how texts came to be the way they are: he propounds the adoption of what may be construed as a “pedantic concern with details” including the relations between agents, publishers, printers and sellers, and the processes of editing, sourcing, and ‘recycling’ of material. This concern for redactive processes and ‘minutiae’ differs from the traditional concern of map historians on instrumental processes of map-production such as surveying and the ‘construction’ of maps in relation to dominant power-laden discourse (Chapter 2).

Questions of authorship are also raised by Mayhew: principally the need to problematize “our taken-for-granted notions of the author as a ‘creator’, owning/inventing their work”.¹⁹² Cartographic authorship was raised in 1996 by Edney, Jacob and Delano-Smith as a future concern in the history of cartography but this has not come into fruition. Even as scholars have increasingly propounded studying the processual nature of maps, as discussed in Chapter 2, authorship has received little attention: the “distinction between cartographers’ and noncartographers’ boundaries” arguably remains one of the most unclear and overlooked components of the history of cartography and an “increasingly common ‘category-mistake’ among map historians”.¹⁹³

¹⁹² Mayhew 2007a, p. 25. See also Withers and Keighren, 2011.

¹⁹³ Delano-Smith, 1996; Edney, 1996 and Jacob, 1996; Andrews 2001, p. 226.

Historians of the book and of science have embraced authorship as an intricate appellation, imbued with complex relationships and cultural transactions. In his illumination of the author as a “function of discourse”, Foucault impelled scholars to consider the “characteristics of a discourse that support this use [of the author] and determines its differences”. This ‘author function’ is spatially and temporally contingent, and has material implications as texts always bear ‘signs’ that refer to the author, or create an ‘author function’.¹⁹⁴ Understanding authorship is thus not only important for more accurately interpreting map content, as propounded in Jacob’s ‘sociology of the map’ and Edney’s ‘cultural history’. It is also worthy of greater examination in its own right as an important and varied historical phenomenon and crucial component of understanding the nature of the era. Questions of authorship are foregrounded in Chapter 7 on Harry H. Johnston.

Mayhew also argues the need for more work on ‘audience, dissemination and reception’. The categories of authorship and readership have traditionally been seen as irreconcilable – the “birth of the reader” being “requited by the death of the Author” – but modern scholars have increasingly seen no contradiction in the analysis of both: authors provide a perspective which readers cannot evade but that they may interpret very differently across time and space.¹⁹⁵ Calls amongst cartographic theorists for scholars to study the ‘practice’ and ‘performance’ of cartography, and analyse how maps were variously *consumed* rather than presupposing how their agency was *imposed*, were studied in Chapter 2.¹⁹⁶ This is part of a larger inter-disciplinary shift, however, that has also seen book historians and historians of science rejecting constructivist conceptions of reading as solely garnering the pre-determined meaning fixed in a text and instead championing examination of the dynamic interaction between the audience and the text/media. Whilst I concur with these contentions, available information on the consumption

¹⁹⁴ Foucault 1969, p. 124. For examples of questions of authorship addressed by historians of science, see Biagioli and Galison, 2003 and for examination of the application of Foucault’s ‘author function’ to (historical) geography, see Curry, 1996.

¹⁹⁵ Barthes 1967, p. 55; Perkins, 2004; Pickles, 2004.

¹⁹⁶ Del Casino Jr. and Hanna, 2006; Kitchin *et al.*, 2007.

and performance of the maps studied is unfortunately sparse. My work is thus mindful of the ‘writerly’ aspects of cartographic texts – wherein readers create their own meaning that may differ from the original intention – and it is cautious in suggesting the agency or implications of its findings. It is not easily possible, however, to examine in detail how maps ‘performed’ in the hands of Victorian and Edwardian readers (discussed below).¹⁹⁷ In light of the difficulties attempting to trace ‘actual readers’, Mayhew and other book historians have promoted analysing ‘implied readers’ – that is, those audiences texts are targeted at – in order to understand contemporaneous cartographic markets.¹⁹⁸

‘Dissemination’ is not qualified by Mayhew: it simply implies the route of texts between author(s) and user(s). It is foregrounded much more in my analyses, reflecting calls to consider ‘circulation’ (in addition to production and consumption) from Chapter 2 and the need to examine the interactions between institutions, raised in Chapter 3. I draw on various theories throughout my examinations, including Darnton’s ‘communication circuit’, Secord’s ‘knowledge in transit’, and Lester’s ‘imperial trajectories’.¹⁹⁹ Unlike traditional communication models used in the history of cartography which conceived of attendant changes to maps as the ‘loss’ of intended meaning (Chapter 2), these theories embrace such appropriation and encourage analysis of whether, and how, maps changed as a result and precursor of their movement. In recognising this, analysing the circulation and mobility of maps serves, as I shall show, to aid our understanding of the *processes* of maps noted in Chapter 2.²⁰⁰

The final component of Mayhew’s typology pertains to the ‘historical geography of communication’ wherein he argues that the “very codes of communication” – including textual meaning and accepted aesthetic norms – display an historical geography.²⁰¹ Studies focused on the production and uses of maps as objects and processes have a tendency to “lose sight of the map itself”. My empirical work is thus

¹⁹⁷ The notion of ‘writerly’ texts was propounded by Barthes in 1970. Writerly texts contrast with ‘readerly’ texts wherein meaning is fixed and reading is merely a reactive complement of writing. Maps have traditionally been conceived of as ‘readerly’ texts. See Crampton, 2001 and Chapter 2.

¹⁹⁸ Mayhew, 2007a; Iser, 1974.

¹⁹⁹ Darnton, 1982; Secord, 2004; Lester, 2006.

²⁰⁰ Harris and Harrower, 2006; Culcasi, 2008.

²⁰¹ Mayhew, 2007a, p. 31.

mindful of the need to foreground the implications of the above processes on the material map.²⁰² My examination of maps' representations is founded on a Harleyian 'deconstruction' in the sense that I seek to read these influences into the signs and symbols of the map text as an ultimately *constructed* image. This is not with an eye to uncovering the 'truth', however, but in order to expose the multifaceted and institutionally contingent factors variously shaping the maps' content. My approach thus also connects with Pickles' 'hermeneutic' approach and the 'materialistic hermeneutic' from book history that examine all aspects of texts as manifestations of diverse discursive and material processes. The focus is on understanding maps' "multiple, institutional and contextual nature" and considering how they are "unstable and complex texts, texts that are not authored or read in simple ways" rather than a Harleyian "determinate reading of the power of maps" seeking to uncover ideological intent in a literal sense.

In order to do so, Mayhew calls for an extension of those textual features requiring study, in particular the 'paratexts' – the features supplementary to the 'main text' including front and back matter, dedications, margins, and typography which have traditionally been overlooked. Literary 'paratexts' have direct parallels with the cartographic 'paramap'. The paramap consists of the 'perimap' – the quality of the paper, the professionalism of the design, the title, legend, scale, cartouches", and the 'epimap' – the "discourse circulating a map designed to shape its reception: advertisements, letters to reviewers, endorsements, lectures, articles, etc." These features were originally invoked by Wood and Fels in order to understand how maps functioned by creating 'propositions' in the space of the map. Whilst my focus is not on how maps 'worked' in this sense, these features are important in understanding maps' content and often tell us about "the social relations and work processes of the printing house [that] cannot simply be read off the nature of the text itself." These features thus also need to be considered in addition to the traditional concern for colour, toponymy, and silences (Chapter 2).²⁰³

²⁰² Jacob 1996, p. 193. See also Withers 2002a, p. 62 and Kitchin *et al.*, 2009.

²⁰³ Mayhew, 2007a, 2007b; Pickles, 2004; Wood and Fels, 2008; Kitchin *et al.* 2009, p. 17; Ogborn and Withers 2010, p. 13.

Archival Interrogation: Repositories, Sources and Methods

The archive of British cartography of Africa produced between 1880 and 1915 is vast and divided across countless official and private repositories. This thesis consulted 13 archives which are listed, by chapter, in Table 4.1. For each study I attempted to locate and document all of the relevant maps within the given institutions and parameters, and to trace the related 'epimap' sources, editorial material (such as original manuscript maps, notes and production ledgers), correspondence, different versions of maps, and reviews.

The Bartholomew Archive is the pivotal repository used in this thesis, linking all three empirical papers (Table 4.1). Held at the NLS Map Library in Edinburgh, it incorporates the maps and plans, administrative and production records, letters and advertising of the commercial map-publishing Bartholomew firm. It was donated to the NLS by the Bartholomew family and HarperCollins publishers between 1983 and 2008, and a six-year project to document the archive was commenced in 2007.²⁰⁴ Its contents with respect to Africa and the period of study are worked through in Chapter 5, but we may note here that the Bartholomew Archive represents a major repository that enables unprecedented insight into British commercial mapping in the late nineteenth and early twentieth centuries. The value of this repository is reinforced as there are very few archives of this calibre for British commercial map-publishers.²⁰⁵ Its particular merits for my research are the comprehensive production records that allow unparalleled quantitative insight into the firm's output. The archive is also valuable, and unique, in the textual correlates it houses which supplement interrogation of the maps and plans: I made extensive use of correspondence, advertising, reviews and editorial notes in order to understand the nature of the firm's output and the 'life-histories' of their products.

Whilst it is one of the richest holdings used in this thesis, the Bartholomew Archive is not without its limitations, principally with respect to 'gaps' in its content.

²⁰⁴ This project was funded by the John R. Murray Charitable Trust. For more information on the archive, see Fleet and Withers, 2010.

²⁰⁵ The archive of the Oxford University Press and the collection of material on George Philip and Son at the RGS-IBG archives are the exceptions to this general paucity, although the latter is largely uncatalogued, and consequently unavailable, for my period of study.

Many of its series are not comprehensive until the twentieth century. Of the firm's correspondence, the full outgoing series only begins in 1900 and incoming letters are extremely limited until 1901.²⁰⁶ Financial entries are sporadic from the 1860s and only complete enough to offer in-depth insight from c.1919. The production ledgers are also prone to switching form and content: producing a comprehensive account of the firm's output between 1880 and 1915 required knitting together the 'Day Books', 'Invoice Books' and 'Job Registers'.²⁰⁷ The repository was nevertheless extremely valuable and the first six months of my archival research and pilot studies were based on this archive. Chapter 5 draws only on sources from the Bartholomew Archive: this reflects the richness of the repository but also served to raise methodological questions about what we can learn from a map publisher's archive. Chapters 6 and 7 required me to consult materials in other repositories.

The thesis also draws extensively on sources from the British Library (BL) and the National Archives in London (TNA). These are huge repositories that differ markedly from the Bartholomew Archive in nature and content. Most of my work in these archives pertained to governmental mapping. 'Official' records of the government formed by far the largest collection available compared to the available material on 'unofficial' and 'popular' institutions. I typically turned to the BL and TNA for different sorts of sources although the nature and reasons for the division of materials between these holdings were not always clear. All of Johnston's governmental maps, for example, were held at TNA. The maps of the Second Boer War, by contrast, were variously held at both repositories: this, in part, is a product of the fact that when the Military Survey Map Library at Tolworth closed, TNA only took 5% of the maps for lack of space: the rest was transferred to the BL to preserve the integrity of the collection.

²⁰⁶ Some earlier correspondence may be found in personal files, grouped according to publication or individual. The outgoing series of editorial correspondence only begins in 1900. Correspondence on more business-related matters, begin in c.1885 but they are of limited use in relation to editorial work, sourcing, and map content.

²⁰⁷ The complications in using the firm's production ledgers with respect to ambiguous listings and the difficulty of determining actual clients are discussed in more detail in Chapter 5.

Table 4.1 Archives consulted in the thesis, listed by chapter. Italicised entries denote that, whilst consulted, sources from these archives were not cited in the chapters.

Chapt.	Topic	Archives
5	The Bartholomew Firm	<ul style="list-style-type: none"> • Bartholomew Archive
6	The Second Boer War	<ul style="list-style-type: none"> • Bartholomew Archive • <i>Bodleian Library, Oxford</i> • British Library Newspapers Repository (Online) • British Library Newspapers, Colindale • British Library • <i>Imperial War Museum</i> • The National Archives, Kew • National Army Museum
7	Harry H. Johnston	<ul style="list-style-type: none"> • Bartholomew Archive • <i>British Library</i> • Cambridge University Library Manuscripts Department • <i>Churchill Archives Centre, Cambridge University</i> • <i>Kew Library</i> • The National Archives, Kew • RGS-IBG Archives • Royal Commonwealth Society Archive, Cambridge University

Overall, TNA was especially valuable for accessing material ‘behind’ the official/ ‘finished’ map: it was in this archive that I examined the private papers and correspondence of governmental officials fretting over Johnston’s latest escapades or the atrocities of the Second Boer War, the scribbled notes pertaining to editorial work on maps and texts exchanged between these men and, in particular, the incoming despatches from Johnston and officials fighting in the Second Boer War that afforded valuable and novel insight into how incoming material was re-authored and circulated in Whitehall. For the paper on Johnston, this manuscript material contained original sketched and amended versions of his work which allowed new insight into the ‘life-histories’ of ‘official’ cartography. Such manuscript maps could not be found for the Second Boer War: this represents one of the most significant archival limitations shaping my research. The British Library contained some similar redactive/ informal material – most notably microfilm copies of generals’ maps and early versions of reports during the Second Boer War – but I principally used the British Library to access published material

such as Johnston's books, the IDWO numbered series of maps of the Second Boer War, and official reports such as the *Royal Commission on the War in South Africa* of 1903.

Despite the quantity of governmental material in these archives, this 'official' material was not necessarily the most thorough: it was not the case that, as has traditionally been assumed, "ministers and under-secretaries are careful to leave behind them all the documents required for a verdict on their actions".²⁰⁸ It was not possible to locate governmental production ledgers akin to those accessible for the Bartholomew firm (detailing quantities, orders, costs, etc). Quantitative analyses of official output are thus based on the number of map titles produced rather than the number of copies as per the Bartholomew firm. Care must thus be taken when analysing this information comparatively. The governmental collections at both archives contained multiple gaps: numbered series of letters and maps – most notably the IDWO maps used in Chapter 6 – commonly had missing items. Some correspondence is entirely one-sided, and appendices were often referenced but had long since been removed. These represent only the omissions that were easily detectable; there were undoubtedly many more. The reasons for the absence of sources are unclear: it may reflect the desire to conceal information or, more innocuously, the fact that an item was taken for use elsewhere and never returned. Written exchanges between officials also often stopped abruptly without resolution, a fact which probably reflects the verbal nature of many governmental exchanges: "of that which verbally passes there is no record whatever".²⁰⁹ There is also a substantial gap with respect to Ordnance Survey material and their work for the War Office as these records were lost in the bombardment of Southampton and the Ordnance Survey buildings during World War II.

Whilst most of the sources consulted were derived from the Bartholomew Archive, TNA and BL, the papers on the Second Boer War and Johnston draw on sources from a further ten repositories. My visits to these archives met with mixed success. In

²⁰⁸ Kiernan 1964, p. 265.

²⁰⁹ R.H. Knox, in the *Royal Commission* 1903, p. 61. Knox was Permanent Under-Secretary until Jan. 1901.

researching the Second Boer War, I visited the archives of the National Army Museum (NAM) and Imperial War Museum (IWM) in my attempts to find the original manuscript despatch maps sent from South Africa from which governmental maps had been derived; and I consulted the Bodleian Library's collection of IDWO maps to find those absent from the BL and TNA. These ventures were unsuccessful. I also consulted the newspaper repositories at the British Library to examine all issues of the *Glasgow Herald* (daily) and the *Graphic* (weekly) newspapers between August 1899 and December 1902. My engagement with these sources differed markedly from those in other archives as I only accessed electronic copies: until 1900 I used the online '19th Century British Library Newspapers' repository and post-1900 I referred to microfilm copies at the BL Colindale branch. Whilst this format was not preferable – particularly given how work at TNA had demonstrated the value of pencilled notes in margins and comments on the 'back' of documents which may be overlooked by those producing microfilm/ scanned copies – it accelerated the process of locating maps in the c.1263 publications I consulted. Unfortunately, neither newspaper has an existing, or at least accessible, archive pertaining to production records, editorial work, or correspondence.²¹⁰

During my research on Johnston, Casada's bio-bibliography directed me to other repositories. Casada listed 22 archives across the world containing material on Johnston. Given the relatively small proportion of Johnston's career that was dedicated to cartography, however, I refined the list according to Casada's summaries, my own archival searches, and my knowledge of Johnston's cartographic career. I visited seven of the archives listed by Casada (Table 4.1).²¹¹ The utility of the sources found in the three repositories at Cambridge University was limited. The material in the manuscripts department was almost exclusively of a personal nature: to Johnston's family and friends detailing his well-being and adventures rather than his work. The Churchill Archive contained 16 letters to W.T. Stead, their content was not applicable to my research. The

²¹⁰ This was determined from search sites such as Access2Archives, through enquiries made to the *Glasgow Herald* offices, and in consultation with existing work on the *Graphic* (Pakenham, 1979 and Harrington, 2000).

²¹¹ Casada, 1977a. The Bartholomew Archive was not included in Casada's inventory.

Royal Commonwealth Society holds microfilm copies of material originally from the Central African Archives (now the National Archives of Zimbabwe) which were microfilmed in 1953 at the request of Johnston's biographer Roland Oliver. This eclectic collection – consisting of letters, sketchbooks, notes on his publications, extracts from his diaries, photographs, and his correspondence with the British South Africa Company (1891-1898) – is interesting in relation to Johnston's character and record-keeping but of little value on his cartography.

In order to examine Johnston's relationship with the RGS, I consulted sources in the RGS-IBG archives. The correspondence files were informative, but rife with gaps: full years are missing including those in which Johnston was known to be producing maps with the Society, conversations are commonly one-sided and frequently stop in a manner that suggests letters are omitted, and there are multiple citations of absent appendices. The information is nevertheless sufficient to garner a good impression of the processes occurring and the nature of Johnston's relationship with the Society. This is supplemented with consultation of the referee reports on Johnston's work although these comments did not pertain to his cartography. With the exception of the 'Additional Papers' series, material on the production and use of maps was scant owing to a lack of cataloguing. I consequently relied on reports in the Society's publications and comments in correspondence to infer the processes and nature of mapmaking. Through Francis Herbert, former RGS-IBG Map Curator, I was permitted brief access to an uncatalogued ledger book of the RGS Drawing Room, but not to other such material. It may be that the archive contains more material pertaining to the RGS' map-compilation, but such as may exist was inaccessible during my research because it had not been catalogued.

One particular archival 'gap' pervades all of the repositories consulted, namely: sources pertaining to the use and the reception of maps (discussed above). I consulted reviews where available: the Bartholomew Archive has 'Review Books' full of newspaper cuttings and both the RGS and Johnston kept newspaper reviews of their maps. Some governmental notes at TNA were also indicative of officials' engagement

with and use of the maps of the Second Boer War and Johnston, but information on how maps were used was limited. My work is not alone in encountering this: Jacob argued that the “way maps were used is probably the most difficult single aspect [to capture/analyse], since when people look at maps they leave no visible marks on the maps themselves. Their vision is invisible to us.” The ‘marginalia’ which has enabled a burgeoning body of literature reconstructing books’ use and reception is typically not available for map historians.²¹² It is for this logistical reason that my work is characterised by a stronger focus on map production and circulation than map consumption/ use. That being said, this binary of production or consumption is repeatedly blurred as my empirical chapters reveal.

My approach to archival interrogation was characterised by an awareness of the need to both be in the archive but also to ‘transcend the archive’. The capacity for researchers to do so and whether we can ever be in a position of exteriority to the archive have been debated at length by archival scholars. My use of this term is pragmatic: I use it in the sense that my research was integrally informed by scholars who, over the past two decades, have appealed to post-modern concepts to elucidate how archives are not natural, objective repositories of historical sources: they are socially-constructed accounts of the past which are spatially and temporally specific yet constantly reinvented and reinterpreted. In light of this, I tried at all times to reflect on how archives *work* to provide information and to conduct research in a manner that was not constrained by archival structures. This necessitated ‘going beyond’ the arrangement of storage boxes, filing, codification, and labelling provided by the archive/ archivist.²¹³

In their arrangement and referencing of material – processes that are arguably inherently political and power-laden – each of the archives created its own links between series and products.²¹⁴ My work required finding and linking sources that, in archival terms, often seemed unrelated: the textual correlates and epimap materials in particular

²¹² Jacob 1996, p. 192. On book marginalia, see: Daston, 2004; Gingerich, 2004; Keighren, 2006.

²¹³ Ketelaar, 2001; Cook, 2001.

²¹⁴ Burke, 2000.

– for example correspondence, editorial notes, production ledgers, reviews and advertising – were not catalogued with the related maps. In each of the archives consulted, Johnston’s maps were housed with others produced around the same time, for example, and the original textual correspondence in which they were sent or discussed and the notes on their production were typically kept in entirely different series. Related materials were also, at times, housed in different archives: discussions about the production of maps of the Second Boer War were held at TNA, with the resultant map accessible only at the BL. This archival ‘divorcing’ rarely bore any indication of the sources’ former unity.

Such ‘extraction’ of maps was one of the principal needs for, but also a challenge to, transcending the structures of the archives across the repositories consulted. Contemporaneously, maps were often removed from their original context as they were used in different ways to their textual correlates. Archivists also often extracted maps to be catalogued into new cartographic series: in the 1950s, archivists at TNA removed c.40% of Johnston’s maps from their original locations. The latter is a prime example of archivists ‘authoring’ archives in ways that re-invent their content.²¹⁵ Extraction by archivists was usually accompanied by a note indicating the reference of the map’s new location, although tracing sources back from an extracted map was typically more complicated. Contemporaneous extraction was highly problematic: there was rarely any indication of the new location of a map. I was able to find most of Johnston’s maps at TNA in spite of this (Chapter 7), but could not access the extracted appendices in the RGS–IBG archive. As noted above, I could not find the original manuscript maps printed for the Second Boer War: this is because they were contemporaneously extracted from the initial papers with no indication of their new location (Chapter 6).²¹⁶

The process, and particularly the ease, of reuniting sources and of transcending the archive was site specific. The Bartholomew Archive facilitated the process owing to

²¹⁵ Brothman, 1991; Cook and Schwartz, 2002.

²¹⁶ Contemporaneous notes suggest that several were extracted to be used in the Government’s official *History of the War* (Maurice, 1906), but these could not be traced.

the meticulous nature of the Bartholomew firm's records; the open access to the sources afforded me by the NLS through my collaborative studentship; and the small size of the repository which allowed me to view the vast majority of records relevant to my era of study. The expansive collections at the BL and TNA, by contrast, coupled with the room-specific access and the limit to the number of items available to order/ access simultaneously made drawing sources together, and going beyond the organisation imposed by the archives, more problematic.

As well as trying to transcend the structures of the archives, I also had to capitalise on them. Part of my archival method was to become relatively fluent in the reference 'languages' of the main archives I consulted. At TNA and the BL, in particular owing to their size, using the prefixes/ numbered series to identify types of sources accelerated the process of finding maps and tracing their associated documents as it was possible to extrapolate previously successful combinations of references to apply to other cases/ maps. I was also more reliant on the catalogue and ordering systems to find material in those archives used for smaller periods of time such as the NAM, IWM, and archives in Cambridge. With the exception of the Bartholomew Archive, however, none of the repositories specifically pertained to cartographic material and thus the archives – individually, and in the patchwork of sources across different holdings – was structured to facilitate the holistic examination of maps' content, production, circulation and use in ways I was striving for.

In addition to reflecting on the construction of the archives I consulted, the literature informing my archival interrogation also highlighted the need to consider how, as researchers, we create our own narratives and impose our own values and assumptions which cannot go unquestioned. Whilst I worked hard to engage critically with the archives, their contents ultimately only show "what the researcher wants the document[s] to tell him or her". My research was not passive: I constructed my own "personal archive". I reflect on this process, and its contents, in Chapter 8 but ultimately,

in what follows, I offer my narrative from many possible versions of the history embodied in the archives and materials I consulted.²¹⁷

Conclusions

This chapter has introduced the topics, theories and archives underpinning chapters 5 to 7. Whilst the foci and approaches of the papers that make up these chapters differ – reflecting my aim of garnering a breadth of insight and the available sources, challenges and opportunities of the different repositories – these studies collectively address the main issues raised in the first two chapters and shed new light on six different institutions that include ‘official’, ‘unofficial’ and ‘popular’ outlets. Each chapter is also designed to connect with theories from the history of cartography, book history and/ or the history of science. Together, these case studies examine the complexity and variability of the British mapping of Africa between 1880 and 1915 with respect to cartographic representations, maps as objects, and the institutions producing them, and allow me to reflect on the pertinence and application of the theories by which we may interrogate these phenomena.

²¹⁷ Ketelaar 2001, p. 139; Withers 2002b, p. 305.

5

The Bartholomews' Mapping of Africa, 1880–1915

Introduction

This chapter investigates how the Bartholomew firm mapped Africa between 1880 and 1915 and raises questions for further research incorporating the lessons and sources of the Bartholomew Archive. My paper examining the firm's Africa cartography constitutes the main body of this chapter. As the first examination of a commercial map-publisher's cartography of Africa between 1880 and 1915, however, this study is also designed to work as a platform for further analyses. Consequently, in addition to the paper – which examines in detail the output of the Bartholomew firm, and concludes by considering the firm's roles, varied functions, and the multifaceted factors shaping its cartography – I also offer chapter conclusions that address the issue of how such map-making institutions functioned, as called for by Driver (Chapter 2) and by Mayhew (Chapter 4). The study tests the application of theories from book history on 'dynamic localities' and the history of science on 'centres of calculation' to cartographic contexts and it considers which issues are most pertinent for further investigation, namely authorship, mobility, credibility and intended audiences. The study is also used to reflect on the content and utility of the Bartholomew Archive and it situates the subjects of chapters 6 and 7 with respect to this study.

Journal Paper: The Bartholomews' Mapping of Africa, 1880–1915

Abstract

This paper examines the African cartography of the Bartholomew map-publishing firm between 1880 and 1915. It represents the first sustained examination of a British commercial map-publisher's experience of mapping during the 'Scramble for Africa'.

The paper provides novel insight into the Bartholomews' output and, informed by theories from book history and the history of science, examines how the firm functioned, the multitude of issues and 'voices' shaping its cartographic conduct and content, and its position in wider networks of the 'imperial archive'. It concludes by discussing the roles played by the Bartholomews in mapping Africa during this period, the ways in which the firm functioned as much more than just an isolated site of production, and how the firm's representation of Africa was shaped by processes and concerns that are irreducible to simply 'imperial'.

Introduction

The Edinburgh-based Bartholomew firm traces its origins to the engraving work of George Bartholomew in the 1820s. By the late nineteenth century it had become one of "the most famous of British commercial mapmakers" with "a huge worldwide business in every sort and scale of map and atlas for every purpose".²¹⁸ The Bartholomews were pre-eminent engravers, mapmakers, printers and publishers of maps and atlases, and had received worldwide acclaim for their diligence, quality cartography, and innovative technical skill. In 1888, John George Bartholomew (JGB) succeeded his father, John Junior, as director of the firm – a position he held until his death in 1920. JGB expanded the firm and was awarded multiple accolades in recognition of his services to cartography and geography, including the RGS Victoria Medal in 1905 and appointment as 'Cartographer to the King' from 1910. The firm's collaboration with "leading geographers, explorers and mapmakers" situated it "at the heart of widespread geographical activity" and the wealth of cartography produced for public sale established the Bartholomews as a household name in Victorian Britain.²¹⁹ The newly

²¹⁸ Nicholson 2000, p. 123. For more on the history of the firm see Gardiner (1976) and on the characteristics of the Bartholomews' output between 1826 and 1919 see Smith (1998, 1999).

²¹⁹ Fleet and Withers 2010, p. 92; Nicholson, 2000.

accessible Bartholomew Archive held at the NLS incorporates the firm's administrative and production records, correspondence, and maps. It offers unprecedented insight into British commercial mapmaking at the turn of the twentieth century.

The paper is divided into three main parts aligned to different sections of the Bartholomew Archive but primarily intended to address interrelated questions raised by recent work in the history of cartography. The first section is informed by the paucity of literature on the cartography of commercial mapmakers during this era. British mapping of Africa during the period of its partition amongst European powers (1880–1915) has almost exclusively been studied from the perspective of the Government who struggled to map adequately the huge swathes of African territory acquired during the 'Scramble'. With the exception of Heffernan's examination of British and French newspaper cartography (1875–1925), analyses of 'popular' map-making institutions' work during this era have been strikingly absent.²²⁰ The Bartholomews' production ledgers are used in this section to garner new quantitative insight into the firm's output of African maps. The statistics are examined with regards to their overall production, with respect to customers in order to situate the firm in wider networks, and in relation to thematic trends and events in comparison with literature on other institutions. This data is discussed in great detail in order to construct a thorough account of the Bartholomew firm's work which may serve as a platform for further analyses.

The second section is informed by recent calls for historians of cartography to move beyond analysing maps' content as reflecting generic 'imperial' discourses to addressing the contingent and complex nature of mapmaking. This section draws on the Bartholomew Archive's epistolary sources, and what we may call the 'epimap' – "the discourse circulating a map" including advertisements, letters, reviews, lectures and articles – in order to garner unprecedented insight into the sorts of issues map publishers

²²⁰ Heffernan, 2009.

faced and their experience of mapping Africa.²²¹ Informed by work on ‘dynamic localities’ from book history, and ‘centres of calculation’ from the history of science, these sources are used to examine how the firm functioned by collating and reassembling information as opposed to simply producing maps, and to historicise and expose the multiple ‘voices’ heard in this process.²²²

The final section compares two of the ‘Bartholomews’ political maps produced less than three weeks apart in 1890. It discusses how they created different images of British politics, mapping and interests in Africa owing to their varying sources, credibility, intended audience, profit margins and authorial relations. These issues are used to illustrate the variability of the Bartholomews’ cartography and to examine how the firm’s maps reflect much more than a simply ‘imperial’ discourse.

In this first sustained examination of a British commercial publisher, use of a newly accessible and rich cartographic archive, and novel application of theories from book history and the history of science, this paper offers in summary several issues relevant for future research. It concludes by discussing the significance of the Bartholomew firm’s mapping, the complexity and variability of the firm’s functions and concerns, and how the Bartholomews and other cartographic institutions may be conceived of in future analyses.

Outputs and outlets: Bartholomews’ production of Africa maps, 1880–1915

The Bartholomew firm produced 2,528,210 maps of Africa for 2,936 orders between 1880 and 1915 (Figure 5.1).²²³ Production of maps of Africa was relatively constant during the 1880s. With the exception of 1888 (discussed below), the Bartholomews produced on

²²¹ Edney, 2009a; Driver, 2010.; Kitchin *et al.* 2009, p. 17 (discussing Wood and Fels, 2008). On the limited temporal scope of the Bartholomews’ correspondence, see Chapter 4.

²²² Johns, 1998; Latour, 1987.

²²³ This total excludes those maps that were included in orders for atlases, including the “Atlas for South African Schools”. The total is likely slightly higher than 2,528,210 owing to the presence of African maps in the ‘unknown’ entries (note 229), although every effort was made to trace the details of these orders.

average *c.*45,000 copies across *c.*56 orders per annum. This increased in the first half of the 1890s, with an average of *c.*75,000 copies and *c.*125 orders for maps of Africa per annum between 1890 and 1895. Production was much greater between 1896 and 1898 with an annual average of *c.*113,000 maps. The firm's output of African cartography peaked in 1899 with 279,336 copies and 249 orders. By 1900, however, the total had dropped to 172,962 copies and 170 orders. The first half-decade of the twentieth century saw an average annual output almost identical to the mid-late 1890s at *c.*110,000 maps and *c.*106 orders. Production continued to drop off rapidly into the 1910s, with annual average copies of *c.*41,000 and annual orders of *c.*60 between 1906 and 1913. This changed abruptly with the onset of World War I in 1914. From 1914 to the end of 1915, the firm received only 79 orders and produced only 12,116 maps of Africa in total.²²⁴

Prior to examining the composition of these trends with respect to clientele, theme and events, it is necessary to reflect on the significance of this output and quite what the statistics may represent. We cannot assume that they simply reflect fluctuations in general interest or demand: analyses must be sensitive to the presence of large orders that have the capacity to skew apparent trends. The average size of orders for African maps was *c.*800 copies. The total number of copies sold in 1888 is anomalously high for that decade (Figure 5.1a) owing to an order for 120,600 copies of six 'Africa maps in Colour for Prof. Henry Drummond'. Whilst an interesting and important component of the firm's output, these large orders are not necessarily representative of popular demand. They were typically one-off orders for use in books.²²⁵ Assessing trends consequently also requires consideration of the numbers of orders to assess whether changes reflect general demand from lots of clients or single requirements (Figure 5.1b).

²²⁴ Statistics were produced by transcribing the firm's records of their output in 'Day Books' (NLS: Acc.10222/Business Record/297-305) prior to July 1888 and cross-referencing these entries with the firm's 'Invoice Books' (NLS: Acc.10222/Business Record/621-5) and 'Job Registers' (NLS: Acc.10222/Business Record/281-2) after the firm's system of recording changed in July 1888.

²²⁵ Only 22 of the firm's *c.*3,000 orders (0.75%) were for more than 20,000 maps.

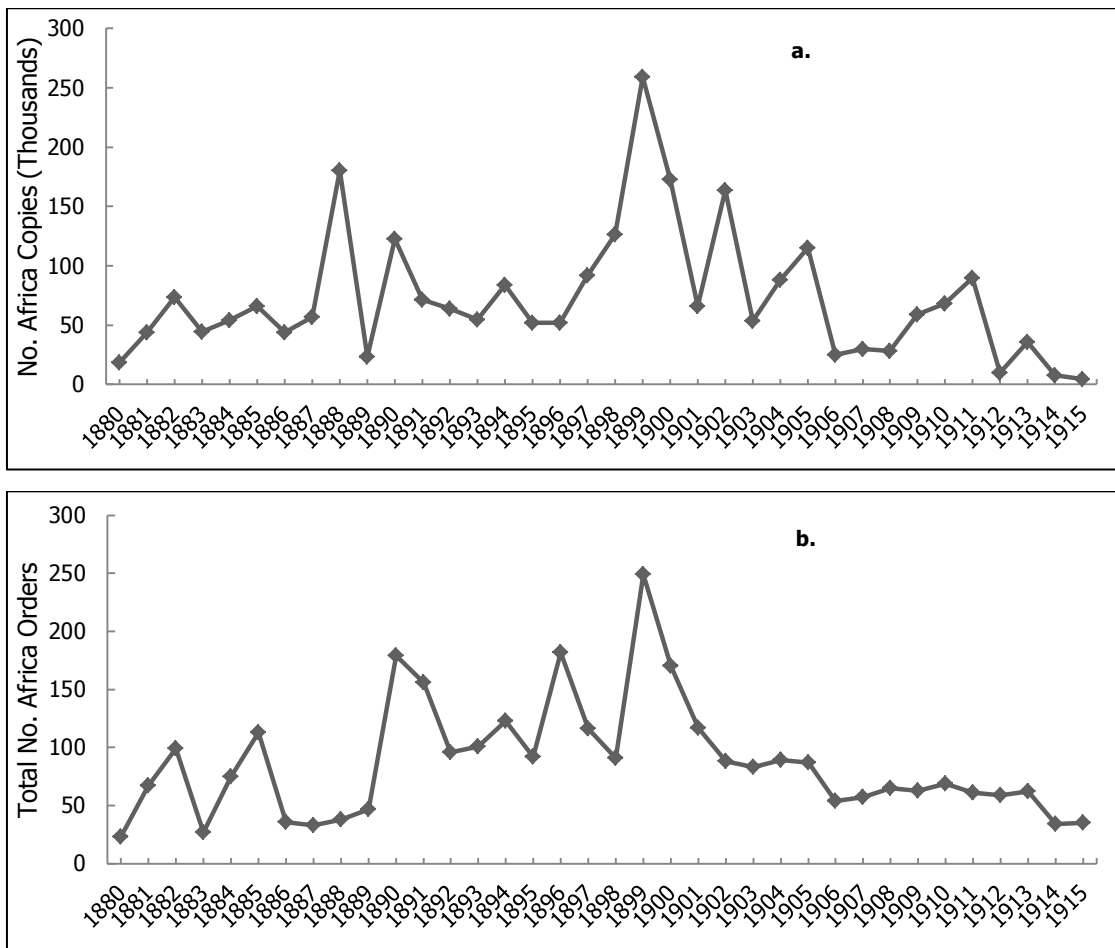


Figure 5.1. The Bartholomew firm’s output of African cartography, 1880–1915. Figure 5.1a. Number of copies of Africa maps produced per annum. Figure 5.1b. Number of orders received for African maps per annum. Derived from NLS: Acc.10222/Business Record/297–305, 621–625 and 281–282.

In order to get a broader perspective on the Bartholomews’ African mapping, the firm’s entire output was transcribed for 16 ‘snapshot’ years between 1880 and 1915 (Table 5.1).²²⁶ African mapping was relatively minor in comparison to the firm’s mapping of the United Kingdom and atlas production, but Africa was the non-European region most mapped by the firm in this period.²²⁷ Total sales of African maps across these ‘snapshot’ years was almost double that of Asia, and greater than the mapping of

²²⁶ Snapshot analyses were limited to a stratified sample of 16 years as the level of further insight acquired through examining all 36 years did not justify the time required to transcribe, code, and analyse the additional 20 years of data. The snapshot years are: 1880–1881, 1885–1886, 1889–1890, 1894–1895, 1899–1900, 1904–1905, 1909–1910, and 1914–1915.

²²⁷ On mapping of the UK, see Nicholson, 2000. On atlases, see Gardiner, 1976 and Barclay, 2004.

North America, the Middle East, Australasia, South America, Polar Regions and Central America combined (Table 5.1). There was evidently an enlarged market for maps of Africa during this period.

Table 5.1. The Bartholomew firm’s global output across the ‘snapshot’ years 1880–1881, 1885–1886, 1889–1890, 1894–1895, 1899–1900, 1904–1905, 1909–1910, 1914–1915.²²⁸ Derived from NLS: Acc.10222/Business Record/297–305, 621–625 and 281–282.

Region	Total copies	Percentage copies
United Kingdom	18,528,475	64.9
Atlas (full and part)	3,143,693	11.0
Europe	2,373,341	8.3
Africa	1,371,580	4.8
World	1,119,878	3.9
Asia	726,919	2.5
North America	619,276	2.2
Middle East	316,204	1.1
Australasia	205,184	0.7
South America	66,671	0.2
Polar regions	49,215	0.2
Central America	48,888	0.2
Total Copies	28,569,324	
Average annual copies	1,740,582	

This market comprised three main types of order. The first was for “products prepared for other publishers for which some or all of the maps were prepared in-house”. The firm had long-standing contracts with publishers; these transactions were characterised by substantial orders for public sale. The second was bespoke “contract work” wherein the firm tailor-made maps for specific clients. These orders ranged a great deal in size and style. Finally, the firm produced ‘publications’ (Table 5.2) which were published under their own name and sold to a range of clients.²²⁹

²²⁸ Owing to the firm’s method of recording it was not possible to determine the geographical content of 639,734 maps across these snapshots. This was consistent across the era (between 2.8% and 4.6% of the annual output). The firm’s non-cartographic output – such as calendars, illustrations, and advertising, and entries marked ‘revisions’ or ‘corrections’ – is not considered.

²²⁹ Bartholomew 2008, p. 6.

The number of the firm's own publications increased markedly in the 1890s as one of JGB's initiatives to develop the firm. The Bartholomews had ten different African publications in circulation during this period, with multiple editions (Table 5.2). All were foldable sheet maps sold to the public through publishers/ booksellers, and to an array of clients. Publications are one of the best indicators of demand for African cartography: they represent JGB's best predictions of "which titles could become bestsellers".²³⁰

Table 5.2. The Bartholomew firm's African publications.²³¹ Derived from NLS: Acc.10222/Business Record/297–305, 621–625 and 281–282.

Coverage/ Region	Entries	Dates of entries
Central Africa – Political and with Stanley 'index'	1	1884
Equatorial/ Central Africa – Political		
'Respective Spheres of Influence as defined under the Anglo-German Treaty of July 1890'	2	1890
Equatorial/ Central Africa – Physical		
a.k.a. 'Orographical map showing route of Mr. Stanley's Emin Pasha Relief Expedition'	2	1890
Africa – Political	15	1890–1899, 1903, 1904, 1912
South Africa – Political	6	1890–1893, 1899, 1904
Central and South Africa – Political	21	1891–1901, 1905, 1907, 1909, 1910
Sudan – 'Special'	4	1896 – 1899
Egypt (and lower Nile) – Survey Map (a.k.a. Tourists')	4	1897, 1906, 1908, 1915
South Africa – Reduced Survey Map (a.k.a. Tourists')	17	1898–1905, 1908, 1913.
South Africa – 'Special'/ War Map	8	1899–1902

Changes in the firm's Africa cartography, particularly the increase in output in 1890 (Figure 1), must be weighed against concomitant 'internal' developments in the firm. The firm became a private company in 1889, John Bartholomew and Co., a year after JGB took over from his father as company director. JGB was more ambitious and proactive than his predecessor. Not only did he produce more publications, under his direction the firm was rebranded the Edinburgh Geographical Institute, acquired a

²³⁰ Bartholomew 2008, p. 5.

²³¹ Publications are listed according to location/ theme rather than exact title as the Bartholomews' listings of them in were too inconsistent to define them more specifically. Additional details and inset maps changed with different issues but are not accounted for in this paper.

partnership with the publisher Thomas Nelson, and was relocated to the more substantial Park Road premises with improved machinery in 1889. This brought the firm “into the mainstream of map printing and publishing not only in Scotland but in Britain as a whole”.²³² These shifts were also associated with a *c.*40% increase in annual output compared to pre-1888 figures (Figure 5.2a). Analysing African cartography as a percentage of the firm’s total annual output confirms that, whilst the firm’s development *enabled* them to engage in mapping Africa to a greater extent than previously, the shifts in African output reflected the additional factors examined in this paper (Figure 5.2b).

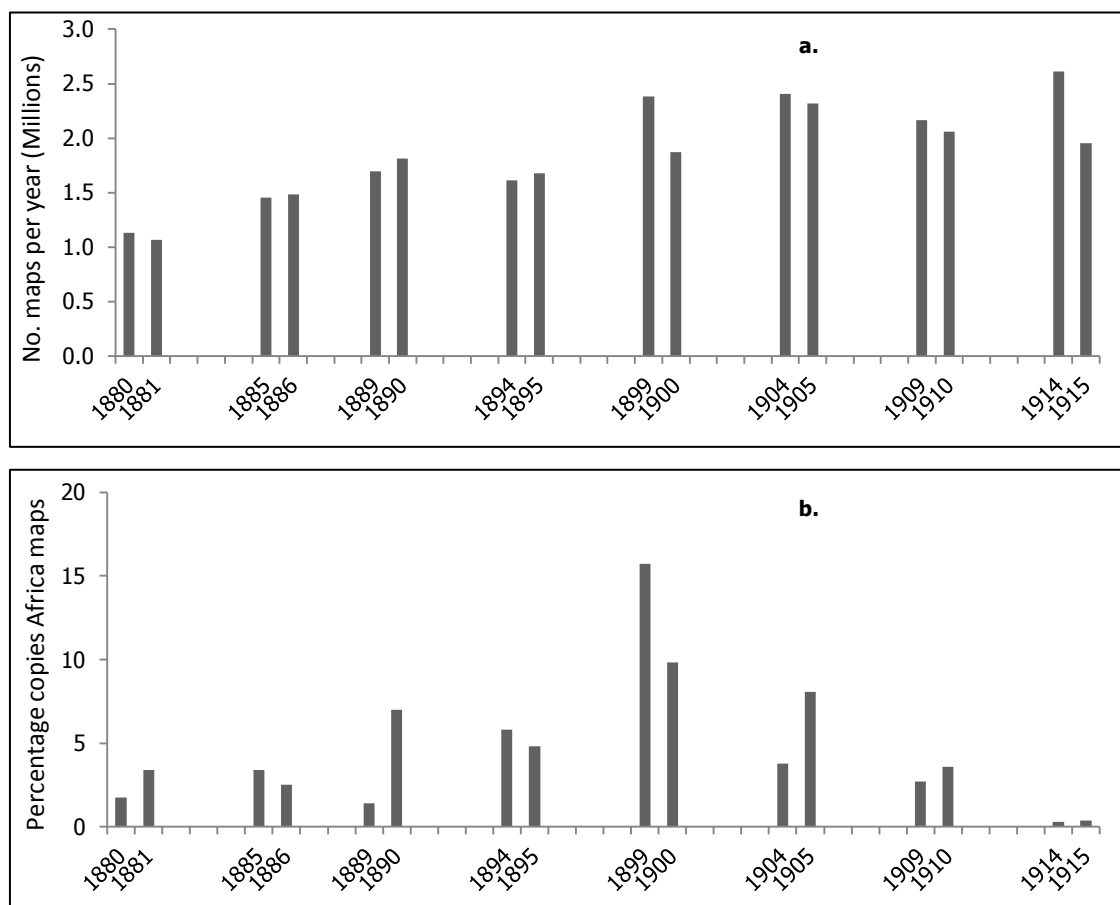


Figure 5.2. The Bartholomew firm’s cartographic output across the 16 ‘snapshot’ years 1880–1881, 1885–1886, 1889–1890, 1894–1895, 1899–1900, 1904–1905, 1909–1910, 1914–1915.

Figure 5.2a. Number of copies of all maps/ atlases produced per annum. Figure 5.2b. Annual percentage of African copies. Derived from NLS: Acc.10222/Business Record/297–305, 621–625 and 281–282.

²³² Fleet and Withers 2010, p. 93; Gardiner, 1976.

Historians of the book and of science have emphasised the need to examine sites of production as “[d]iscrete but interlocking”. The Bartholomew firm’s output thus needs to be examined as a particular locale that “fit[s] into a larger, distributed pattern of knowledge generation necessary for the whole project to succeed”. Who the firm serviced in their production of African cartography, and the firm’s position in professional and cartographic networks at a variety of scales becomes crucial for understanding their output and role.²³³ The firm’s production record can only tell us the individual or institution with which the Bartholomews had direct contact, not how maps were redistributed or used. It nevertheless affords new insight into who was purchasing African cartography from commercial publishers between 1880 and 1915 (Table 5.3).

Table 5.3. The Bartholomew firm’s clientele for African cartography.²³⁴ Derived from NLS: Acc.10222/Business Record/297–305, 621–625 and 281–282.

Type of client	British ‘metropole’ (UK)		British ‘periphery’ (British Dominions)		International	
	Copies	Orders	Copies	Orders	Copies	Orders
Publisher with author	580,264	408	0	0	0	0
Publisher–Retailer	328,175	602	0	0	8,441	59
Retailers (Booksellers)	321,227	594	0	0	6,401	44
Publisher	278,184	489	0	0	8,844	58
Churches/ Missionaries	305,803	196	20,100	42	146,900	6
Newspaper/ Magazine	198,390	11	0	0	0	0
Academic Societies	137,099	78	0	0	6,050	7
Company	37,501	25	6,040	3	0	0
Government	30,625	61	17,040	6	0	0
Printers	20,402	71	0	0	0	0
Individuals	34,921	38	2,212	5	2903	3
Unknown	13,949	72	0	0	125	10
Other	11,805	8	0	0	57	6
Total copies	2,298,345	2,653	45,392	56	179,723	193
Totals (%)	90.9	90.7	1.8	1.8	7.1	6.4

In studying the RGS as a centre for geographical calculation, Heffernan stressed the significance of the Society’s locality in the “‘brain’ of empire” in Kensington, London. The Bartholomews’ location in Edinburgh and in Scotland was likewise significant.

²³³ Johns 1998, p. 60; Dritsas 2005, p. 52; Livingstone, 1995.

²³⁴ The location of clients could not be found for of 31 orders (1.1%) and 4,190 copies (0.2%).

Home to the headquarters of his firm, and a second pre-eminent map-maker W. and A.K. Johnston, since the 1820s, JGB proclaimed Edinburgh “the greatest map producing place in the British Empire”.²³⁵ The firm’s Edinburgh location acquired new significance from 1884 with the establishment of the RSGS. JGB co-founded the Society with David Livingstone’s daughter A.L. Bruce in order to improve the discipline and practice of geography in Scotland.²³⁶ JGB served as the Society’s honorary secretary and one of its principal cartographers from 1884 until his death. The RSGS represented one of the firm’s most consistent clients for African cartography: the society ordered 129,204 copies of 60 maps of Africa between 1885 and 1914, 54 of which were used in the Society’s publication, the *Scottish Geographical Magazine* (SGM) (Table 5.5, end of paper).

The firm may also be situated in the national ‘imperial archive’, the term used to describe the “total knowledge” – both real and fantastical – of the British Empire. Between 1870 and 1940, British acquisition of information about the Empire was underpinned by the pursuit of the “possibility of comprehensive knowledge” and the ‘imperial archive’ – a term coined by Richards – represented “the collectively imagined junction of all that was known or knowable”. The archive was composed of multiple “knowledge-producing institutions” striving for this ideal of total knowledge.²³⁷ Across Britain, these institutions made their own ancillary archives that pursued and sustained both the material supply of information and the ideological ambition of comprehensive knowledge. Many looked to cartography in this endeavour as, in their “collection, storage and maintenance”, maps were “particularly good instances of the texts that composed the imperial archive”. The Bartholomew firm must thus be seen in relation to the networked ‘nodes’ of the archive.²³⁸

Publishers and booksellers dominated the firm’s clientele base in Britain (c.64%). The proportion of copies ordered by these clients varied annually, but remained

²³⁵ Heffernan 2002, p. 213; Bartholomew, 1893.

²³⁶ For more on the provenance of the RSGS, see Lohead, 1984; Bridges, 1985 and Withers, 2001.

²³⁷ Richards 1993, p. 11–14.

²³⁸ Burnett 2001, p. 6; Heffernan, 1996.

consistently dominant across the era (Figure 5.3). Scottish, and particularly Edinburgh-based, publishers and booksellers comprised a substantial proportion of the firm's clientele of this type, most notably T. Nelson and Sons (121,309 copies), William Blackwood (117,603 copies), T.C. and E.C. Jack (105,677 copies), and John Menzies (99,850 copies).²³⁹ The English market was dominated by W.H. Smith (131,692 copies).

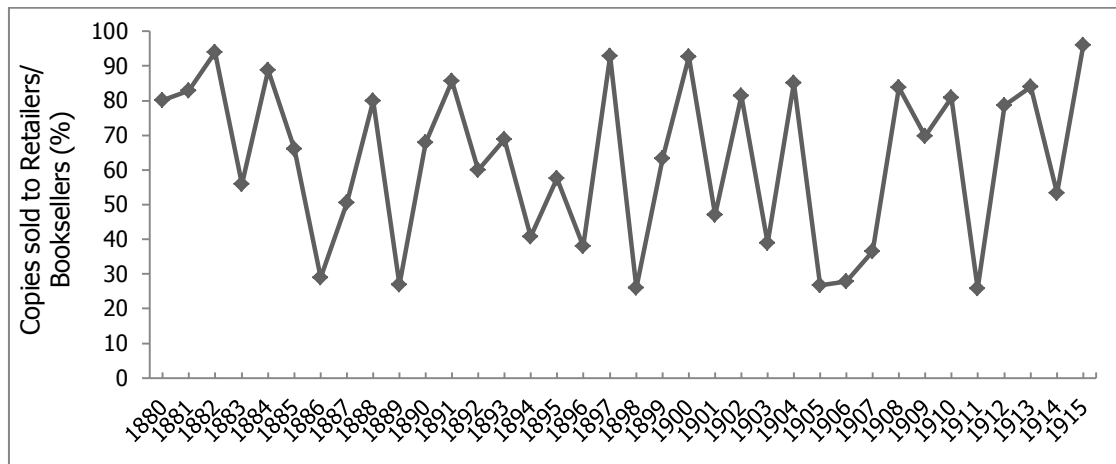


Figure 5.3. Annual percentages of the Bartholomew firm's Africa maps sent to Publishers, Booksellers and Publishers/ Booksellers, 1880–1915. Derived from NLS: Acc.10222/Business Record/297–305, 621–625 and 281–282.

Approximately 435,200 copies of the maps sent to these clients can be identified as sales of the firm's publications. Whilst ostensibly produced for the British public, we cannot ascertain how these publications were redistributed beyond these clients. Nearly 40% of the copies in this category were listed with an author in addition to a publishing house ('Publisher with author', Table 5.3). These orders can be traced to their use in books. Some of the largest transactions include: Drummond's order for 120,600 maps for his *Tropical Africa* book (1888); 59,895 maps for Steevens' *With Kitchener to Khartoum* (1898); and 35,443 maps for Wallace's *Farming Industries in Cape Colony* (1896). Amongst the most famous volumes, the Bartholomew firm produced 12,200 copies of a map for Winston Churchill's *My African Journey* (1908) and 1530 maps for the 1901 edition of the *Encyclopædia Britannica*. The greatest repeat-custom of this type came from Harry H.

²³⁹ Other significant clients include: A. and C. Black (82,765 copies), Oliver and Boyd (43,726 copies) and John Grant and Sons (42,031 copies).

Johnston, a preeminent African populariser, British Consul and fellow of the RGS. Although he worked with different book publishers, Johnston commissioned the Bartholomews for a total of 134,060 copies of 34 bespoke maps that were used in seven of his books between 1897 and 1913 (on Johnston, see Chapter 7).²⁴⁰

A little over 7.4% of the firm's maps were ordered for newspapers and magazines. The number of orders for these clients was small (Table 5.3). This corroborates Heffernan's findings regarding the unwillingness of newspaper publishers to pay the associated expense. When such publications did use maps, however, they ordered substantial quantities. Orders include: 11,076 maps of the "Relief of Emin Bay" in 1887 for the *Graphic*; 106,740 copies of two Second Boer War Maps for the *Glasgow Herald* in 1899; and eight tailor-made maps totalling 51,201 copies for the *Statesman's Year Book* between 1899 and 1913.²⁴¹

Churches, missionary societies and affiliated individuals represent one of the Bartholomews' most consistent clients for maps of Africa. Nearly 80% of the orders in this category were placed by committees and members of the 'Free' and 'United Presbyterian' Churches of Scotland (unified as the 'United Free Church of Scotland' from 1900). Just over a tenth was from the Universities Mission to Central Africa. These contacts had their own markets for 'missionary maps' and rarely ordered other types of cartography. Marginal notes in the production ledgers stating 'on Stone' indicate that the firm kept copies of these churches' orders on lithographic stone to facilitate their regular reproduction throughout the period.

The Bartholomew firm sold 30,025 maps of Africa to the British War Office (WO) between 1897 and 1909. A little over half (13,084 copies) were of the Bartholomew firm's publications. The WO's main demand was for maps of South Africa, particularly so during the Second Boer War (1899–1902). During the conflict, the WO ordered 6,695

²⁴⁰ Drummond, 1888; Steevens, 1898; Wallace, 1896; Churchill, 1908; Johnston, 1897, 1898, 1902, 1903, 1910a, 1910b.

²⁴¹ Heffernan, 2009. Many more Bartholomew maps were probably used in newspapers and magazines, but were redistributed by publishers.

copies of the firm's specially-issued publications (Table 5.2). The firm sustained its relations with the WO into the first decade of the twentieth century, supplying them with a total of 7700 copies of their publications between 1897 and 1909, and 5300 copies each of custom-made summary maps of the Second Boer War in 1904 and of the political situation in 1909. In 1902, they were commissioned by E.H. Hills of the IDWO to produce 2040 copies of four sheets of Somaliland for the 1:1 million map series of Africa.

The Bartholomew firm was also a repository of maps for leading 'unofficial' institutions: that is, organisations that were not 'official'/ governmental, but engaged with Africa and were often instrumental in influencing policy.²⁴² In addition to the RSGS, the 'Academic Societies' category (Table 5.3) includes 42 copies of the Bartholomews' publications to the Manchester Geographical Society in 1890 and 72 copies, with required additions, to the BAAS in 1905 for its South African meeting. The firm also produced 3500 bespoke maps of the geodetic arc for the BAAS in 1908 and a set of 13 rainfall maps for the RGS in 1911. The 'Company' category (Table 5.3) is dominated by the 4,760 maps for the Glasgow-based African Lakes Corporation across twenty orders between 1888 and 1913, and nearly 30,000 copies of "H. Gaze and Son's Map of Egypt" produced for the eponymous travel company between 1889 and 1893.

Only 1.4% of the Bartholomews' output was sent to individuals not listed according to an affiliated institution.²⁴³ The majority of these orders were for very small quantities of the firm's publications throughout the era. These were sent to numerous local residents including a local MP and academics from Edinburgh and Glasgow universities. The firm also sent small numbers of their publications to a network of select Africanists and geographers including John Scott Keltie (RGS librarian/ Assistant Secretary), Hugh Robert Mill (RGS librarian) and Arthur Silva White (RSGS Secretary). Larger orders came from several Scottish military men including 2040 bespoke maps for 'Major Chooks' of Crieff in 1900 and 205 maps of the Orange Free State for Major Tufnell,

²⁴² Cain and Hopkins, 1987; Driver, 2000. See Chapter 3.

²⁴³ The majority of the firm's customers were listed by the Bartholomews, and consequently categorised in this paper, according to their affiliated institution (churches, societies, companies).

General Staff of the Scottish Command, in 1910. Leading Africanists also made use of the firm's resources, including: Dr Felkin, the eclectic Edinburgh-based missionary and explorer, who ordered 502 copies of four bespoke maps in the late 1880s; James Stevenson, the philanthropic Glasgow Merchant, who ordered 15,800 maps between 1883 and 1888; and Arthur Low Bruce, the director of the African Lakes Company and IBEAC, who made three orders for publication and bespoke maps in 1893. Whilst one of the smallest categories, these 'Individuals' testify to the breadth of the Bartholomews' clientele for African cartography.

Whilst clients located in the British 'metropole' dominated the Bartholomews' transactions, the firm also produced maps for British institutions and individuals located in the 'periphery' of the British Empire. Lester has identified the need for greater examination of the 'imperial networks' and trajectories of information, artefacts and personnel moving between metropolitan and peripheral institutions.²⁴⁴ For the Bartholomew firm, these institutions were concentrated almost exclusively in South and East Africa. Nearly 25,000 copies of the firm's maps are known to have been sent to East Africa through the United Free Church and Imperial British East Africa Company in the 1890s.²⁴⁵ The firm sent c.20,000 copies of their maps to South Africa to the British South Africa Company (1894), South African map-publishers P. Davis and Sons and J.C. Juta, and the Cape of Good Hope Government, for whom they produced c.17,000 maps between 1897 and 1909.

The final geographical category in which the Bartholomews need to be situated is its 'international' custom, by which I mean its clients who were located outside of Britain and its dominions. The majority of this custom was from German map-publishers – including Herr Dietrich Reimer and Justus Perthes – and from publishers and missionary societies in North America.²⁴⁶ The dominance of religious clients reflects six orders by American missionary movements between 1884 and 1911 totalling 145,000 copies. This

²⁴⁴ Lester, 2006.

²⁴⁵ The true quantity is probably larger as maps were redistributed by British factions of the society.

²⁴⁶ For more on the Bartholomews' German collaboration, see Scully, 2010.

category also represents an eclectic group of clients across the globe – ranging from a one-off order for Cairo Library (1902), to two transactions with the American Department of Migration in Washington (1908), to six orders for the Istituto Geografico De Agostini in Rome (1908–1910). International publishers’ and booksellers’ orders were characterised by the repeat custom of select institutions throughout the period.

Whilst there are significant limitations on what these production ledgers can tell us of the firm’s clients, this section has exposed the Bartholomews’ position spanning multifaceted cartographic ‘trajectories’ across the globe, and including highly influential institutions. The significance of this position, and more of the reasons for the diversity of the firm’s cartography, is discussed in the next section.

The Bartholomews’ production ledgers also afford new insight into what sorts of maps the firm was producing and thematic shifts in its output. A degree of caution must be taken, however, when analysing the genre categories in Table 5.4. The genres of a tenth of the firm’s orders could not be traced.²⁴⁷ Maps were categorised according to the principal component of their title/ description: supplementary information and insets were omitted to streamline categories. Statistics cannot account for map-users or map-use which may differ from that intended or implied: ‘tourist’ maps range from those produced with H. Gaze and Sons (above) advertising new Nile steamer routes for sightseers, to the firm’s survey map of South Africa issued during the Second Boer War which was inexplicably titled ‘Tourist’ map (Table 5.2). This section nevertheless offers new insight into the firm’s experience both in its own right, and in comparison to Stone’s assertion of an abrupt shift from ‘imperial’ to ‘colonial’ cartography following the Berlin West Africa Conference in 1884–5 and Heffernan’s chronology for British newspaper mapping of Africa.²⁴⁸

²⁴⁷ Genre statistics were produced by cross-referencing map descriptions and titles listed in the firm’s Day Books with the maps available for viewing in the firm’s Printing Records. For 86 orders the firm’s references were too vague to determine its type, and maps could not be located in the firm’s Printing Records. The proportions of unknown maps vary annually but were sufficiently consistent across the era that this error margin should not detrimentally affect the conclusions drawn.

²⁴⁸ Stone, 1995; Heffernan, 2009.

Table 5.4. Genres of the Bartholomew firm's African cartography.²⁴⁹

Genre	Details	Total Copies	Total Orders
War/ Events	Entitled 'war', 'special' or pertaining to recent/ concurrent events.	507,963	685
Political	Entitled 'political' or as depicting possessions and boundaries	491,465	793
Missionary	Entitled 'missionary maps' or specifically depicting mission stations	381,932	518
Physical	Topographical and orographical maps and those depicting physical features such as hills, river systems. This includes the firm's Reduced Survey 'Tourist' maps	292,470	652
Exploration	Maps with a focus on depicting expeditions, explorers' findings, and route maps.	235,154	425
Unknown	Maps that did not have explicit titles, and could not be found in printing records/ available books.	196,475	86
Historical	Depicting any phenomenon (inc. battles and expeditions) more than 10 years ago.	178,178	20
Human/ Social	Depicting human/ social phenomena, most commonly race, population, religion	139,861	26
Resources/ Commerce	Maps with a focus on depicting commercial entities and resources	37,747	13
Communication/ Transport	Maps with a focus on depicting railways, shipping routes, telegraph lines, etc.	31,523	18
Tourist	Entitled 'Tourist'. This does not include the Reduced Survey 'Tourist' maps	29,354	38
'General'	Entitled 'General', without qualification of contents.	29,311	36
'Imperial'	Entitled 'Imperial'	28,102	12
Settlements	City plans (and Environs) and maps of settlements.	25,175	14
Other	Diagrams, obscure maps (e.g. progress in cartography, index maps)	25,170	25
Total		2,624,880	3,680

Table 5.4 displays the range of cartographic genre produced by the firm. The statistics reflect two different types of custom. The genres in the top half of the Table 5.4

²⁴⁹ The total numbers of copies and orders in this table exceed those produced by the firm (2,528,210 copies and 2,936 orders). This reflects the fact that maps with equal focus on several themes, and orders for several different genres of map, were counted multiple times. Whilst this must be accounted for, this approach was deemed more preferable than increasing the number of genres to include composite themes or forcing maps/ orders into one category.

were ordered extensively by a range of clients and, with the exception of missionary maps, in part reflect the issue of the firm's own publications of this type (Table 5.2). The bottom half of the table reflects small numbers of bespoke orders for specific clients.

A fifth of the firm's African output, and the largest of the themes identified, covered wars and events. This contrasts with Heffernan's finding that cartographic coverage of African conflicts in newspapers was "initially quite rare" and that even "episodes of imperial warfare in which British [...] troops were directly involved" had no additional impact on newspapers' cartographic content.²⁵⁰ The peaks evident in Figure 5.4 represent the Bartholomews' mapping of six main events: the First Boer War (December 1880 – March 1881); the Anglo–Egyptian War (June – September 1882); General Gordon's activities in Khartoum and the Nile Expedition to save him (February/September 1884 – March 1885); the Emin Pasha Relief Expedition (January 1887 – May 1890) and the Second Boer War (October 1899 – May 1902).

The firm's coverage followed an almost identical pattern for the first three events. They prepared 'Special' or 'War' maps within ten working days of the conflict arising and issued them for publication by other publishers/ booksellers. The majority of copies were sold within the first week of issue. Demand ceased almost immediately following the end of the conflict.²⁵¹ There was almost no demand for summary or retrospective cartography. The firm's 1890 map of Central/ Equatorial Africa "Showing the route of Mr. Stanley's Emin Pasha Relief Expedition" represents the firm's first attempt to issue its own publication covering an event/ conflict (Table 5.2). Unlike the other examples, the firm issued this publication after the event, to coincide with Stanley's triumphant return to Britain in May 1890 and his national lecture tour.²⁵²

²⁵⁰ Heffernan 2009, p. 275.

²⁵¹ The firm sold 19,687 copies of a "Transvaal War Map" between Jan. and Mar. 1881; 60,728 copies of a "War map" and "Special War Map" of Egypt between July and Sept. 1882; and 35,464 copies of a "Soudan War Map" and 11,471 copies of a map entitled "The Nile Expedition. Approaches to Khartoum" between Feb. 1884 and Mar. 1885.

²⁵² The expedition was also mapped for Dr. Felkin in the *SGM* (1886) and *Graphic* (1887).

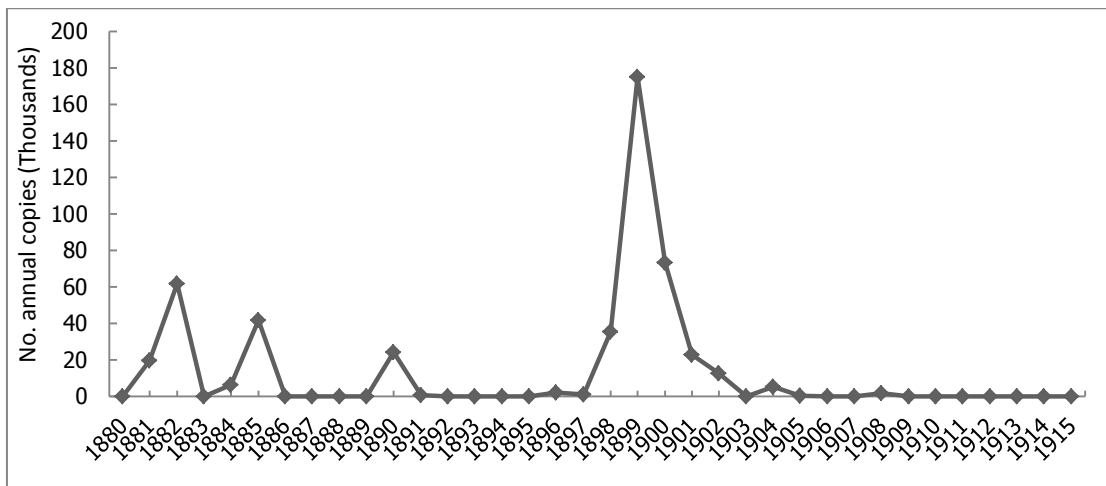


Figure 5.4. ‘War’ and ‘Events’ maps produced per annum by the Bartholomew firm, 1880–1915. Derived from NLS: Acc.10222/Business Record/297–305, 621–625 and 281–282.

The Bartholomews’ cartographic coverage of the Second Boer War (1899–1900) was significantly greater than the other conflicts (Figure 5.4). The climate of public interest was sufficient that the firm produced its own multi-edition “Special Map of South Africa” that sold 52,700 copies in the last four months of 1899 alone, although sales dropped to c.13,000 in 1900–1 and to 7,720 in 1902. The totals for this conflict also reflect large orders for maps for newspapers and books. The firm’s mapping of this war dominated its output of African cartography (Figure 5.1a). In addition to those maps entitled ‘War’ or ‘Special’, the firm also produced c.57,000 copies of its ‘Tourist’s’ and ‘political’ map of South Africa issued to coincide with the conflict. The secondary peak in 1904 was the result of the bespoke map produced for the WO summarising the events of the conflict. Much has been written about the government’s struggle to map adequately the region as the war unfolded: Heffernan discovered that newspapers struggled to produce maps of this conflict owing to its roving guerrilla nature. The Bartholomew firm, by contrast, appears to have flourished relative to its usual output.²⁵³ This is the focus of Chapter 6.

Cartographic coverage of other events, however, was notably lacking. The firm produced a “Special Map of Soudan” between 1896 and 1898 to coincide with the British

²⁵³ Liebenberg, 1997; Heffernan, 2009.

fighting with the Mahdi and the Fashoda Crisis, but its sales were low. The increase in 1898 almost entirely reflects orders for Steevens' book.²⁵⁴ Heffernan has detailed the interest amongst newspapers in the mapping of Africa during the First World War. By contrast, the Bartholomews' output of African cartography plummeted (Figure 5.1a). A note in the firm's Day Book in April 1915 informed R.C. Cleghorn "we have no special map of German S.W. Africa [...]. The demand for a special large scale map of the region is not sufficient so we are not issuing one".²⁵⁵

Both missionary maps and maps of physical phenomena (topography, orography, lakes, river systems, rainfall) were consistent features of the firm's output in this period with no significant change over time (Figure 5.5). Over 90% of missionary maps were ordered by missionary societies, individuals and churches (above). The remaining 9.3% were sold to publishers, principally the Edinburgh-based religious publishers Oliphant and Anderson. Quantities fluctuated year on year owing to churches' bulk-ordering, but the pattern is remarkably consistent at an average of 9,500 maps per year between 1881 and 1912. On average, 5,000 maps of physical features were produced per annum throughout this period. These were principally sold to the RSGS and in small quantities to a range of clients. This consistent output was punctuated by some very large orders used in books. From 1897, the firm issued 'Tourist' and 'Reduced Survey' publications, with a focus on topography and physical features, of South Africa and Egypt (Table 5.2). This contrasts with Stone's assertion that topographic overview maps were 'imperial' in character and decreased from the mid-1880s. Sales heightened during the Second Boer War but dwindled after the conflict. Only 18,106 copies of these 'physical' publications were sold between 1903 and 1915.

²⁵⁴ Steevens, 1898.

²⁵⁵ Heffernan, 1996, 2002 (RGS) and 2009 (newspapers). NLS: Acc.10222/Business Record/305. The reduction in mapping Africa also probably reflects the firm's finite resources – namely time, lithographic stones, machinery and paper given the paper rationing (Potter, 2007) – which were being channelled into mapping Europe. The firm's mapping of Europe increased from an average of c.90,000 maps per year between 1880 and 1910 to producing c.798,000 in 1914 alone.

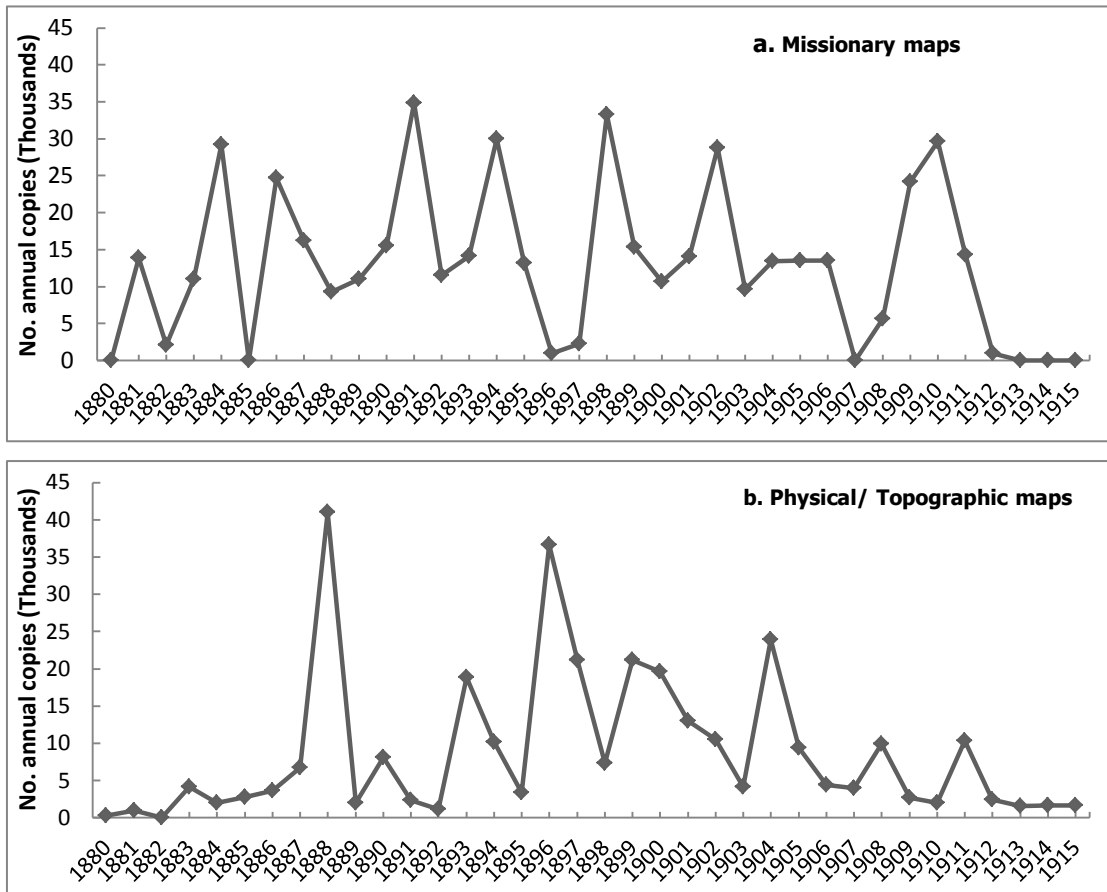


Figure 5.5. Missionary maps (Figure 5.5a) and Physical/ Topographic maps (Figure 5.5b) produced per annum by the Bartholomew firm. Derived from NLS: Acc.10222/Business Record/297–305, 621–625 and 281–282.

The firm's output of exploration/ route maps and of political maps underwent the most significant changes over time (Figure 5.6). The market for explorative and route maps was clearly highest during the 1880s and 1890s (Figure 5.6a). Nearly 97% of the Bartholomews' maps of this type – including their 1884 Central Africa publication depicting H.M. Stanley's work and numerous bespoke maps of authors' routes for books – were sold between 1883 and 1898. With the exception of the RSGS, who ordered maps depicting the routes of returning travellers delivering lectures and papers to the Society throughout the period (Table 5.5), the firm's production of these maps all but stopped in the twentieth century. This corroborates Stone's and Heffernan's findings of a shift away from explorative 'imperial adventure' mapping during this period. The change is less

abrupt than Stone’s proposal of a prompt shift in the mid-1880s, however, and occurred earlier than Heffernan’s findings for newspapers.²⁵⁶

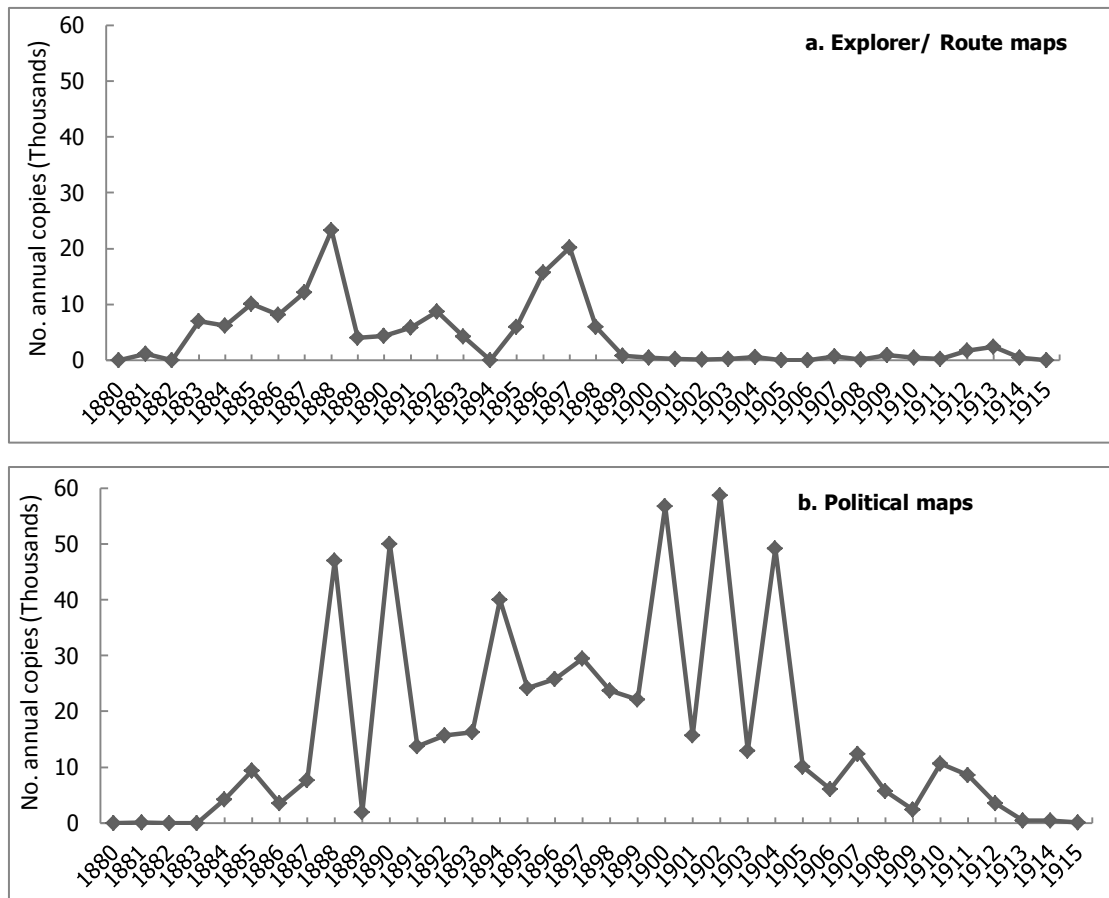


Figure 5.6. Explorer/ Route maps (Figure 5.6a) and Political maps (Figure 5.6b) produced per annum by the Bartholomew firm. Derived from NLS: Acc.10222/Business Record/297–305, 621–625 and 281–282.

Neither Stone nor Heffernan report that political cartography was a significant feature of the period. By contrast, the Bartholomew firm received more orders for political maps than any other genre (Table 5.4). The firm produced very few political maps during the 1880s. Their 1884 Central Africa publication depicted political boundaries to coincide with the “African Congress now sitting” in Berlin, but purchase of this was meagre compared to later publications.²⁵⁷ The peak in 1888 reflects 40,200 political maps for Drummond. The firm produced on average 28,000 more copies and

²⁵⁶ Stone, 1995; Heffernan, 2009.

²⁵⁷ *Glasgow Herald* (Review), 25/12/1884. NLS: Acc. 10222/Business Record/1881.

received c.69 more orders of political maps per annum in the 1890s than in the previous decade. The majority were for copies of the Bartholomews' three political publications – Africa, Equatorial/ Central and Central and South Africa (Table 5.2). The firm sold 50,271 copies of the first two titles in 1890. No single order exceeded 5,250: this peak represents mass-purchasing on a similar scale to the first four months of the Second Boer War. Africa's political state changed so frequently during the 1890s that each new edition of the firm's publications was met with a flurry of orders which sustained demand throughout the decade. The firm listed c.2.5 entries for new political publications per year between 1890 and 1899. Total copies were bolstered by some large orders – most notably 15,036 maps for the *Nineteenth Century Magazine* in 1884 – although the firm received very few large orders for political maps for books, perhaps because they would have become rapidly out of date.

By 1902, 90% of the African continent was under European control. Maps consequently needed less updating and the market for political maps could not be sustained. The Bartholomews only listed roughly one new entry for political publications every two years between 1901 and 1910. The peaks in 1900, 1902 and 1904 reflect large orders intended for use in books rather than the widespread uptake that characterised the previous decade. Between 1906 and 1915 the firm's output was characterised by the firm amending and selling what was already produced in small quantities and the occasional order for maps for books, the RSGS and the Statesman's Year Book. The firm issued a new political "Central and South Africa" publication in 1910 to mark and depict the Union of South Africa, but sales only reached c.4300 copies. A comment in the Day Book in July 1913 signalled the sale of the last 18 pre-printed copies of this map and noted that they would not be printing a new edition "for some time".²⁵⁸

The reduction in Bartholomews' mapping of 'imperial frontiers' from c.1900 corroborates Heffernan's findings for newspaper cartography. Unlike newspapers,

²⁵⁸ NLS: Acc.10222/Business Record/305.

however, the Bartholomew firm's output does not appear to have then shifted significantly towards maps emphasising Anglo-African commercial and logistical 'interconnections'.²⁵⁹ The firm's production of maps emphasising features such as communications, transport links, and distances increased between 1899 and 1902 but, akin to most of the categories in the bottom half of Table 5.4, this reflected individual orders rather than significant changes in output. A third of this category reflects two maps depicting railways, navigable waters, distances from the coast and telegraphs produced for the Statesman's Year Book in 1899.

It is difficult to identify chronological changes in the genres in the bottom half of Table 5.4 as these statistics generally reflect irregular and unconnected orders rather than large scale shifts in demand. Cumulatively, however, these categories suggest that the firm's output began to diversify from the mid-late 1890s (Figure 5.7), with the exception of mapping related to human and social phenomena, for which the firm received almost exactly seven orders per decade. The Bartholomews produced slave trade maps for James Stevenson and Henry Drummond in the 1880s and later years were dominated by orders for maps of African religions, populations, and even degrees of native 'backwardness' by Harry H. Johnston.²⁶⁰

More than 80% of the firm's mapping of cities/ settlements, resources/ commerce and communications occurred between 1895 and 1905. City maps were produced for ten orders by publishers/ the RSGS and covered Cairo, Alexandria, Khartoum, Pretoria, Johannesburg and Cape Town and an unspecified set of 'South African Cities'. Resource maps include: a plan of the Witwatersrand gold fields surveyed by E.H. Melvill (1895), a variety of maps of Cape Colony's livestock and crop resources for Robert Wallace's book (1896) and for the Cape of Good Hope Government's publication to aid new and intending settlers in the region (1902), and two maps of the Congo's commercial and vegetation products for the RSGS in 1905. These shifts arguably support Stone's thesis

²⁵⁹ Heffernan 2009, p. 208.

²⁶⁰ Johnston, 1897, 1898, 1902, 1913. Discussed in Chapter 7.

that mapping was shifting towards ‘colonial’ cartography, characterised by smaller-scale maps depicting the utility of regions and the logistics of exploiting them. The scale of these outputs was small relative to Stone’s analysis, however, and does not confirm any large-scale discursive shifts in the way people represented or conceived of Africa.²⁶¹

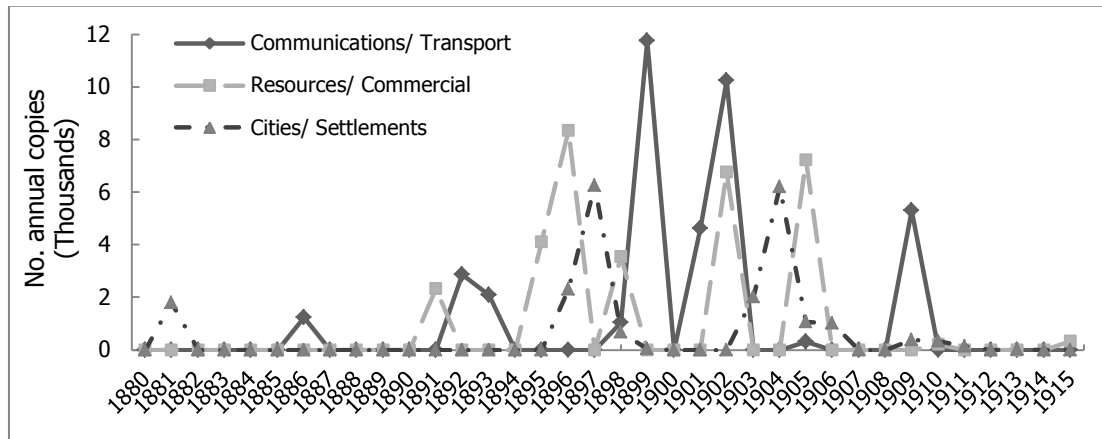


Figure 5.7. Communications/ Transport, Resources/ Commercial and Cities/ Settlements maps produced per annum by the Bartholomew firm, 1880–1915. Derived from NLS: Acc.10222/Business Record/297–305, 621–625 and 281–282.

Historical mapping, by contrast, underwent significant temporal change. With the exception of one order, all historical maps were produced after 1897. Almost 80,000 copies were produced for use in books, including six maps for Harry H. Johnston’s publications, Dr. Stewart’s *Dawn of the Dark Continent* and the histories of Stanley and Churchill in Africa. The majority of these maps looked back over a century of developments, most commonly juxtaposing historical maps with present-day political conditions such as Dr Stewart’s “Changes of a Century, 1803–1903”. A similar order comparing Africa in 1897 and 1837 was produced for the *Statesman’s Year Book* in 1897. Whilst not counted here, the firm also produced a *Literary and Historical Atlas of Africa and Australasia* with J.M. Dent in 1913. There was a palpable shift, albeit for select clients, towards an unprecedented market for retrospective cartography in the early twentieth century. This contrasts with Stone and Heffernan’s narratives, both of whom represent

²⁶¹ Stone, 1995.

British mapping as forward planning. Only one map listed in the Day Books, produced for Harry H. Johnston, explicitly looked to “Africa of the Future”.²⁶²

There are obvious limitations in the conclusions we can draw from studying only production records, and great care needs to be taken when interpreting this quantitative material given the ‘gaps’ in the data, but we may nevertheless offer some comments about the bigger picture from these statistics. The strongest conclusion to draw from this quantitative examination is the variability of the Bartholomew firm’s experience. Whilst this section has discussed some trends, the overriding characteristic of the data is its noise. The range of themes covered by the maps, and the lack of many clear thematic chronologies in part reflects the firm’s diverse clientele who had different ideas about Britain’s involvement in Africa and different things they required from the maps. This issue is examined in closer detail below but, even at the resolution of genres, the findings corroborate recent assertions by Edney and Driver that mapping during imperial eras was more variable than traditionally assumed. There was no archetypal Bartholomew ‘imperial map’: maps engaged with a range of themes including physical geography, social sciences, history and politics.

These genres are more diverse than those introduced by Stone and Heffernan and the Bartholomews’ output differs markedly from the government offices and newspaper on which their conclusions were based. The Bartholomews’ outputs of political and historical maps, and its coverage of wars and events, were greater than that identified by other scholars and there was neither an abrupt shift in the mid-1880s towards ‘colonial’ mapping, nor a visible shift from *c.*1900 towards mapping ‘interconnections’. Even in those aspects where the firm’s experience corroborates elements of other scholars’ findings – such as the reduction in explorative mapping – the extent and timing of shifts differ. Perhaps most crucially, whereas both Heffernan and Stone found that the output of new genres of cartography emerging in the 1890s/ 1900s replaced, and even exceeded, that of earlier ‘imperial’ and ‘adventure’ mapping, for the

²⁶² Johnston, 1898, 1902, 1910a, 1910b; Stewart, 1905; Golding, 1906; Churchill, 1908; Johnston, 1913.

Bartholomew firm *all* genres of mapping fell out of demand in the 1910s and did not increase again in the period of study.

Epistolary and epimap sources: problematizing production and authorship

Like most studies of mapmakers, the focus of the previous section has been on the Bartholomew firm as a map-producer, examining its *output* of cartography. The firm did not, however, have its own surveyors in Africa: it required an *input* of secondary sources and networks of informants. For this reason, the Bartholomew firm may be conceived of not just as a site of production, but as part of numerous networks and centres of calculation which functioned as “clearing houses for what Latour calls ‘immutable mobiles’, those items of stored, catalogued information that made ‘knowledge at a distance’ possible”. In order to appreciate the Bartholomews’ experience and function, we need to examine how distributed knowledge and cartographic sources, garnered through multifaceted incoming ‘trajectories’, was amassed and reassembled by the firm, and according to whose concerns. The epistolary (correspondence) and epimap (advertising, papers, public interviews, etc.) sources in the Bartholomew Archive offer unprecedented insight into how the firm functioned.²⁶³

The Bartholomews’ principal cartographic sources, JGB informed a journalist in 1893, were “Government surveys” and the “transactions of different societies”. In 1890, JGB compiled a list for the SGM of Europe’s “best and most recent Government and private” maps of Africa. Of the 152 British maps, the list comprises 65 by the British Government and 52 from societies, including 47 from the RGS and three from the RSGS. Whilst JGB ostensibly positioned his firm in these networks of ‘knowledge-producing’ institutions, the Bartholomew Archive illustrates that, in reality, the firm’s source-base was more pragmatic than this ostensible reliance on only the “best” informants. Access to government maps was problematic as the majority were not sold for public purchase.

²⁶³ Heffernan 2000, p. 321; Lester, 2006; Livingstone, 2010. The sources do not disclose changes over time, however, owing to the incomplete nature of the correspondence series and the relatively small number of sources concentrated in the period 1886–1895.

The Bartholomews requested copies from various government departments, but it is unclear as to whether these were issued. Failing this, they relied on copies sent to “Geographical Societies’ rooms” and published Blue Books.²⁶⁴ The books of newspaper articles and maps collated and annotated by the firm, and a letter to J.M. Dent also reveal that the Bartholomews drew on material “in the daily papers” to supplement their up-to-date information.²⁶⁵ JGB’s 1890 list also included 35 maps from British publishers, never of these sources were declared in his 1893 press release. Remnants of the firm’s reference library also attest to their eclectic sources that range from a sheet-map of Africa from the German Journal *Petermann’s Geographische Mitteilungen* (1885), to Portuguese charts of the Zambezi Delta (1891), to a map of Egypt extracted from the *Encyclopaedia Biblica* (1901), to an Ordnance Survey map depicting Gold Coast Vegetation (1910).²⁶⁶ Thus, whilst Stone has characterised the cartography of this ‘early colonial’ era as increasingly parochial, shifting away from international cartographic cooperation, the Bartholomews’ eclectic reference material suggests otherwise. As JGB reported, the firm extensively used German cartography in the compilation of its maps and the firm’s relocation of Mount M’Fumbiro from British East Africa (according to Stanley) to the Congo State in 1892 reflected their sources from German cartographers.²⁶⁷

As well as published maps, the Bartholomews were also reliant on networks of informants and unpublished materials. The multiple ‘Africanists’ with whom the Bartholomews worked furnished the firm with new manuscript maps, first-hand findings and novel survey data. Harry H. Johnston was especially forthcoming with new information and observations: he ‘corrected’ the maps the firm offered him and gave them copies of his Government prints and RGS maps of British Central Africa and Uganda for the firm to use in the compilation of maps for his books on the same

²⁶⁴ Bartholomew, 1893; Bartholomew 1890a, p. 576.

²⁶⁵ J.M. Dent to JGB, 29 May 1913, NLS: Acc.10222/Business Record/941. For Newspaper clippings, see NLS: Acc.10222/Business Record/1894 and 1895.

²⁶⁶ NLS: Acc.10222/Reference Maps/10–12. This reference series is incomplete, however, and does not represent all maps used by the firm.

²⁶⁷ Stone, 1995; Bartholomew, 1893, 1902.

regions.²⁶⁸ The firm's relationship with the RSGS is again significant.²⁶⁹ In producing 56.3% of the RSGS' African cartography between 1885 and 1915, the firm was afforded exceptional access to the data of those individuals for whom the firm were commissioned to make maps. These included Henry Morton Stanley, Frederick Lugard, Daniel J. Rankin, Arthur Silva White, William B. Fripp and Lieut. Boyd Alexander (Table 5.5). Numerous missionary societies also corrected the Bartholomews' maps and offered additional information. The firm consequently served as a key 'node' through which unique African information was brought back to Britain and disseminated. As well as being used in the bespoke cartography for these clients, incoming material could be incorporated into the firm's own archive of information from which they produced maps for others. The firm's 1891 "Political Map of Africa" publication, for example, was updated from information acquired through collaboration with Arthur Silva White for an RSGS article in November 1890.²⁷⁰

The firm also relied on "correspondence with geographical specialists and members of geographical societies both in this country and abroad". The firm's correspondence includes JGB writing to the RGS and to a host of governmental offices requesting recent maps, statistics, clarification of boundaries and, occasionally, sending proofs with requests for amendments and additions.²⁷¹ Returns were patchy, but this correspondence represents a significant resource. The network of personal clients at the RGS and RSGS identified in the quantitative section served in part as the firm's reviewers: the small numbers of maps sent to these men were commonly accompanied by requests for their feedback and amendments. The firm's correspondence with clients is characterised by extensive exchanges of proofs, and requests for clarification of detail. A two-month 'cut' into the Bartholomews' correspondence serves to exemplify this point and the firm's position in a stream of incoming 'trajectories'. Between October and

²⁶⁸ Johnston, 1897, 1902. See Chapter 7.

²⁶⁹ For more on the RSGS' roots in African exploration, and the society's function as a forum through which a range of topics were addressed, see Bridges (1985) and Bell *et al.* (1995).

²⁷⁰ White, 1890.

²⁷¹ Bartholomew, 1893. See JGB to the Under Secretary of State, 2 May 1902, for an example of the firm sending proofs with requests for additions. NLS: Acc.10222/Business Record/837.

December 1901, the firm was: furnished with new population and rainfall statistics from the Department of Agriculture in Cape Colony; provided with new Government projections of Somaliland; furnished with feedback on a map proof and new data regarding the political boundaries of West Africa from Hugh Spence of the Encyclopaedia Britannia; informed of the new railways under construction in the same region by Mr John Halt; given corrected proofs of plans of Cairo and Constantinople from E.A. Reynolds-Ball; and sent additions and amendments for the firm's map of East Central Africa by the Secretary of the Universities' Mission to Central Africa.²⁷² Such information renders "troublesome the seemingly clear boundary between production and consumption".²⁷³ The firm's function was as much about *reproduction*, consumption and mobilisation of available material as simply production. For historians of the book and of science, the focus consequently becomes how the firm assembled these sources in ways that were specific to them, principally in relation to their concerns for credibility: "whose knowledge was considered valid and authoritative"?²⁷⁴

JGB defined one of his principal functions as "judg[ing] the trustworthiness of this material", and using his "[d]iscretion as to the comparative value of our various authorities". The process of cartographic reduction was inherently selective. "In the case of travellers' maps – of Africa, for example – authorities differ greatly [...]. The map of an untrained missionary, who has made a rapid journey across a country cannot be relied on to any great extent. Then, again, the work of certain travellers, who are known to be skilled observers, is never questioned. One must weigh the material, and then reduce it to shape." JGB was explicit in his 'weighing' of sources: "we use the Government surveys as far as available, and failing them the best materials we can get from the carefully prepared maps of specialists, down to travellers' sketch maps".²⁷⁵ This hierarchy pervaded the Bartholomews' work; declaring their publications as 'from the

²⁷² Lester, 2006. NLS: Acc.10222/Business Record/978.

²⁷³ Livingstone 2010, p. 5.

²⁷⁴ Johns, 1998; Eamon, 2006, cited in Livingstone 2010, p. 3.

²⁷⁵ These quotes are all from Bartholomew, 1893. His methodology was echoed by G.W. Bacon who declared that owing to the status afforded official cartography, when the Government produced a new map "all previous maps become obsolete". NLS: Acc.10222/Business Record/1886.

latest official surveys', and advertising their acquisition of 'contracts for Governments' bolstered the credibility, and apparently sales, of their maps.

The firm thus served as a centre of calculation "through which important information circulated, and where it was ultimately stored in a useful, recoverable form".²⁷⁶ In this, the Bartholomew firm functioned as something of an archive itself in addition to being part of the national 'imperial archive'. The Bartholomews used their incoming sources to keep up-to-date a stock of copper plates of African maps. These plates functioned as the base maps for the majority of the firm's cartography and as the master copies from which they could make new maps.²⁷⁷ The firm advertised this capacity in the 1890s, promoting their willingness "to supply copies from most of their very large collection of engravers' plates. These plates represent maps of all countries of the world on various scales, many special copies of these maps may thus be obtained without the original costs of drawing and engraving".²⁷⁸ Much of the firm's correspondence is characterised by the despatch of proofs and explanations of their extant maps available for amendments, additions and tailoring. Very few of the firm's maps were entirely 'new'. Whilst a generative system that extensively produced maps of Africa for its clients, the firm also needs to be read as controlling the production and appearance of certain types of cartographic statement through its filtering of information, aligned to concerns with credibility and authority.

The Bartholomew firm was not only a 'clearing house' where distributed sources were stored and re-structured. It was also a meeting house of multiple authorial 'voices'. This further problematizes conceiving of the firm as simply a map-producer. J.B. Harley proposed that maps reflect the intertwining of two 'voices' – the 'inner' mapmaker and the 'outer' patron.²⁷⁹ The epimap and epistolary sources in the Bartholomew Archive suggest that the firm was in dialogue with more numerous voices. JGB gives valuable

²⁷⁶ Heffernan 2000, p. 321.

²⁷⁷ Bartholomew, 1893; Bacon, 1897

²⁷⁸ NLS: Acc.10222/Business Record/1864.

²⁷⁹ Heffernan, 2000; Wood, 2002.

insight into his perspective as the firm's principal 'mapmaker' between 1888 and 1920. JGB's endeavour to assess the state of Europe's African cartographic archive in recognition of its value to "commercial enterprise", and his resultant conclusion that "the compilation of the map of Africa will be a task requiring the constant attention of the cartographer for a long time to come", suggest that he too pursued the possibility of 'total knowledge' of the British Empire and the role cartography could play in its realisation as maps represented the "epitomised record of our earth-knowledge". He promoted a role for his firm in this endeavour, listing two Bartholomew publications and three they had produced for the *SGM* in his list of the 'best' available maps.²⁸⁰

Britain's approach to fulfilling this archive however was, in JGB's opinion, fundamentally flawed. The British geographical community pursued "enterprise and adventure" at the expense of "facts and research". Its goals were "practical and commercial" designed for "practical colonisation", he lamented, rather than true "geographical science". He openly envied the more constructive German cartographic philosophy.²⁸¹ In his work with the RSGS, personal papers and interviews, JGB depicted his work as a corrective to British cartographic deficiencies and ignorance, particularly through 'flagship' and educational atlases.²⁸² As a commercial institution, however, the Bartholomews also had to produce what sold, and what was cost effective. When quoting the cost of work to clients, the firm typically offered several money-saving options (recommending the use of existing maps, reduced colour, etc). The colours, inclusions and exclusions in Bartholomew maps must be read against their cost-conscious nature as much as any overarching ideology. For the Bartholomews, mapping Africa – particularly in the fast-paced, competitive market that characterised the late nineteenth century – was as much about making money in light of the immediate

²⁸⁰ Bartholomew 1890a, p. 575–576; Bartholomew 1902, p. 34.

²⁸¹ Bartholomew 1902, p. 34–35.

²⁸² For more on JGB's role in promoting quality cartography, cartographic literacy and the discipline of geography, see Withers, 2001.

demands of the audience (real and perceived) and the competition from other mapmakers, as improving cartography or serving the British Empire.

For JGB, this meant not necessarily producing the 'best' cartography possible. For all of the Bartholomews' forward-thinking and JGB's desires to improve British cartography, the "higher class of maps" they sought to produce was "only appreciated by a select few". The 'voice' of the mass British public was heard loudly in the firm, shaping its output. JGB's strong views on the expectations of the British 'imperial archive' apparently quelled their progress and meant that, in JGB's eyes, to produce 'scientific' cartography was "to embark on a daring philanthropic enterprise".²⁸³ This voice acquired greater potency when allied to the firm's finances: "many of our best maps do not pay – they have cost thousands of pounds to produce, and they are no more in demand than the old ones at the same price".²⁸⁴ This was heightened during the late nineteenth and early twentieth centuries, when the need for prompt output to meet evanescent demand for African maps acutely outweighed the investment of time and effort by publishers to produce wholly up-to-date cartography.

The intended audience inevitably changed with client, but the quality of the cost-effective cartography the firm settled for producing owing to JGB's perspective of the British public came under fire when it was presented to more critical clientele. During the production of the 1:1 million map sheets, the IDWO informed JGB that they did not believe "[t]he best workmanship has been put into this sheet". This, coupled with the excessive time it took the firm to complete the sheets, caused the IDWO to revoke its offer of providing further work of this kind.²⁸⁵ Between 1903 and 1910, John Scott Keltie of the RGS informed the firm that its map of the Lake Chad region required updating, that the colouring was not sufficiently uniform, and advised them to "please be quite sure of your figures", since their map of Africa was "in several respects not up-to-date",

²⁸³ Bartholomew, 1893; Bartholomew 1902, p. 53, p. 35. Parallels may be drawn between this and Edney's work (1997) on the Great Trigonometrical Survey of India, wherein he argued that the dominant model of the 'imperial archive' determined which 'mode' of cartography was pursued.

²⁸⁴ Bartholomew, 1893

²⁸⁵ IDWO to JGB, 27 Dec. 901, NLS: Acc. 10222/Business Record/978.

and concluded that he had erroneously taken “for granted that you [the Bartholomews] would be in possession of the latest information”.²⁸⁶

The ‘voice’ of the audience was ‘heard’ both in JGB’s construction of it prior to mapping, and from actual feedback following publication. The Bartholomew Archive houses a series of ‘Review Books’ in which the firm, with the aid of press-cutting agencies, compiled volumes of newspaper reviews of both their work and rival publishers’.²⁸⁷ These compilations were one of the principal ways the voice of the ‘reader’ was heard. Whilst JGB may have seen topographic maps and detailed surveys as the “mother maps” of the cartography serving the British Empire and the pinnacle of the cartographic archive, contemporary reviews suggested that what actually sold was up-to-date political representations with “clearly defined colours”.²⁸⁸ The firm had to listen: “with few exceptions,” JGB lamented, “the demand determines the supply”.²⁸⁹

One of the most striking, and unanticipated, effects of the firm’s attention to reviews was that, from the 1890s, African politics became the most up-to-date feature of the Bartholomews’ entire archive of maps. This reflected the fact that the political changes in Africa were extensively publicised and were perceived to be expected by audiences. By contrast, the physical geography of the continent, and maps of Britain, did not have anything like the same demand. The firm consequently sold maps that were “inaccurate” in these senses as it did not affect sales.²⁹⁰

The final preeminent ‘voice’ is that of the Bartholomews’ patrons. The firm’s epistolary exchanges with its clients did not just collect information: they constituted a complex epistemic process that problematizes understanding the firm as the sole author

²⁸⁶ Keltie to JGB, respectively: 25 July 1903, 25 Aug. 1904, 8 Feb.1906, 24 Oct. 1910, 24 Oct. 1910. NLS: Acc. 10222/Business Record/951.

²⁸⁷ See NLS: Acc. 10222/Business Record/1881-1884 on the firm’s own work and Acc. 10222/Business Record/1885 and 1886 on other publishers’ work.

²⁸⁸ *Glasgow Herald*, 13/11/1890, NLS: Acc.10222/ Business Record/1881.Appreciation of the use of colour is evident in the majority of the firm’s reviews. A review in the *Manchester Guardian* on 15 Dec. 1904 similarly highlighted how the British public, was “unduly impressed by [...] brightly coloured maps.” NLS: Acc.10222/Business Record/1884).

²⁸⁹ Bartholomew 1890b, p. 295; Bartholomew 1902, p. 35.

²⁹⁰ Bartholomew, 1893.

of 'its' maps. The firm's authorial relations were client, and even transaction, specific. Some clients – particularly those who did not have any specialist knowledge such as British publishers, printers and newspapers – had minimal redactive authorial input beyond specifying size, content and available funds. The Bartholomew firm was left to produce something relevant within the parameters. At the other end of the spectrum, however, some clients – particularly Africanists, the Government and geographical societies – controlled the authorial process fastidiously. When the firm produced the 1:1 million maps of Somaliland with the IDWO, for example, Major Hills and other IDWO officials stipulated every detail from controlling the reduction to scale, to the level of contrast between red and blue colouring, to “very slight rearrangement[s]” in the position of place names.²⁹¹ These different authorial relationships, and their significance for maps' content need to be accounted for, rather than attributing content to simply the Bartholomew firm.²⁹²

Deconstructing the Bartholomews' 'political' maps

These issues of sourcing, credibility, intended audience, profit-margins and authorial relations were not only specific to the Bartholomew firm; they also differed depending on clientele, and even transaction. This variability, and the fact that such issues are manifest in the Bartholomew firm's maps, can be exemplified if we compare two of the firm's 'political' maps produced less than three weeks apart. The first map was produced at the request of Harry H. Johnston on 18 October 1890 to accompany his paper to the Liverpool Chamber of Commerce (Figure 5.8). The second map was produced on 6 November 1890 to accompany JGB's article on the state of European mapping of Africa published in the *SGM* (Figure 5.9).²⁹³ Johnston and the RSGS were significant clients for

²⁹¹ IDWO to JGB, Nov.–Dec., 1901. NLS: Acc.10222/Business Record/978.

²⁹² See also NLS: Acc. 10222/Business Record/749 for disputes with Arthur Silva White and Ernst Ravenstein regarding authorship and creative ownership of the British Empire Map.

²⁹³ Bartholomew, 1890a. This paper has been cited extensively in this paper. The dates of these maps are from the 'Day Books' and thus indicate when the 'finished' map was sent to the client.

the firm: they account, for 5.3% and 5.1% of the firm's total output of African cartography respectively.

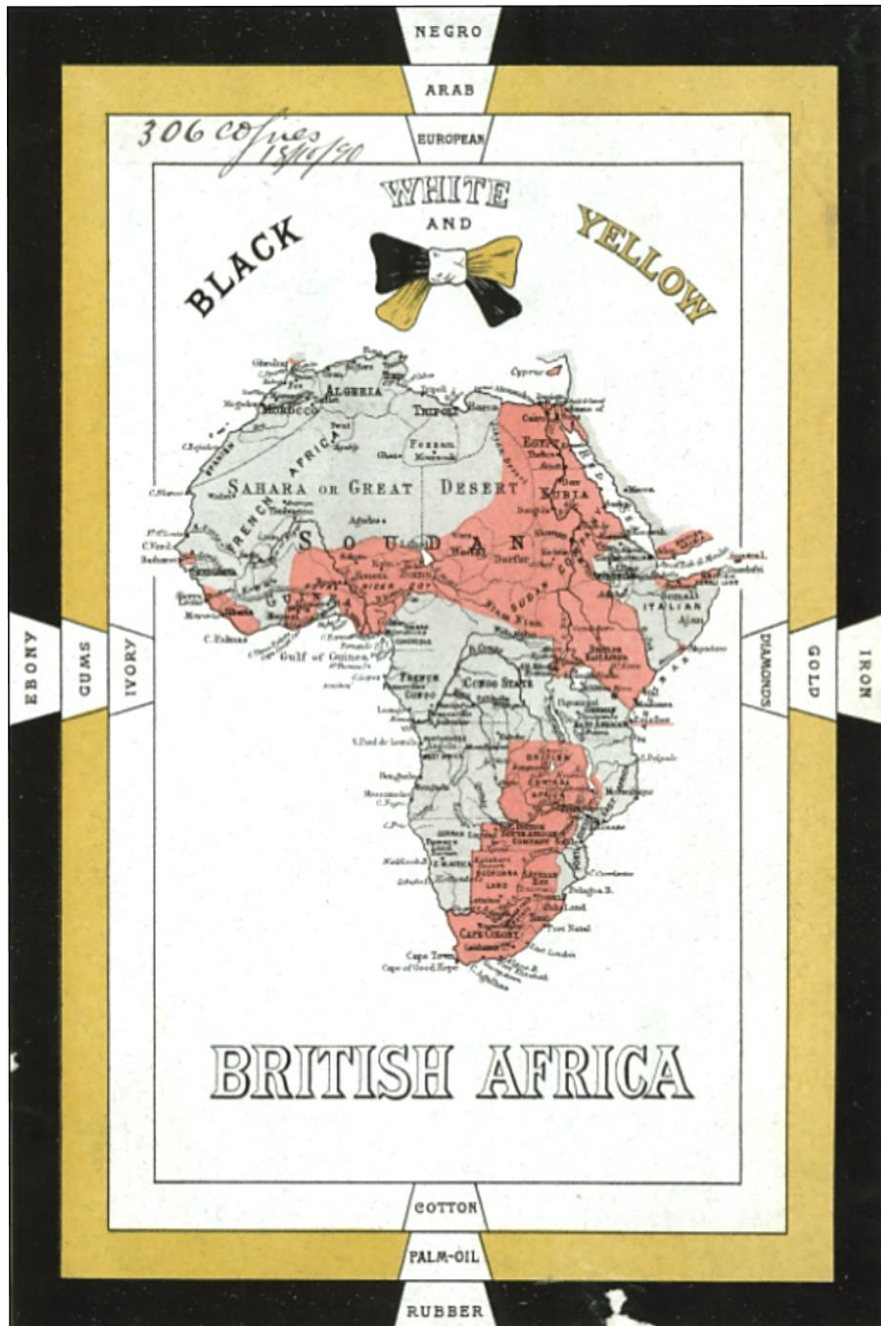


Figure 5.8. 'Black White and Yellow British Africa' for H.H. Johnston. NLS: Acc.10222/ Printing Record/14b, folio 162b. Reproduced by permission of the Trustees of the NLS.



Figure 5.9. 'Political Map of Africa'/ 'Mapping of Africa' for the *Scottish Geographical Magazine*, 6, p. 617. NLS: Acc.10222/Printing Record/14b, folio 164b. Reproduced by permission of the Trustees of the NLS.

One of the principal differences underpinning these maps was the level of authorial control retained by the Bartholomews. Figure 5.8 was the first of 34 maps Johnston produced with the firm and in each of his projects he sent JGB sketch maps and/ or strict instructions stipulating exactly how the map(s) were to be produced. By contrast, JGB was almost entirely in control of the production of Figure 5.9: the RSGS typically granted the firm permission to produce maps as it saw fit, pending approval of a proof map. The

maps consequently strongly reflect the different stances on the British Empire projected by these men.

Johnston was a staunch advocate of extending British territory in Africa at this point of his career: he participated in this endeavour as a consul to the British Foreign Office and as an agent to Cecil Rhodes during 1890. With its inflated image of what the British Empire *could* achieve should the Liverpool Chamber of Commerce invest in his schemes, Figure 5.8 was a rhetorical device engineered to support Johnston's case for the benefits of British expansion in Africa. The Black-White-Yellow cartouches were designed to symbolise the value of these races working 'together' in Africa to this end. JGB, by contrast, offered very little – at least publicly and in the archive – of his views on the British Empire. He typically only indicated support for the Empire when propounding the value of Geography as a tool of Empire, or in support of his arguments for greater investment in high-quality cartography. According to Johnston's map, Britain was a lone expansionist destined to attain a length of territories spanning the Cape to Cairo. This was presented as highly attainable given the lack of scale and competition. Those consulting the RSGS map, by contrast, encountered a patchwork of European territories across a vast continent and a pessimistic forecast of Britain's influence in Africa that was hindered by, and expressed in, the paucity of good cartography.

The maps also reflect different intended audiences, concerns with credibility, and budgets. For Johnston, his map did not need to impress his commercial audience in the quality of its cartography. It consequently does not have any of the details the Bartholomews typically used to make maps appear 'scientific': Figure 5.8 has no scale, no lines of longitude and latitude, no indication of surrounding oceans, and minimal geographical detail. Africa – floating in the middle of the map, with no indication of its location and with all islands omitted – is more emblematic than cartographic. This style probably also reflects Johnston's fiscal concerns as he was apparently bearing the cost of the mapping from his own pocket. Johnston could have requested more details; indeed the map used is a simplified version of a pre-existing print. The fact that the full version

would have cost Johnston roughly five times more – an unnecessary expenditure given the intended audience – and potentially detracted from his political message must have informed his decision. JGB's map for the RSGS, by contrast, was principally informed by his, and the society's, pursuit of 'scientific' cartography and the perceived demands of a map-savvy readership. Figure 5.9 consequently includes multiple mechanisms that promote its geographical quality and credibility, including: a scale, lines of longitude and latitude, indications of oceans, more detail of underlying geography and place names, and a map of the British Isles for scale. The RSGS also had a limited budget which probably explains why the map is a reproduction of the firm's extant publication issued that year (Table 5.3). This recycling enabled the RSGS to purchase the maps for only 3 pence (3d.) each.²⁹⁴

The Bartholomew firm and its clients thus created two very different images of Africa that gave different indications of British political possessions in Africa, differently represented the nature of Britain's involvement in Africa, and gave different impressions of the state and style of British mapping of Africa. In this, these maps exemplify how variable the 'Bartholomews'' mapping could be – even within the same genre – and that maps reflect a host of issues, of which serving the British Empire was only a part. Finally, this example illustrates the wide-ranging roles played by the Bartholomew firm: in the space of less than a month they had, albeit indirectly, informed RSGS readers of the state of European mapping by calling for improved cartography and aided in the investment of private monies into the establishment of British Central Africa.

Conclusions

This paper has provided the first sustained examination of how a commercial British map publisher engaged with mapping Africa between 1880 and 1915. The study of only one institution, and the limitations of the archive, impose obvious restrictions on the conclusions that can be drawn about the nature of 'popular' mapping and the role

²⁹⁴ The same map sold to trade at c.8 pence (8d.) and retailed at 1 shilling.

played by British commercial map publishers in this era. Even so, the Bartholomew Archive has been showcased as the best available repository on this topic and as providing a great deal of insight into the firm's work and experiences. The conclusions of this paper are three-fold and illustrate how the significance of the firm's mapping, the functions it served, and the factors influencing its output go beyond those which have traditionally been assumed.

The Bartholomews were much more than simply map-publishers producing cartography for the British public: the firm produced *c.*2.5 million copies of maps of Africa between 1880 and 1915 for clients across the world, ranging from the British War Office to a bookseller in Bulawayo. The Bartholomews' maps were probably seen by more people than the cartography of governments and academic institutions which have hitherto received much more scholarly attention. We cannot reasonably claim to know from this study how most of the firm's maps were redistributed and used, or whether they shaped British public opinion and the course of events in Africa. We do know, however, that the firm's roles included, amongst others: publishing maps for the British public, principally to aid their following of events and politics in Africa; compiling maps for geographical societies; producing maps to aid pre-eminent Africanists in the dissemination of their findings and opinions; providing cartographic products for missionary societies and churches; servicing the cartographic needs of chartered companies; supplying maps to the British War Office; and providing maps for colonial governments in South Africa. Whilst we may not be able to trace how these maps were actually used and by whom, it is clear that the Bartholomews' roles were manifold: fundamentally characterised by contributing information to the 'imperial archive' and providing knowledge that aided their clients' various endeavours.

To more fully understand the Bartholomew firm, however, is to understand it as much more than just a site of production. It was a complex centre/ locality/ archive that was both influenced by, and influential upon, distributed networks of clients and 'imperial trajectories' that constitute 'the imperial project'. Whilst dominated by clients

based in Britain (90.9% of maps) and booksellers/ publishers (59.6% of maps), the distributed networks of which the Bartholomew firm were part spanned the globe. These networks were highly influential on the firm's work – both in what they requested from the Bartholomews, and what they provided them with. The firm collated and authored material from a host of sources. Their client base made them well situated for accessing novel information, and part of their role was in assimilating and disseminating this new knowledge. This information was hierarchized and reassembled according to the challenges and 'voices' specific to the firm, and to its clients, before being reincorporated into these networks. This paper champions the need to understand the firm through these processes of input and redaction as much as output. The theoretical frameworks of centres of calculation and dynamic localities have worked well to illuminate the multifaceted ways in which the firm engaged with mapping Africa.

Finally, by investigating the complex nature of the firm's activity, we can begin to appreciate how its actions and output are much more than reflections of any generic imperial discourse. The firm's work corroborates recent scholarship examining how there was no all-pervasive British 'imperial' discourse during the late nineteenth and early twentieth centuries. On a quantitative level, the statistics highlight the multitude of 'ideological clusters' and issues with which cartography engaged. Mapping of politics and of events – arguably typical 'imperial' themes – dominated the firm's total output, but maps also engaged with social sciences, history and religion.²⁹⁵ Some trends were illuminated, but the dominant characteristic of the Bartholomew firm's experience was its multiplicity. Such variability was reinforced by the example illustrating the extent to which the firm created different 'political' images of Africa according to different stances on Britain's involvement in Africa and requirements for mapping. This example also introduces the second reason why the firm's mapping was much more than just 'imperial': their cartography was shaped by a host of factors. The epimap and epistolary sources indicate that the availability of source material, questions of credibility and

²⁹⁵ MacKenzie, 1984; Porter, 2006; Thompson, 2005; Edney, 2009a. See Chapter 3.

reputation, levels of authorial control, concerns for markets and profit margins, and consideration of both real and intended audiences – particularly JGB’s perception that the British public lacked any “critical appreciation of merit” – shaped the ways in which the Bartholomews, and their clients, constructed maps of Africa as much as, if not more than, any overarching ‘imperial’ ideology.²⁹⁶ These issues were specific to the firm, even to each map.

The Bartholomews’ cartography of Africa between 1880 and 1915 reflects this multitude of contexts, the firm’s varied roles, and its multifaceted functions. It has given rise to a Bartholomew ‘archive’ – both in the imperial and repository sense – that is more multifarious than has typically been assumed and warrants greater study in future analyses.

²⁹⁶ Bartholomew 1902, p. 53.

Table 5.5. Africa maps for the *Scottish Geographical Magazine* by the Bartholomew firm, 1885–1915.

Date	Name	Paper Author	Reference
1885	River Basins of Africa	H.M. Stanley	1, EOI I.
1885	Eastern Route to Central Africa	F.L. Maitland Moir	1, p. 112.
1885	Togo-land. German Protectorate on the Slave Coast	H. Zoller	1, p. 318.
1885	South Africa showing British Possessions July 1885	<i>Not Listed</i>	1, EOI VIII.
1885	Shire Highlands, showing routes to Mozambik Coast	H.E. O'Neill	1, p. 446.
1886	South Africa, Elevation and Rainfall	W. Tripp	2, EOI V.
1886	South Africa, Geology of Great Central Basin	H. Nipperday	2, EOI VIII.
1886	Proposed routes for Relief Expedition to Emin Bey	R.W. Felkin	2, EOI XII.
1887	Cyclone in Mozambique Channel	H.E. O'Neill	3, p. 242.
1887	Sketch Map of British Bechuanaland	J. Mackenzie	3, p. 314.
1887	Journey of Messrs. Brown and O'Donnel in Gaza Country	<i>Not Listed</i>	3, p. 588.
1888	Possessions and Claims in Central and Southern Africa	A. Silva White	4, p. 158.
1888	Country between Lake Nyassa and Tanganyika	E.G. Ravenstein	4, p. 420.
1888	Cameroons District	H.H. Johnston	4, p. 536.
1889	Lake Bangweolo	E.G. Ravenstein	5, p. 134.
1890	"Stevenson Road" Country	D. Kerr Cross	6, EOI VI.
1890	Political Sketch-Map of Equatorial Africa	<i>Not Listed</i>	6, EOI VII.
1890	Orographical Map, Equatorial Africa with Stanley's Route	H.M. Stanley	6, EOI VII.
1890	Political Map of Africa/ Mapping of Africa	J.G. Bartholomew	6, EOI XI.
1891	Comparative Value of African Lands (1891)	A. Silva White	7, EOI IV.
1891	Progress of African Cartography	E.G. Ravenstein	7, EOI VI.
1892	Distribution of Pygmy Tribes in Central and South Africa	H. Schlichter	8, EOI VII.
1892	British East Africa (Physical Map)	F.D. Lugard	8, p. 642.
1894	Algeria: Physical and Political	A. Silva White	10, p. 194
1896	Gold Coast Colony and Adjacent Territories	W. Scott Dalgleish	12, p. 20
1896	Hausaland	W. Scott Dalgleish	12, EOI I.
1896	South Africa, showing land surface features	G. Seymour Fort	12, EOI VI.
1897	Orographical Map of Southern Rhodesia	F.C. Selous	13, EOI X.
1899	Orographical Map of the Upper Nile Basin	<i>Not Listed</i>	15, EOI II.
1899	New Anglo-French boundary in the Sudan	W.A. Taylor	15, p. 259.
1901	Southern Central Africa	C. Lemaire	17, EOI X.
1903	British Somaliland, 1903	P. Geddes	19, p. 95.
1903	New Boundary between Abyssinia and Egyptian Sudan	<i>Not Listed</i>	19, p. 200.
1903	The Nile-Cairo to Khartoum	H.M. Cadell	19, p. 226.
1903	Plan of the New City of Khartoum	H.M. Cadell	19, p. 240.
1904	Changes of Frontier, Northern Nigeria	<i>Not Listed</i>	20, p. 262.
1905	Rhodesia	J. T. P. Heatley	21, End of Vol.
1905	Congo Free State, 4 maps: Orography, Vegetation, Political Divisions, Commercial Products	CH. Sarolea	21, End of Vol.
1905	Abyssinian Frontier Question	S.H.F. Capenny	21, p. 262.
1905	Anglo-Portuguese Boundary in Central Africa	S.H.F. Capenny	21, p. 441.
1907	The Niger Basin	H.H. Johnston	23, p. 66.
1907	Lieut. Elliot's Expedition in NW. Cape Colony	J.A.G. Elliot	23, p. 403.
1907	Sketch Map showing new frontier line, Liberia	<i>Not Listed</i>	23, p. 655.
1909	Boundary between Abyssinia and British East Africa	<i>Not Listed</i>	25, p. 148.
1909	Railway Construction in Nigeria	<i>Not Listed</i>	25, p. 354.
1910	Gold Coast and Ashanti	H.N. Thompson	26, p. 475.
1910	British Trans-African Railway	<i>Not Listed</i>	26, p. 635.
1911	Dr. Karl Kumm's Route (Hausaland to Egypt)	K.W. Kumm	27, p. 226.
1911	Franco-German Congo Agreement	<i>Not Listed</i>	27, p. 660.
1914	Distribution of Rainfall intensity in Africa	B.C. Wallis	30, p. 368.

Chapter Conclusions

In demonstrating the size of the Bartholomews' output of Africa cartography between 1880 and 1915, the firm's multitude of functions and position interwoven with other institutions, and the fact that its experience differs from other institutions' during this era, the above paper supports the notion developed in Chapter 3 that to study British cartography without examining commercial publishers such as the Bartholomew firm is to omit a significant feature of the historiography.

In the context of the thesis, this paper serves as a pilot study with respect to the application of insights from the history of the book and the history of science to cartographic institutions. My aim was not to test the extent to which mapmakers functioned as centres of calculation or dynamic localities, but to establish how the sorts of questions these theories raise can help better understand the complexities of cartography. The paper confirms the utility of these theories for garnering new insight into cartographic institutions as they foster examination of how map-making institutions worked to create maps rather than to see these sites simply as venues of map-production. The notion that cartographic institutions functioned like dynamic localities and centres of calculation – in the sense that they were complex and interwoven sites wherein information was amassed from a host of incoming trajectories, hierarchized, and reassembled to make possible new forms of knowledge specific to them – will be shown to hold also in chapters 6 and 7.

In recognising cartographic institutions as such, and in the light of findings on the Bartholomew firm's experience, this study raises other questions to consider and compare in subsequent papers: how the institutions differently sourced, hierarchized and reassembled cartographic material; whether they accounted for different real and intended audiences; the nature of their authorial relations; and, crucially, how these differences shaped the conduct and content of the firm's cartography. The example of the Bartholomew firm has also highlighted the significance of networks and the mobility of maps, both of which issues warrant greater study: how did other institutions work as

'meeting points' of different trajectories. How were maps used and reused across sites? How were materials differently changed in different places?

This study has raised methodological issues pertinent to the use of the archives of other institutions in this thesis. It highlights the utility of quantitative analyses that are under-used in the history of cartography. Whilst conclusions must be cautiously drawn from this material, particularly with regards to cause and effect, this study attests to the value of these records for examining the varying quantities of maps produced over time and across multiple variables. Using the Bartholomew Archive also demonstrates the utility of lesser-used epimap and epistolary sources. It is through them that we can explain more fully institutions' experience of mapping Africa, and understand the multitude of factors underpinning cartographic output and content.

Finally, this study helps situate the subjects of chapters 6 and 7 in more detail. It highlights quite how prominently mapping the Second Boer War stands out in relation to the Bartholomews' usual output (Figure 5.5); and it illustrates the significance of studying Johnston given the content and range of his cartography (Figure 5.8), his repeat custom, provision of reference materials from other institutions, and, not least, his intriguing authorial relationship with the firm.

6

Mapping the Second Boer War from Britain, 1899–1902

Introduction

This chapter examines the British mapping of arguably the most significant event – both politically and cartographically – of the period of study: the Second Boer War (1899–1902). The paper which forms the bulk of this chapter focuses on how British ‘official’ and ‘popular’ institutions contrasted in their representations of this event. This focus on representation in part reflects the interests of my own intended ‘audience’: *The Journal of Imperial and Commonwealth History*. The research trajectories of this journal connect with questions regarding the nature of imperialism and the complex ways in which it has been engaged with and represented.

The paper is also informed by, and designed to address, further findings from Chapter 5. It makes use of quantitative analyses to clarify and support findings of institutional difference and to engage with debates regarding the fluctuating levels of coverage of the conflict in Britain. Whilst not cited in this paper, the study is informed by those theories that conceive of institutions as complex interwoven sites. Particular attention is paid to the issues revealed as significant for the Bartholomew firm including redactive processes – such as editing, sourcing, pursuits of credibility and concern for intended audiences – and inter-institutional networks and interactions. Thus, in addition to the conclusions of the paper – which reflect on the variable nature and role of British mapping during the Second Boer War and link this study to broader debates about the nature of imperialism – I also offer chapter conclusions which consider what this paper reveals about the complexity and significance of the production, circulation and use of British maps of Africa during the late nineteenth and early twentieth centuries and connect the findings to theoretical debates in the history of cartography, the history of science, and book history.

Journal Paper: Mapping the Second Boer War from Britain, 1899–1902

Abstract

This paper examines the mapping of the Second Boer War (1899–1902) by institutions in Britain. It illustrates how the Intelligence Division of the War Office, the *Glasgow Herald* and *Graphic* newspapers, and the Bartholomew map-publishing firm differently represented the background conditions, battles and political boundaries of the war, and investigates how these differences reflect site-specific perspectives on the conflict, cartographic sources, processes of redaction, and intended uses/ audiences. The study concludes by reflecting upon the significance of the maps of the Second Boer War and the factors shaping their style and content. It also connects these findings to broader questions about the nature of imperialism and raises implications for future studies.

Introduction

The Second Boer War between the British Empire and Boer forces from the South African Republic (Transvaal) and the Orange Free State (OFS) began on 11 October 1899 following the exchange of ultimatums between the British Government and the President of the Transvaal, Paul Kruger. In September 1899, Britain demanded full voting rights for the large numbers of British expatriates ('Uitlanders') residing in the Transvaal. Kruger issued a retaliatory ultimatum in October giving the British Government 48 hours to withdraw their troops deployed to his borders otherwise he, together with Martinus Steyn's OFS, would declare war.²⁹⁷ The expiry of this ultimatum elicited Britain's longest, most expensive, bloodiest, and most humiliating war since 1815.²⁹⁸ The war ended on 31 May 1902 with the Treaty of Vereeniging which declared British sovereignty over both countries with the promise of eventual self-government.²⁹⁹ Whilst Britain acquired these territories, few interpretations deemed the conflict a British

²⁹⁷ On the multi-faceted origins of the conflict, see Pakenham (1979). More recent papers have examined why Britain let the hostilities descend into war: see Steele, 2000 and Surrridge, 2000.

²⁹⁸ Pakenham 1979, p. xv; Donaldson, 2008. The war cost over £200,000,000 and at least 22,000 British, 25,000 Boer and 12,000 African lives.

²⁹⁹ The Treaty of Vereeniging also stipulated that all Boer forces would surrender, all troops would be disarmed, and the British would provide a reconstruction pay-out of £3,000,000.

victory and popular support for British military activity in Africa plummeted from its peak in May 1900 to disenchantment and disgust by the end of the conflict.

This paper represents the first sustained examination of the mapping of the Second Boer War conducted in Britain, rather than in South Africa. My aims are two-fold. The first is to provide novel insight into how the war was differently mapped by the IDWO, *Glasgow Herald Graphic* newspapers, and the Bartholomew map-publishing firm. The second is to examine how the maps came to be the way they are by exploring the institution-specific processes and concerns shaping cartography. The paper is presented in four main parts. The first analyses the institutions' quantitative outputs. Subsequent sections examine how and why the institutions differently represented three phenomena: events, terrain, and politics. Specific attention is paid to how institution-specific perspectives on the conflict, cartographic sources, processes of redaction, pursuits of credibility, and intended uses/ audiences were differently manifest in the maps. I conclude by reflecting upon the significance of the maps of the Second Boer War and the factors shaping their style and content, connecting this study to broader questions of the nature of imperialism, and raising implications for future studies.

The four organisations studied were selected in order to afford insight into a range of British institutions' cartographic engagement with the conflict. The IDWO was one of the main mapping factions of the British Government.³⁰⁰ Section F of the Division was run by two superior staff officers (both Royal Engineers) assisted by a map curator and assistant, clerks, draughtsmen, and printers. Its role was to "take cognizance of the maps of all countries, the United Kingdom alone excepted". There was "no obligation on the department to make surveys. It deals mainly with those provided by others" which it corrected, 'improved' and printed before issuing to the army and governmental offices.³⁰¹ My focus here is on the department's series of maps with the prefix 'IDWO'. This series,

³⁰⁰ Other British mapping factions were the Ordnance Survey and the Admiralty, but it was the IDWO which was principally tasked with overseas mapping and bore the brunt of the *Royal Commission's* investigation into the Government's cartographic failings in 1903.

³⁰¹ Notes from Sir John Ardagh's Private papers. TNA: PRO 30/40/16. There was much debate about whether the IDWO was responsible for surveying in the *Royal Commission*. See Chapter 3.

commenced in 1881, has been almost wholly overlooked but it was one of the British Government's most important cartographic repositories of overseas mapping and offers unique insight into how the British War Office chose to document the conflict cartographically.³⁰² This paper also engages with 'popular' cartographic narratives of the war in light of extant literature on its consumption by the British public (below).

The Bartholomew firm affords unparalleled insight into British commercial publishing at the turn of the twentieth century and previous analyses have highlighted the Second Boer War as having been extensively mapped by the firm.³⁰³ The *Glasgow Herald* (a daily newspaper) and *Graphic* (a weekly illustrated journal) are used to examine British journalistic mapping given the conflict's reputation as the "world's first 'media war'".³⁰⁴ The two newspapers selected were well-established and together incorporate the two main types of publication in circulation during the war: daily newspapers and illustrated weekly journals.³⁰⁵ The *Glasgow Herald* was selected as it was one of the Bartholomew firm's largest clients (Chapter 5). The *Graphic* was chosen owing to extant literature which stresses this publication's significant engagement with the conflict and offers supporting material to aid interpretation of its cartography.³⁰⁶

Two main bodies of literature inform this investigation. The first is a suite of conference papers for the *International Cartographic Association*. Analyses of Britain's mapping of the Second Boer War have traditionally been dominated by investigations into why the Government failed to adequately map the seat of the war and the fact that available maps were "with perhaps one exception, very incomplete and unreliable".³⁰⁷

³⁰² Jewitt, 1992. Jewitt lists the first 2000 maps in the IDWO series (1881–1905).

³⁰³ Fleet and Withers, 2010. See Prior (2012), and Chapter 5, on the Bartholomews' Africa mapping.

³⁰⁴ Gooch 2000, p. xix. This comment is made "in respect of both the volume and the variety of image-making which was undertaken in and about it and then supplied to a large and demanding public". Morgan (2002) makes a similar argument, linked to the advent of mass literacy after the 1870 Forster Education Act and technical developments in telegraphy.

³⁰⁵ Morgan, 2002; Heffernan, 2009.

³⁰⁶ Harrington, 2000; Stearn, 2000.

³⁰⁷ *Royal Commission*, paragraph 261. See also Waters, 1904; Maurice, 1906; Liebenberg, 2003; Collier, 2006. The reasons for Britain's failure to provide adequate maps to troops include: cost, harsh terrain, Kruger and Steyn's refusal to allow British mapping of their territories prior to the war, and the unfeasible delegation to poorly funded cadastral-oriented survey departments in Africa.

Over the last decade, these conference papers have begun to analyse the British government's cartography of the conflict in spite of its quality.³⁰⁸ The IDWO produced a series of military sketches tied to the geodetic chain covering northern Natal, sourced principally from Major Grant's reconnaissance surveys of 1896 and designated IDWO 1223. From November 1898 the department also compiled all available data into maps of the Transvaal and OFS. The resultant 28-sheet black and white series was on a scale of 1:250,000 and referred to as IDWO 1367. The twelve sheets that had been printed by October 1899 were the main maps issued to troops at the outset of the conflict. During the war, Britain deployed two survey sections and three mapping sections to South Africa. They produced two types of cartography: topographic survey and compilation maps.³⁰⁹ The former were produced by survey sections, with the help of British army military surveyors (Royal Engineers) and local Surveyor-General offices. The majority, however, were only completed after the war.³¹⁰ Compilation maps were produced by Field Intelligence Departments as the quickest way to meet the acute demand for cartographic intelligence. They were compiled from an eclectic array of materials including local surveyors' plans, oral accounts of travellers, and cadastral farm surveys. These maps were of notoriously poor quality and fundamentally unsuited to military purposes but four compilation series were produced out of necessity.³¹¹ The conference contributions have shed new light on the understudied official/ governmental efforts in the field, particularly the variability in content and coverage. Non-governmental cartography, and those maps produced in Britain rather than in South Africa, remain overlooked, however.

³⁰⁸ Board, 2003, 2006; Liebenberg, 2003, 2007.

³⁰⁹ Liebenberg, 2003.

³¹⁰ IDWO 1223 (North Natal) was the only survey map available during the war. For more on the TSGS and GSGS survey maps produced after the war, see Liebenberg, 1997, 2003.

³¹¹ IDWO 1367 was the first compilation map. It was updated during the war and joined by a further three series compiled principally from farm surveys: the 'Imperial Map of South Africa' (1:250,000) by South African surveyors Wood and Ortlepp under contract to the WO, the Transvaal and Orange River Colony Degree Sheets (1:148,752), and Major Jackson's Transvaal and Natal Series (1:148,752). See Liebenberg (2007) for their characteristics, production and use.

The second literature is a much larger and interdisciplinary body of work on the consumption and representation of the war in Britain. Analyses of the British public's engagement with the war have shifted in the century following the conflict: from J.A. Hobson's contemporaneous proclamations of the public being swept up in a jingoistic fervour; to reinterpretations in the 1960s and 1970s which stressed that the Boer War caused irreparable damage to Britain's limited and fragile popular imperialism; to more recent analyses which have stressed the complexity and contingency of the public and other parties' "ravenous appetite" for information on the war and the plethora of representations associated.³¹² Most recently, Gooch's edited volume *The Boer War: Direction, Experience and Image* attested to the range of representations produced of the conflict including: war correspondents' reports, images by special artists despatched to the field, pictorial journalism, and advertising. Each of these outlets was associated with "certain images and groups of images [that] recurred until they became, arguably, the dominant, stereotypical images of the war". Cartography was absent from these narratives.³¹³ In his study of newspaper cartography between 1875 and 1925, Heffernan briefly summarised British journalistic mapping of the Second Boer War as "the occasional general location map" which reflected the fact that it "did not lend itself to clear or helpful cartography". The conflict was, nevertheless, one of the few cases of imperial warfare he found to be mapped by British newspapers.³¹⁴

This paper affords for the first time insight into the cartographic representations of the Second Boer War produced by four major cartographic outlets in Britain at the turn of the twentieth century. In doing so, it addresses the gaps in extant studies in both the history of cartography and histories of Empire that have hitherto overlooked the nature and role of the cartography produced in Britain of this conflict, and develops new cartographic narratives of the war that foreground the complex ways mapmakers in Britain constructed their own 'stereotypical' images of the conflict.

³¹² Hobson, 1902. On the fragility of support for Empire see Morris, 1979. On the contingency of popular imperialism, see: Price, 1972; MacKenzie, 1984; Donaldson, 2008. Gooch 2000, p. xix.

³¹³ Stearn 2000, p. 212. Badsey, 2000; Stearn, 2000; Harrington, 2000; Wilkinson, 2000 (respectively).

³¹⁴ Heffernan 2009, pp. 275–277.

Institutions' outputs: August 1899 – December 1902³¹⁵

The IDWO produced 57 different IDWO-numbered maps of the seat of war between August 1899 and December 1902. The majority were single sheets, either reproduced from maps sent to the department from officers in South Africa or compiled from this field intelligence data and other sources at the War Office or Ordnance Survey.³¹⁶ They are consequently highly diverse in coverage and quality, ranging from large scale field sketches (1:15,840) to overview maps (1:12,000,000). These maps were produced to be circulated around governmental departments in confidential reports, used for reference by multiple offices, and stored for future analyses. Only the IDWO 1367 series appears to have been issued to troops in the field, and only this series and two single sheet maps were sold to the public.³¹⁷

The Bartholomew firm produced 456,656 copies of maps of South Africa, spread across 437 orders. Over 99 per cent of this output reflects sales of 15 map titles.³¹⁸ The Bartholomews' output was characterised by re-use of four main base maps at scales of ~1:11,500,000, 1:5,600,000, 1:2,500,000 and ~1:800,000. The Bartholomews had three strands of output, differentiated in Figure 6.1a. A little over 40% of the firm's maps (193,890 copies) were produced for books on the conflict by Louis Creswicke, Christian de Wet and G.W. Steevens.³¹⁹ Nearly a third of the Bartholomews' maps were for

³¹⁵ The period under study includes two months prior to the war, and seven months following the conflict in order to include the institutions' pre-emptive and cessation mapping.

³¹⁶ This was determined using Jewitt's anthology (1992) and consulting maps at the BL and TNA. The 28 sheets of IDWO 1367 are only counted as one map so as not to skew proportions/ observations. Second editions are not counted. Eight of the maps could not be located. The observations in this paper pertain to the 48 maps (and a sample of IDWO 1367 sheets) consulted. See Appendix I for details.

³¹⁷ Some IDWO maps produced prior to Aug. 1899 were issued to troops – such as IDWO 1223 (above) – but the maps studied herein are neither in any of the private map collections of officials fighting in the war consulted, nor mentioned as being available to troops during the *Royal Commission Minutes of Evidence* (see Evans, 2002). Only IDWO 1367, IDWO 1449 and IDWO 1478 are priced and have a stamp listing the 'agents for the sale of maps'. These are discussed later.

³¹⁸ Only these 15 maps are available to study in the Printing Record of the firm's archive (Appendix II). Small orders for other titles (c.0.7% of the firm's output) are not included in these files.

³¹⁹ Nearly a quarter of the firm's output (110,210 copies) was for three maps for Creswicke's multi-volume *South African and the Transvaal War* (Jan. 1900 – Nov. 1902); over ten per cent (50,400

newspapers (148,450 copies), principally supplement maps for the *Glasgow Herald* and *The Strand Magazine*. The remaining quarter (114,316 copies) reflect general sales to a range of clients. Nearly 98 per cent of these were sales of the Bartholomews' own publications: the firm had two large fold-out 1:2,500,000 sheet maps of South Africa in circulation during the conflict: a 'Reduced Survey' and a 'War' map.³²⁰

The *Glasgow Herald* and *Graphic* newspapers produced 250 and 49 maps of the war, respectively. Both newspapers produced supplement maps: the *Graphic* published one with George Philip and Son on 21 October 1899 and the *Glasgow Herald* issued two with the Bartholomew firm on 30 September and 4 November 1899. The rest of the newspapers' maps accompanied textual reports and were a combination of black and white sketch maps (c.90 per cent in both papers), bird's-eye view maps (8 per cent in both papers) and 'special' full and half page maps by publishers (1.6 per cent of the *Herald's* output). Scales were rarely provided but were extremely variable.

Extant literature has aligned British media coverage of the Second Boer War to the three key phases of the conflict. The first stage, during the last four months of 1899, was characterised by pre-emptive Boer offensives into northern Natal and Cape Colony that repeatedly overwhelmed General Buller's limited and disorganised British forces. The second phase, encompassing most of 1900, saw a suite of successful British counter-offensives and relief missions led by Lord Roberts. It culminated in a premature declaration of British victory after they 'won' the republics' principal cities and officially annexed the OFS (as Orange River Colony) on 28 May and the Transvaal on 25 October 1900. These two stages are grouped together as the 'first year' of the conflict, characterised by extensive media coverage capitalising on the insatiable interest and ardent support for the conflict as optimistic forecasts of a swift/ easy British victory held

copies) were for the English translation of de Wet's *Three Years War* in Nov. 1902; and 33,280 copies (7.45 per cent) were for Steevens' *From Capetown to Ladysmith* (Feb.–Mar. 1900).

³²⁰ The Bartholomews' 'Reduced Survey' map was also known as a 'Tourists' map and the 'War' map was also referred to as their 'Special' map. The firm also had a map of 'Central and South Africa' in circulation, which sold 2,563 copies in this period. This title – and the firm's maps for school atlases and for the Cape of Good Hope Government – are not included in analyses.

sway.³²¹ The final stage of the conflict, from 1901, was a protracted guerrilla war. The Boers compromised British operational capacity by raiding army occupations, capturing supplies, and severing supply/ communication lines. British responses included ‘driving’ Boer commandoes into wire-mesh barricades, destroying their crops and homesteads, and relocating Boers and black Africans interned and displaced by these policies to concentration camps. Extant literature has stressed how this phase is associated with considerably less media coverage, reflecting the reduction in incoming material, the “diminution of interest” and a “war-weariness” amongst the public, and the difficulties of representing the barbed wire, blockhouses, and camps that typified this final stage.³²²

The cartographic chronologies of the outputs of the institutions studied broadly corroborate these trends. The Bartholomew firm experienced the greatest initial increase. Between September 1899 and March 1900, the company produced on average 46,146 maps of South Africa per month, 304 times the monthly average for the first six months of 1899. This output was influenced by large orders for books and newspapers (Figure 6.1a) but the firm also received on average 42 orders for South Africa maps per month, more than 30 times that of the first six months of 1899, suggesting that the markets were booming. Newspapers similarly suggest a British thirst for maps of the conflict. Both papers produced 30 times their average monthly output of maps of Africa between October 1899 and June 1900 relative to the first six months of 1899. The *Glasgow Herald* produced on average 24.8 maps per month and the *Graphic* produced on average 4.6 maps per month (Figure 6.1b–c). Their relative peaks were sustained three months longer than the Bartholomews’. Newspapers ordered pre-emptive supplement maps and the Bartholomews issued a ‘Special’ map of South Africa in September 1899, but output only really intensified from October. As G.W. Bacon reported, it was “not until the actual day of the declaration of war that maps are consulted” by the public.³²³

³²¹ Harrington, 2000; Stearn, 2000; Morgan, 2002.

³²² Stearn 2000, p. 213; Harrington, 2000; Heffernan, 2009.

³²³ Bacon, 1897.

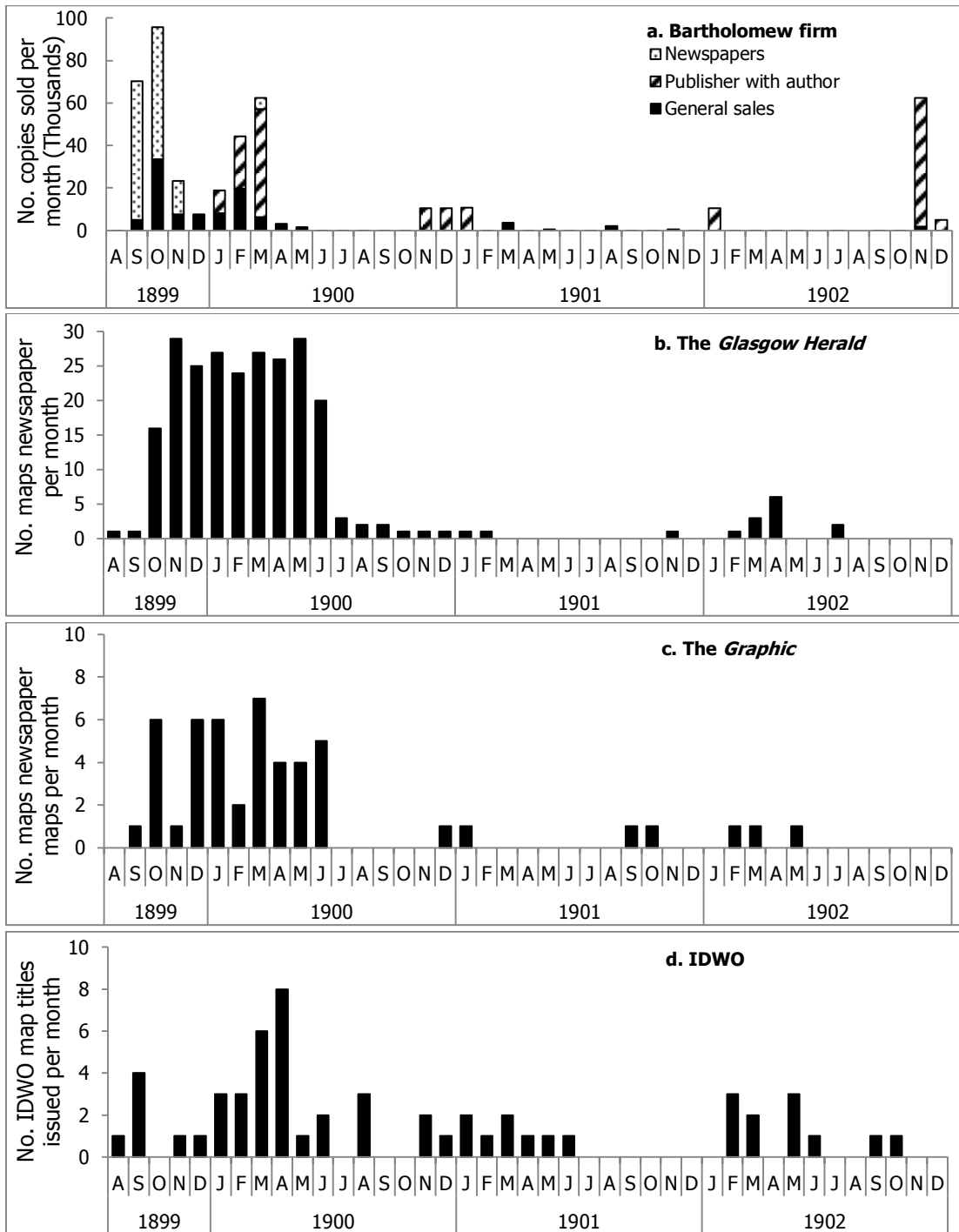


Figure 6.1. Monthly outputs of maps produced by the Bartholomew firm, *Glasgow Herald*, *Graphic* and IDWO. Figure 6.1a. Derived from: Bartholomew production records, NLS: Acc.10222/Business Record/281, 282, 302, 303, 623. Figures 6.1b. and 6.1c. Derived from: newspapers held in the BL digitised archive (1899–1900) and microfilms at the BL Colindale branch (1901–2). Figure 6.1d. Derived from: consultation of maps at the BL and TNA.³²⁴

³²⁴ The measure of output differs between institutions. The Bartholomew graph refers to the number of *copies sold*; the newspaper graphs refer to the number of different map titles published;

Unlike newspapers and commercial publishers, the IDWO's cartographic coverage did not reflect the demands of the public and publishers, but what was deemed necessary by the British government, and what was possible given the availability of sources. Output was heightened between January and June 1900 but this initial peak was far less acute and considerably later than the other institutions (Figure 6.1d). The IDWO had been pre-emptively acquiring and compiling maps since 1896, but their initial focus was on righting the dearth of maps in the field. They only began mapping in earnest from Britain after floods of despatches and maps reporting the calamities of the opening phase reached their offices.

'Popular' map-making institutions did not sustain the initial cartographic output throughout the second phase, unlike other media.³²⁵ The newspapers' and the Bartholomew firm's chronologies were characterised by rapid decline within the first half of 1900. Even the infamous peak in public support following the Relief of Mafeking (May 1900) is not visible in their cartographic output. Newspapers experienced the sharpest decline. The *Glasgow Herald* issued only 24 maps between July 1900 and the end of the war; the *Graphic* printed just seven, quantities they had previously produced per month. The Bartholomews' general sales dropped to an average of 489 per month after March 1900. In the opening months, the firm could not keep up with demand and turned away custom to prioritise producing its publications on the war. By March 1900, they faced "great competition" from other publishers and a diminution of popular interest. They informed clients that they were "anxious to clear our present stock" and incentivised bulk orders by offering heavily reduced prices and advertising space on the back of maps.³²⁶ Through small flurries of orders for new editions of publications, and the more resilient market for maps for books, the number of copies sold by the Bartholomews was still four times pre-war demand. The value of maps, however,

and the IDWO refers to the number of maps produced (as per the date on the map). Analyses must be mindful of this difference but each measure is the best way of representing changes relative to that institution.

³²⁵ Morgan, 2002; Harrington 2000.

³²⁶ JGB to John Walker & Co. 19 Mar. 1900. NLS: Acc.10222/Business Record/764.

decreased dramatically. The firm sold their 'Reduced Survey' for on average two shillings per map in the last four months of 1899. By the end of the war, they were selling for little over one shilling.

The IDWO's output was more stable. The government could not afford to tire of the conflict in the same manner as the public. Their output nevertheless diminished from nearly three maps per month in the first 11 months of the conflict, to less than one map per month for the rest of the period. This may reflect the difficulty of mapping the final stage of the conflict for both field officers and the IDWO alike, and the fact that the latter had a set of maps in circulation by this point which reduced the need for more.

Cessation mapping was minimal across all institutions, although it may have occurred after 1902. The increase in IDWO mapping at the end of the conflict evident in Figure 6.1d reflects the surge of information received with the return of officers to Britain and pertains to previous events rather than summarising the war.³²⁷ Newspapers' coverage stopped abruptly with no summary mapping. Whilst there was some demand for books in late 1902, the Bartholomews did not issue a publication to coincide with the end of the conflict, the market was evidently deemed too poor. Bacon's review of 'When War Maps Boom' was confirmed: maps 'vanished' once the war was decided.³²⁸

Representing battles and incidents

The first two phases of the Second Boer War were characterised by extensive fighting between Boers and British forces. Gooch's book discussed how newspapers and advertisers reported battles in elaborate pictures which reflected the Victorian culture of melodrama as much as the true events.³²⁹ Maps were absent from these studies, yet the cartography of the *Glasgow Herald* and *Graphic* newspapers were dominated by events mapping: the *Glasgow Herald* contained 128 maps of battles and incidents (51.2% of its output) and *Graphic* contained 28 (57.1% of its output). Battles and incidents were also

³²⁷ The IDWO did not produce summary cartography until they issued a *History of the War* in 1906.

³²⁸ Bacon, 1897.

³²⁹ Badsey, 2000; Stearn, 2000.

the main foci of the mapping by the IDWO (22 maps, 38.6%). By contrast, none of the Bartholomew firm's maps was designed specifically to depict events.

Coverage of events by the newspapers and IDWO almost entirely pertained to fighting during the first nine months of the conflict (Figure 6.2). This reflects the shift in the phases of the conflict: the Battle of Diamond Hill (11–12 June 1900) was the last conventional battle of the war. Incidents and confrontations continued during the third phase, including Boer raids and British 'drives', but they received little coverage. Interest had waned and field staff, IDWO officials, war correspondents and newspaper editors alike struggled to map the guerrilla warfare that was so elusive, and differed so markedly from their conventional image of war.³³⁰

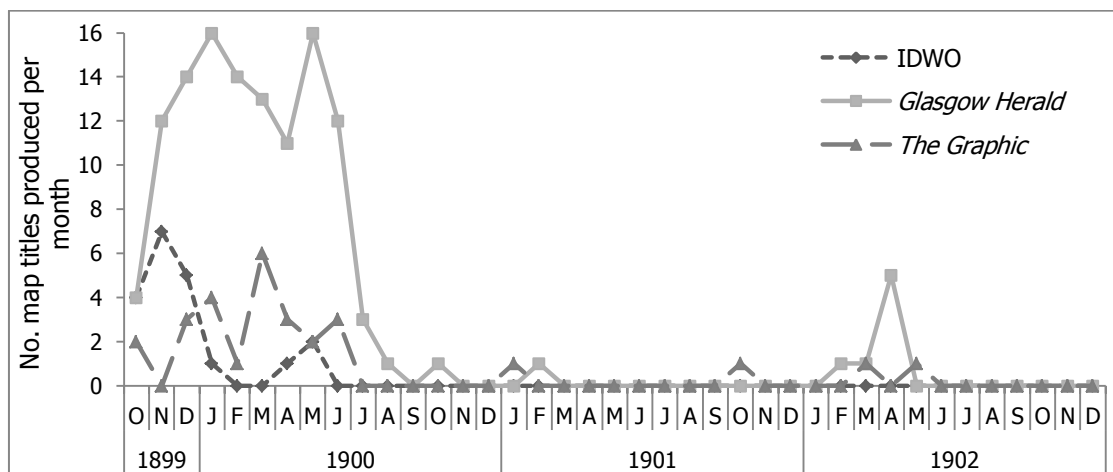


Figure 6.2. Monthly outputs of Second Boer War maps specifically depicting battles and events by the IDWO, Glasgow Herald and Graphic.³³¹

A comparison of the representation of the events at Colenso on 15 December 1899 illuminates how and why the same incident was depicted so differently by the institutions. Led by General Buller, the British launched an unsuccessful frontal attack on the Boers at Colenso with the intention of relieving the besieged town of Ladysmith. It marked the third British defeat of 'Black Week' and was one of the principal events for which inadequate cartography was blamed for British failings. Buller and his men were

³³⁰ Stearn, 2000; Heffernan, 2009.

³³¹ Figure 6.2 documents the dates of the events covered rather than the date they were produced. To adopt the latter skews interpretations owing to the lag times.

chiefly reliant on a hurriedly compiled plane-table sketch map made by Royal Engineers and Royal Field Artillery batteries prior to the conflict. Unverified and misleading, this map led to British forces being cornered by the Boers in a loop of the Tugela River as they attempted to cross drifts marked on the map that were in fact unfordable.³³² The British suffered heavy casualties and were forced to reverse from Colenso.

The War Office produced IDWO 1457, a 'Sketch Map of Engagement on the Tugela near Colenso on 15th December 1899', to report the battle (Figure 6.3). Like all the IDWO battle maps, it was a printed version of a 'despatch map' submitted to the department from officers in the field; in this case it was forwarded by General Buller to the Secretary of State on 17 December 1899. IDWO 1457 was produced in January 1900, over a month after the conflict. This was relatively prompt: the average lag time between an event and the issue of a corresponding IDWO map was four months. The style of IDWO 1457 is typical of such battle maps. It functioned to document, and in part justify, the events. It used white blocks to show British positions, with black letters depicting specific batteries/ brigades and hashed lines indicating their lines of advance. The 'Enemy' are depicted with black blocks and no movements. There is significantly more topographic detail in this map than most others of this genre: battle maps typically only used hachures around Boer factions to illustrate their commanding positions and to help justify British failings. The scale (1:54,000) is the median for this genre.

Like all other despatch maps, it was circulated between staff at the IDWO including the Permanent Under-Secretary, Secretary of State, DMI and Quarter-Master General. These men determined whether a map should be ignored/ filed away, printed internally or produced as an IDWO map. Studying the notes between these officials for ten of the maps suggests that the Tugela map was selected for reproduction as it was deemed sufficiently significant, useful, suitable and credible by these men.³³³ Many more maps were sent to the IDWO than were produced as IDWO maps: if they did not meet

³³² See Pakenham 1979, p. 208 and Evans, 2002 on the mapping of the Colenso region in the field, and its significance for the events that followed.

³³³ TNA: WO 105/5 and TNA: WO 32/ 7887.

these criteria and, in particular, if they contained anything “objectionable in style”, they were not reprinted. General Colville’s map detailing “Burnt Wagons” and “scores of decaying carcasses”, for example, was not even considered for reproduction.³³⁴

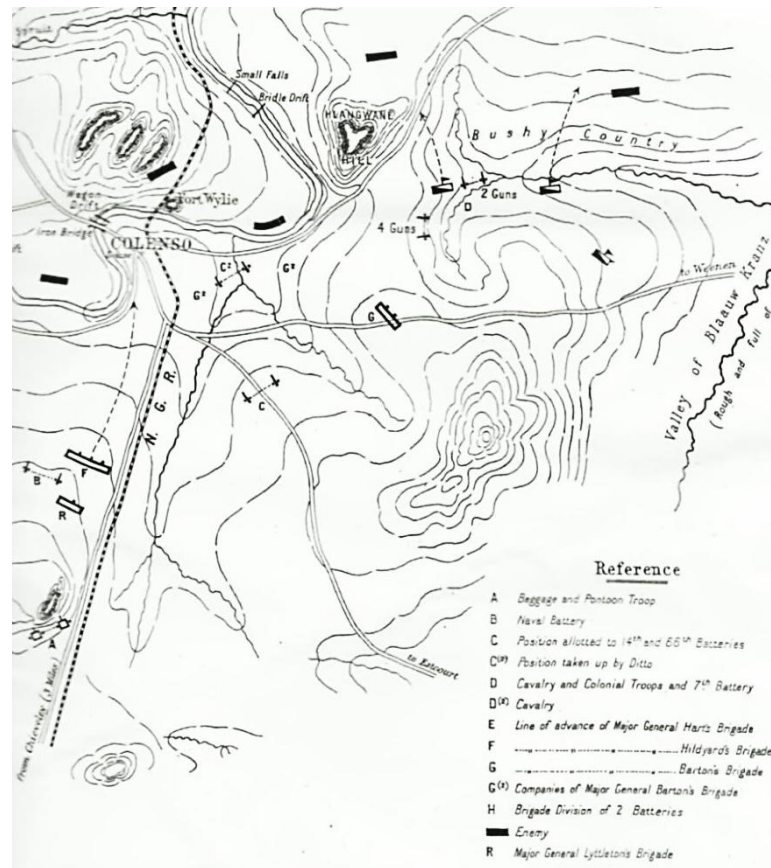


Figure 6.3. Extract from ‘Sketch Map of Engagement on the Tugela near Colenso on 15th December 1899’, IDWO 1457. BL: Maps.MOD.IDWO1457. Reproduced courtesy of the British Library Board.

It has not been possible to locate the original MS map submitted by Buller in order to examine whether any changes were made to the map in its conversion to an IDWO edition.³³⁵ The striking uniformity of battle maps suggests the department may have altered content to conform to their desired style. The IDWO was inconsistent in its editing. Ostensibly, the government claimed it did “not like the idea of publishing a

³³⁴ ‘Chief’ to Lord Roberts, 6 Feb. 1900. TNA: WO 105/5. Colville to IDWO, 3 Mar. 1900. TNA: WO 105/6.

³³⁵ None of the original MS cartography could be located during this study (Chapter 4).

despatch which is not what was originally sent in".³³⁶ Between them, however, governmental officials seemed to share the belief that "[t]here is no doubt something to be said for the policy of putting a good face on the matter" and textual accounts underwent extensive redaction.³³⁷ Of particular note is that IDWO 1457 was the only battle map to bear indication of its provenance: "From a plane table sketch by Cap.^t G.S. Elliot, R.E.". This lent the map credibility. The work of Royal Engineers was valued by the IDWO, and Elliot's methodology was "the usual way to produce a very credible sketch map". The accompanying textual reports, however, indicated that 'Elliot's' map was in part produced by other men and by 'filling in' a cadastral farm survey with the topographical features that could be seen from a distance.³³⁸ The fact that Elliot was named, and less credible techniques and authors were not declared, is significant: this would fundamentally have shaped how users analysed the maps and thus interpreted how it influenced events at Tugela. This probably reflects the IDWO's desire to present a positive image of the map in light of the role it had played in the conflict. The IDWO's mapping of events must thus be seen as a selective body of *versions* of despatch maps sent to the department by officers in the field.

Newspapers faced different issues when mapping the battle at Colenso and other events. Sourcing reliable information was problematic. They relied on 'despatches' released by the Government, principally published in *The London Gazette* (the official journal of the British Government) for much of their textual information. Like all battle maps, however, IDWO 1457 was neither printed for general sale, nor published in the *Gazette*. Newspapers thus turned to other sources, particularly war correspondents.³³⁹ The *Graphic* despatched its own reporters Charles Fripp and W.T. Maud. The *Glasgow*

³³⁶ Coleridge Grove to General White, 1 Aug. 1900. BL: MSS Eur F 108/64.

³³⁷ Salisbury (Prime Minister) to St. John Brodrick (Secretary of State for War), 12 Jan. 1901. TNA: PRO 30/67/7/ pp. 333–333b. For discussions of how to publish textual accounts of the events at Tugela, see TNA: WO 32/7945.

³³⁸ Evans 2002, p. 139, citing Captain Elton's contemporaneous account; Maurice 1906, p. 352.

³³⁹ On the work of newspaper correspondents, their role, the logistics of production and their relationship with editors and censors, see: Badsey, 2000 and Harrington, 2000.

Herald lacked its own correspondents but entered into an agreement with the *Daily Telegraph*, the *Daily News* and the *Daily Chronicle* wherein they could use “the whole of the dispatches sent to these London newspapers by their war correspondents”.³⁴⁰ The IDWO introduced strict press censorship on this material, however, chiefly for reporting events. The ‘general principles’ were that “[a]nything regarding movements of troops, important orders issued, state of transport and supply, indications regarding future events, and all matters likely to be of any use to the enemy, should invariably be stopped.”³⁴¹ The DMI would only allow war correspondents’ work to be forwarded “after the official despatches have been sent”: emphasis was on giving “the public accurate intelligence as to *past events*”.³⁴²

For daily newspapers under pressure to produce maps as soon as possible this was problematic. The *Glasgow Herald* produced a map entitled ‘Scene of General Buller’s Reverse’ (Figure 6.4). It was published just one day after the events at the Tugela. This was especially prompt: the average lag time between events and their mapping in the *Herald* was three days. Such rapid output was possible as the map was a reproduction of an existing image. The rush to produce a map is reflected in its appearance. It has no specific detail on the event, it merely functioned to show locations and to aid readers in imagining and following the fighting. This was typical of the *Glasgow Herald’s* coverage: neither birds-eye nor standard sketch maps titled events maps were any different from non-battle maps other than by appellation and accompanying text. This made them highly ‘recyclable’. Figure 6.4 was replicated a further seven times including twice more to show the Colenso Battle and three times to accompany reports on the siege and relief of Ladysmith.

³⁴⁰ The *Glasgow Herald*, 13 Oct. 1899. The telegrams of the Reuter’s Agency and the Press Association were also at their disposal.

³⁴¹ Cited from Henderson (DMI’s) *13 Rules for Guidance of Press Censors*. NAM: 9307–07–14–08. See Badsey (2000) for an in-depth examination of the implementation of censorship and effects on imagery.

³⁴² *General Rules for Correspondents*, NAM: 9307–07–14–39. Brodrick to F.B. Finlay, July 1901. TNA: PRO 3/67/8, p. 422. Emphasis added.

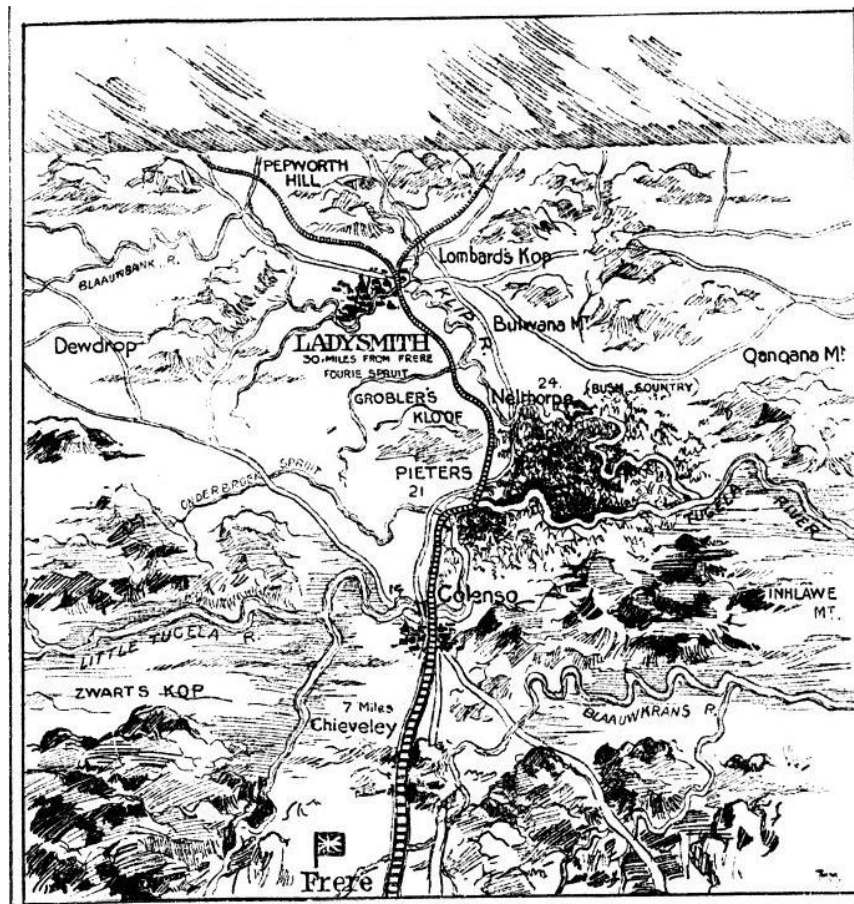


Figure 6.4. 'Scene of General Buller's Reverse', *Glasgow Herald*, 16 Dec. 1899. Online '19th Century British Library Newspapers Database'. Reproduced courtesy of the British Library Board.

The *Glasgow Herald's* coverage of events ultimately reflected their demand for cheap, rapid and disposable quotidian maps. The *Herald* did, however, seek to make the maps credible. Figure 6.4 was "carefully compiled from maps issued by the War Office" (likely IDWO 1367) and "from photographs".³⁴³ The compiler/ author, however, were not listed. Sourcing from IDWO maps and official despatches were the main sources of credibility for the *Glasgow Herald's* cartography. The paper pursued an interesting dualism: criticising the government's cartographic failings in text, yet celebrating and promoting the use of them as credible sources in the newspaper's own work.

The *Graphic's* experience of mapping battles differed markedly from the *Glasgow Herald* and its representations reflected this. The weekly *Graphic* had on average ten days

³⁴³ *Glasgow Herald*, 16 Dec. 1899.

to produce a map of the event (seven days longer than the daily *Herald*).³⁴⁴ A 'Map showing the attempted passage of the river by General Buller on December 15th' was published in the *Graphic* on 23 December 1899 (Figure 6.5). This delay gave the cartographers/ artists time to compile much more information on the conflict. The *Graphic* was characterised by an "unflinching support of the war" and this was manifest in the effort editors put into producing an array of cartographic material on events which bolstered support for the war.³⁴⁵

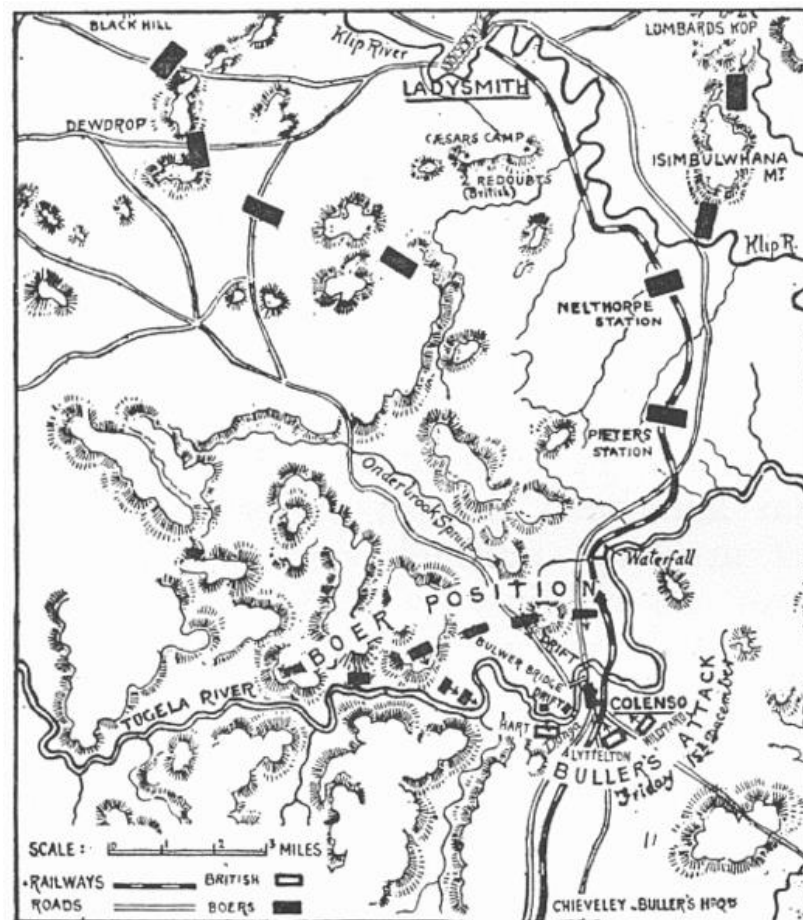


Figure 6.5. 'Map Showing the Attempted Passage of the River by General Buller on December 15th', *Graphic*, 23 Dec. 1899. Online '19th Century British Library Newspapers Database'. Reproduced courtesy of the British Library Board.

³⁴⁴ Only four of the events were mapping in the next edition of the *Graphic*. The majority were issued in the second publication after the event.

³⁴⁵ Harrington 2000, p. 241.

Like all battle maps in the *Graphic*, the map of Colenso was bespoke and depicted both troops and their movements. Over three quarters of the paper's battle maps (22 maps, 78.6%) were in the style of Figure 6.5, which used the same representational conventions as the IDWO map: British positions were depicted in white and Boer positions in black. The detail differed markedly, however, on the *Graphic* map. In addition to being at a smaller scale (1:200,000 against 1:54,000 of the IDWO) and with less topographic detail, the Boer forces were represented as much more numerous and organised. In IDWO 1457, 18 British brigades out-numbered seven 'Enemy' blocks. In the *Graphic*, Boers out-numbered the British by 17 to three; British naval batteries, cavalry, colonial troops and guns were omitted. The Boers were depicted as advancing on the British troops (small arrows), a cartography suggestive of a more aggressive Boer force than the static blocks of IDWO 1457. These differences were consistent across all comparable maps. It is difficult to determine the role of official censors, editors or war correspondents (who notoriously exaggerated the magnitude of adversaries' troops) in shaping their representations. An imposing and aggressive Boer presence was nevertheless typical of the *Graphic's* coverage. Bold Boers were more feared and incited support, in keeping with the paper's backing of the war.³⁴⁶

In contrast to the *Glasgow Herald*, the *Graphic's* sourcing was characterised by the rejection of Government-released material as "very sparse, conjectural, and in many cases contradictory, not to mention sensational and untrue." The most credible and desirable maps, in the eyes of the *Graphic's* editors, were those produced from field sources.³⁴⁷ The map of Colenso, however, was one of 13 of the *Graphic's* battle maps (59.1%) for which the sources and authors were not disclosed. In order to print them so quickly, it is likely that these maps were compiled in London from war correspondents' textual information.

³⁴⁶ This impression was given also in the *Graphic's* pictorial images: see Harrington 2000, p. 242.

³⁴⁷ Stated by Charles Lowe, author of the 'Chronicle of the War' feature, in which 28 maps (57.1%) of the *Graphic* cartography were published, 21 Oct., 1899.

The nine titles for which the *Graphic* did declare sources constitute an eclectic array of maps imported from the field, including troops' battle plans, birds-eye sketches from field intelligence officers, and two 'Boer Plans'. These maps were, not unsurprisingly, printed several weeks after events given the time it took for images to reach Britain from South Africa. The *Graphic* made eloquent use of maps that reflected their support for the war and the time and resources available to produce them. This made them very popular; the Colenso map (Figure 6.5) was one of four maps used in Creswicke's *South Africa and the Transvaal War* for which the Bartholomew firm also produced maps.

The battle at Colenso was represented on the Bartholomew firm's general reference maps with a tiny crossed-sword symbol next to Colenso. It was not depicted in the firm's 'Reduced Survey' map until the edition in March 1900.³⁴⁸ This was typical: their indication of events through small battle signs next to place-names was incomplete, sporadic and commonly only updated after significant lag times. This is unlikely to reflect sources; dates and rough locations of conflicts were some of the most readily available details in the newspapers and official despatches they used to garner information. The firm's style probably instead reflects the perceived role, longevity and audiences of their maps. Representation of battles was apparently not sought by the public: only four out of 80 reviews of war maps kept by the firm mention the depiction of battles, none of which called for improved battle representation.³⁴⁹ The firm mass-produced editions with several months between revision; focusing on events would have rendered their publications and maps for books too rapidly out of date. The Bartholomews' publications were ultimately smaller-scale reference maps, designed for

³⁴⁸ Colenso was left off the Jan. edition, although it was represented more promptly on the firm's 'Special' map of 29 Dec. 1899. The firm also gave equal emphasis in their maps to battles fought in the Anglo-Zulu War (1879) and the First Boer War (1881–1882). It is unclear whether this was purposeful to offer historic context or whether it reflects the re-use of previous versions.

³⁴⁹ The Bartholomew firm kept 'Review Books' of newspaper cuttings to inform their work. They kept 80 reviews of multiple publishers' maps of the Second Boer War including their own. NLS: Acc.10222/Business Record/1886 and 1887. Only one of the firm's clients, the Lea Brothers, forwarded a list of desired battles to the firm. Lea Brothers to Bartholomew & Co. Undated, 1901. NLS: Acc.10222/Business Record/977. This map is not extant in the Bartholomew Archive.

users to locate details and events “that have been mentioned in the telegrams” rather than to depict the battles themselves.³⁵⁰

Maps thus need to be seen as an important part of the visual apparatus used in Britain to document the events of the Second Boer War during the first nine months of the conflict. Their functions differed from textual accounts and pictures. Maps offered tangible and accessible images of events that words could not provide and they helped to *document* and situate incidents rather than simply *depicting* dramatized scenes like the ‘pictures’ in journals. It was thus through maps that Britons could interpret events and locate the action in South Africa. Victorian and Edwardian Britons – and we as modern commentators – access very different impressions and knowledge of these events, however, depending on which institutions’ maps are consulted. The maps are not as overtly ‘sensational’ as pictorial images but those outlets that engaged with mapping the conflict – namely the IDWO and the *Graphic* – must be seen as *constructing* compelling images of the events that served to support these organisations’ interests and reflected a range of concerns including cost, authorial credibility and institutional strategy rather than simply documenting the action.

Charting terrain

This section explores how the South African terrain was mapped in light of the extant literature stressing how maps issued to troops inaccurately represented this topography.³⁵¹ Information on the terrain in South Africa was mapped, to varying degrees, by all of the institutions studied: in 13 of the 15 different Bartholomew maps titles (86.7%), 32 IDWO maps (56.1%), 15 maps in the *Graphic* (30.6%) and 51 maps in the *Glasgow Herald* (20.4%). A comparison of their mapping of the terrain around Ladysmith, northern Natal illustrates how and why coverage differed both inter- and intra-institutionally.

³⁵⁰ *Newcastle Chronicle* (Review), 26 Oct. 1899. NLS: Acc.10222/Business Record/1886.

³⁵¹ Inadequate maps have been linked to British defeats at Tugela (above), Modder River, Stormberg and Magersfontein. See Maurice, 1906 and Liebenberg, 2003.

Figure 6.6a is an extract from the Bartholomews' 'Reduced Survey Map of South Africa'. The base map depicts topography with rough hill shading. This is characteristic of the firm's representation. The 'Reduced Survey' map was additionally 'coloured to show height of land'; it was the only Bartholomew map to use this layer colouring. At 1:2,500,000, this map was the largest scale for which the Bartholomews represented topographical information. The same base map was reproduced for four of the Bartholomews' titles (Appendix II). The decision to publish a map focused on topography reflected perceived demand. In the summer of 1899, the Bartholomews collated newspaper reviews denouncing other publishers' South Africa maps that had been issued with the "serious drawback" of no topographical information and thus "transformed [the region] into an almost unbroken plain".³⁵² The firm attempted to capitalise on this apparent gap in the market. The strategy was successful; they sold 25,267 copies of this map in the first six months of the war and c.40,000 copies in total.

The sources of this topographical information are unclear. Neither the base map nor the thematic shading were entirely 'new'. The base map was one of several scales of map the firm kept up-to-date on plates such that they could promptly be printed in the event of war. The thematic shading was revised from an earlier edition first issued in February 1898.³⁵³ The base map was the result of years of refining available material. Its content reflected the Bartholomews' hierarchy of credible sources based on the principal of "Government surveys as far as available". It was only if they could not access these, that the firm used "the best materials we can get from the carefully prepared maps of specialists, down to travellers' sketch maps".³⁵⁴ The firm's belief in the superiority of governmental cartography is also reflected in their attempts to assert the credibility of their cartography. The surveys from which Figure 6.6a was apparently reduced were undisclosed, but were repeatedly claimed to be 'official' or 'governmental', and the firm

³⁵² *Broad Arrow* (Review), 28 Oct. 1899; *Manchester Guardian* (Review), 9 Aug. 1899. NLS: Acc.10222/Business Record/1886. Reviews pertain to maps by E. Stanford, Bacon and Co. and the *Daily Mail*.

³⁵³ Bacon, 1897.

³⁵⁴ Bartholomew, 1893.

informed potential clients that it was recognised “by the War Office as the best map of South Africa published [*sic.*]”.³⁵⁵ Governmental sources and endorsements were the Bartholomews’ principal sources of credibility.

In reality, the Bartholomews’ enthusiasm for incorporating IDWO material into their maps was tempered by commercial concerns. The firm’s topographic information was imprecise, lacked spot heights, and was only included on small scale maps. Governmental material was available (principally IDWO 1367 and later IDWO 1449, discussed below) at larger scales, from which they could have revised their maps. The Bartholomews’ decision not to do so probably reflects their acute awareness of the transient markets for war maps. Maps were “bought up with sudden and astonishing eagerness” at the outset of the war, but were also “thrown on one side as soon as a big battle decides the issue of the public mind”. Commercial map publishers had to capitalise on this window of opportunity. Improving maps would have risked missing out on this market and losing sales owing to the “the great competition there is with these maps”.³⁵⁶ These fears were especially acute with the Second Boer War given the forecasts of a short and glorious war. By the time it became apparent that the war was not going to be over by the end of the nineteenth century, demand had dwindled and updating maps was evidently not deemed necessary, or cost-efficient. The Bartholomews’ topographic coverage thus reflects their cartographic archive of available material, hierarchy of credibility, and perceptions of audience demand.

Despite its flaws and omissions, the War Office map curator Alexander Knox ordered 9,536 copies of the Bartholomews’ ‘Reduced Survey’ map (almost a quarter of its sales).³⁵⁷ The fact that this publication was issued to troops as one of only c.25 “maps actually available for issue when the war was declared” is relatively well known.³⁵⁸ Less

³⁵⁵ JGB to Blaikie and Sons, 10 Feb. 1900. NLS: Acc.10222/Business Record/764, p. 845.

³⁵⁶ Bacon, 1897; JGB to John Walker & Co. 6 Nov. 1899. NLS: Acc.10222/Business Record/764, p. 627.

³⁵⁷ The firm sold them 8,395 copies of their ‘Reduced Survey’ map, and 1171 copies of their ‘Special’ map. Knox always requested the former, but in the first three months of the war, the desired quantities could not be printed in time.

³⁵⁸ Ardagh, TNA: PRO 30/40/16. It was the only map by commercial publishers on this list.

well known is that the IDWO continued to order copies of this map until January 1902 for use by the Colonial, Foreign and War offices in London. Notes between officials in Whitehall refer to the Bartholomews' map, and copies can be found in the private papers of Sir John Ardagh (DMI).³⁵⁹ It is unlikely that the IDWO used this map in the compilation of its own cartography, but it must be seen as a valuable and well-used resource for them.³⁶⁰

IDWO 1449, a 'Sketch Map of Country Round Ladysmith' (Figure 6.6b), is a prime example of the War Office's early mapping of the physical conditions in the field. Roughly a third of IDWO maps (20 maps, 35.1%) were of the 'country round' important locations or regional maps. They were either reproductions of 'despatch' maps (as for battle cartography above) or compilation maps produced in London. IDWO 1449 (Figure 6.6b) is an example of the latter. It was produced in December 1899 as a revision of IDWO 1308 – which had been compiled from an array of sources including existing maps such as those of Troye and Jeppe, the reports and sketches produced by officers deployed to undertake reconnaissance in South Africa before the war, local surveyors' plans, and oral accounts of travellers – and amended according to new material acquired from Field Intelligence Divisions since the outbreak of war and revised in January 1900 (Figure 6.6b). Like most of the maps in this genre, relief features were only "sketchily depicted by means of hachures" and it gave no spot heights. This reflects the eclectic array of sources on which it was based and the difficulty in unifying them into any trigonometric base.³⁶¹ The map was, nevertheless, derived from more information than the Bartholomews' map and was thus much more detailed and complete. At 1:126,720, the detail was roughly twenty times larger than on the Bartholomews' map.

³⁵⁹ See TNA: MPI 1/719/1 and TNA: PRO 30/40/16/5. There are also copies with MS additions in the Foreign Office libraries. See TNA: FO 925/1184 and TNA: FO 925/1185.

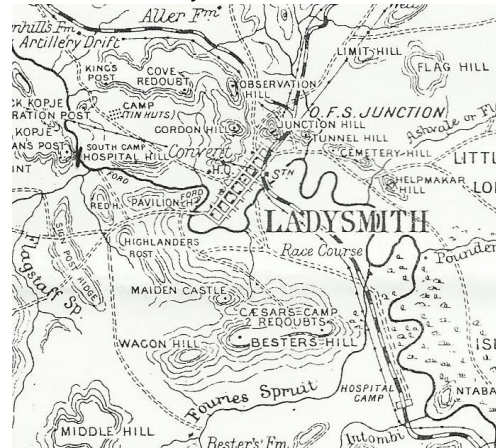
³⁶⁰ This fits into broader debate about the Government's use of maps that were fundamentally 'not fit for purpose' (Board, 2006). The Bartholomews' map was nearly ten times smaller in scale than the minimum scale favoured by the IDWO for such use (4 miles to 1 inch).

³⁶¹ Liebenberg, 2006, p. 7. Two thirds of the maps in this genre do not depict spot heights.

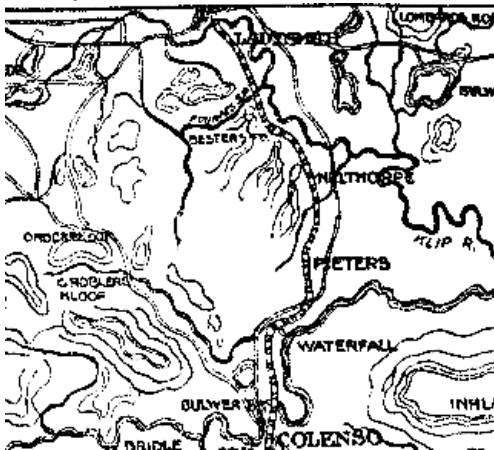
a. Bartholomew 'Reduced Survey' map



b. IDWO 1449 (Jan. sales edition)



c. 'Advance on Ladysmith', *Glasgow Herald* 19 Jan. 1900



d. 'Plan of Ladysmith', *Graphic*, 27 Jan. 1900

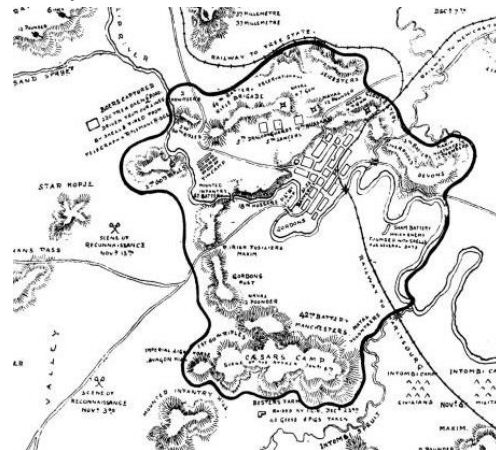


Figure 6.6. Extracts of the maps of the Ladysmith region by the Bartholomew firm, IDWO, *Glasgow Herald* and *Graphic*. Figure 6.6a. NLS: Acc.10222/PR/30b. Reproduced by permission of the trustees of the NLS. Figure 6.6b. BL: Maps.MOD.IDWO1457. Figure 6.6c. BL online database. Figure 6.6d. BL online database. Figures 6.6b–6.6d. Reproduced courtesy of the British Library Board.

The maps in this genre were recognised as fundamentally utilitarian documents by the IDWO and their content reflects this.³⁶² Field staff attempted to assert the integrity of their submissions to the IDWO by declaring their method (commonly pacing bearings with a plane table, or using a clinometer), and, later, by claiming corroboration with the major field series. Such information was not included in the IDWO maps, however, and the first nine numbers in this genre were termed 'sketch' maps, indicative of their

³⁶² Liebenberg, 2003.

quality. Maps produced from 1901 were markedly better as the Royal Engineers and survey sections deployed to South Africa began to submit superior material to the IDWO. Whilst similar in style to earlier maps, these titles were more thorough, at larger scales (typically 1:15,840), and depicted more spot heights/ contours. Their provenance lent the maps significant credibility in the eyes of the IDWO who began to disclose their origins and dropped 'sketch' from their titles. With this came the important caveat, however, that the DMI "takes no responsibility for its accuracy". The IDWO appears to have been resigned to the limited credibility of these maps.³⁶³ Whilst the maps reflect the IDWO's selection of sources according to a hierarchy of method/ author, their approach was summarised by Major Grant as compiling maps "as best we could": it was "either that or to have no maps at all".³⁶⁴

IDWO 1449 (January edition) was one of only two maps issued for public purchase. The second was IDWO 1478, a map of 'Pretoria and Surrounding Country', produced from a survey by Captain T. Bowyer-Bower, Royal Engineer. It is no coincidence that these two titles have superior topographic coverage compared to the other IDWO maps. Ardagh's papers contain multiple examples of newspaper articles criticising his department's performance and the IDWO were acutely aware of the bad press surrounding their cartography. Publishing these maps was a way to present a superior and reassuring impression of the state of the IDWO's cartography to the public.

These published maps also had a profound impact on newspapers' topographic coverage. The *Glasgow Herald* saved money and time by re-using maps derived from one main source. Prior to January 1900, the second supplement map produced by the Bartholomews was the 'mother map' of choice.³⁶⁵ At ~1:800,000 it contained no topographical information. The first 69 sketch maps in the *Glasgow Herald* consequently

³⁶³ IDWO 1558, 1559, 1564, 1598, 1621, 1623 and 1628 bear this assertion. The 'Imperial Map' series of South Africa and the Cape Colony was also notoriously emblazoned with a warning: 'This map is not to be considered as absolutely accurate' (Board 2003, p. 886).

³⁶⁴ Major Grant, *Royal Commission on the War in South Africa*, 'Minutes of Evidence', pp. 30–31.

³⁶⁵ This re-use was agreed by the Bartholomew firm, for the price of 'two guineas'. JGB to Messrs. George Outram, 20 Oct., 1899. NLS: Acc.10222/Business Record/764, p. 602.

did not depict any terrain. Figure 6.6c is an extract of the first sketch map representing topography in the *Glasgow Herald*. It was published on 19 January 1900 and “prepared from that [map] issued on Wednesday by the Intelligence Department”, i.e. IDWO 1449. The detail was reduced and modified; to show all detail given the small size of the maps and the coarse printing adopted by newspapers was not possible. IDWO 1449 nevertheless profoundly influenced the representation of topography in the *Glasgow Herald*. Despite widespread criticism of the IDWO’s mapping, it apparently lent the *Glasgow Herald*’s maps credibility. The resultant map (of which Figure 6.6c is part) was re-used 24 times, repeatedly celebrated as originating from a governmental map, and accounts for 80.6% of the *Herald*’s topographic coverage in sketch maps.³⁶⁶

The *Graphic*’s perspective on the relative merits of governmental and field material was again manifest in its representation of topography. By producing eight maps from war correspondents in the field, it depicted terrain far earlier than the *Glasgow Herald*, beginning on 28 October 1899. Unlike the IDWO, they did not hierarchize sources of field intelligence; the very fact it originated in South Africa was apparently sufficient to establish its credibility. Sources include an unnamed ‘British Officer’ and a member of the Royal Army Medical Corps; such sources would probably not have been deemed sufficiently credible by the IDWO. Figure 6.6d, a ‘Plan of Ladysmith’ was a “facsimile of a sketch by our special artist W.T. Maud”, produced on 7 April 1900. It exemplifies the *Graphic*’s representation of terrain: it was at a very large scale; topography and physical features were not its focus; and the information was sketchy, incomplete and derived from undisclosed sources and methods. Despite the *Graphic*’s ostensible rejection of governmental material, they too seem to have benefited from the availability of IDWO 1449. The *Graphic* produced seven maps with topographical information from undisclosed sources, six of which were of the Ladysmith region covered in IDWO 1449. The detail on these maps visibly improved as of 27

³⁶⁶ The other seven sketch maps depicting topography appear to be from the revised editions of IDWO 1367 when they became available.

January 1900, 10 days after the issue of IDWO 1449, and the shape, name and location of the principal features are extremely similar to the IDWO map.

Both newspapers also used bird's-eye view maps to depict topography. The *Glasgow Herald* used seven maps, reproduced as 20 different map titles, and four of which were derived from other newspapers as per their agreement (above).³⁶⁷ The *Graphic* published five different maps, all from field sources. These bird's-eye maps served a specific function: to provide viewers with powerful images of the harsh terrain British troops were encountering. They were frequently referred to in the textual accounts of both newspapers to justify either British failings or to laud British successes.

The capacity for maps to inform their users of South African terrain was one of their principal advantages over pictorial and textual representations yet the institutions studied herein struggled to make them do so. As well as the paucity of information, the maps of South African terrain printed in Britain were shaped by the different institutions' different concerns for credibility – particularly with respect to their views on the relative value of governmental and field intelligence – and the linkage of sources through the mutual sharing and reference of maps.

Mapping political possessions

Britain's decision to descend into war was ostensibly in retaliation to Kruger's telegram and in pursuit of enfranchisement for the growing number of British 'Uitlanders' in the Transvaal that the Boers had "starved of political rights". For those in Whitehall, and in the field, it was not a territorial war.³⁶⁸ The IDWO's cartographic coverage reflects this: none of their maps specifically represented political possessions.³⁶⁹ Both newspapers and

³⁶⁷ See Figure 6.4 for an example of this style.

³⁶⁸ Pakenham 1979, p. xxii; Steele, 2000; Surridge, 2000. These authors discuss the multi-faceted official perspectives on the war and its origins in reluctance, moral obligation, and concerns for British reputation. Territorial ambitions were only really spear-headed by Rhodes and Beit.

³⁶⁹ Territories were noted with text on those maps of sufficient scale, but they were not given emphasis or shaded as belonging to the British/ Boer. IDWO 1512 used red perimeter shading for boundaries, but it was used for all boundaries, regardless of the countries' political status.

the Bartholomew firm, by contrast, explored the territorial ramifications and possibilities of the war: possessions are depicted in 11 Bartholomew map titles (73.3%), 21 maps in the *Glasgow Herald* (8%) and 8 maps in the *Graphic* (14.3%).³⁷⁰

The Bartholomew firm's political focus reflects perceived demand as well as the cartography available. Nearly two-thirds of the reviews collated by the firm (53/80 cuttings) mentioned the issue of boundaries, territories and possessions. Reviews and book authors encouraged political reading of the conflict using these maps. The *Eastern Morning News* advised users they "would better understand the ferment in Natal if they studied her frontiers".³⁷¹ Conan Doyle argued that contemporaneous maps should show the republics lying "in the very centre of British possessions, like the stone in a peach".³⁷² The Bartholomews' cartography reflects a similar phenomenon to that identified by Harrington and by Stearn wherein editors and correspondents represented the conflict according to their own, and audiences', expectations of the war as much as its true character. After nearly two decades of mapping focused on the political shading associated with the 'Scramble for Africa', the Bartholomews' archive of available maps, perspective on British activity in Africa, and perception of audience demand was ultimately political. They consequently framed the conflict in the same manner.³⁷³ Their patrons and the public were seemingly in agreement. Steevens and Creswicke both ordered political maps and the Bartholomews sold c.21,000 more copies of their politically-oriented 'War' map to publishers and retailers than their 'Reduced Survey' version.³⁷⁴

The Bartholomews' political narrative consistently omitted the Boers. In the four maps for which they used multiple colours – such as in their 'Special' map – European

³⁷⁰ The focus is on those maps that indicate possessions by shading or demarcating political ownership as opposed to maps that show territorial borders.

³⁷¹ *Eastern Morning News* (Review) 27 Sept. 1899. NLS: Acc.10222/Business Record/1886.

³⁷² Conan Doyle 1900, p. 2.

³⁷³ Harrington, 2000; Stearn, 2000.

³⁷⁴ Only three of the maps for newspapers, and the map for de Wet (1902) did not include shading of possessions.

naming and shading were possessive: ‘Portuguese’, ‘British’, etc. The Transvaal and OFS, by contrast, were listed by their names and not as ‘Boer’ territories. They were thus available for the taking until they became British colonies. In six of the firm’s maps – including the Reduced Survey map and the maps for Creswicke’s books – the Bartholomews only shaded British possessions in red. This saved money, but also fostered an optimistic account of the boundaries. In these maps, the Bartholomews shaded the boundary between the OFS and Transvaal with British red, despite the fact that neither territory was then in British possession (Figure 6.7).³⁷⁵ The reasons for this shading are not stated but it appears to have been purposeful as the boundary did not require this shading aesthetically (black or grey would not have interfered with other details). This method was highly effective. For the reviewer at the *Sheffield Telegraph*, it “increases our regret that the poltroonery of politicians permitted the Transvaal, the pearl of South Africa, to pass out of our hands”.³⁷⁶ It also fostered an inevitability about the British occupation of these regions – encapsulated by Steevens in his statement that the map produced for him by the Bartholomews showed “the Transvaal and Orange Free State are all but lapped in the red of British territory”.³⁷⁷



Figure 6.7. The Bartholomew firm’s ‘Reduced Survey Map of South Africa’, dated 14 Feb. 1900. NLS: Acc.10222/PR/30b. Reproduced by permission of the trustees of the NLS.

³⁷⁵ This convention started from the outset of the war and continued throughout, until it became ‘right’ in the eyes of the British following the official annexation of the territories. One of the six maps did not include this phenomenon as the territory in question was not covered.

³⁷⁶ *Sheffield Telegraph* (Review), 5 Apr. 1900.

³⁷⁷ Steevens 1900, pp. 14–15.

The newspapers' political output must be viewed with respect to their purpose, protocol and profit margins as much as rhetoric. Boundaries did not change enough to necessitate their weekly or daily representation. Political shading was also costly and newspaper editors were notoriously frugal.³⁷⁸ The Bartholomew firm quoted C.A. Pearson £30 for 5000 copies of their supplement map in black and £45 for the same number with coloured political shading: Pearson unsurprisingly opted for the former.³⁷⁹ When political shading was adopted in newspapers, it was always in greyscale as newspapers did not use colour printing in the papers. The methods of representation were, nevertheless, significant. Newspapers generally only represented Boer occupation, therefore fostering an image of the Boers as ominous aggressors.³⁸⁰ Both newspapers represented northern Natal as almost encircled in Boer territory, the antithesis of the image created by the Bartholomews. This narrative of enemy political expansionism was most explicit in the *Glasgow Herald* which produced a suit of political maps entitled 'How Matters Stand' (Figure 6.8) depicting Boer occupation in grey to inform readers "how far the enemy have succeeded in penetrating British territory".³⁸¹ Readers of these newspapers were thus confronted with a war in which Britain was trying to hold back 'enemy' expansion into their territories. This contrasted with the image presented by the Bartholomew firm, wherein readers would be forgiven for thinking the conflict was a territorial war in which Britain sought to claim the remaining territories interrupting its full occupation of southern Africa. In reality, neither narrative was correct.³⁸²

³⁷⁸ Heffernan, 2009.

³⁷⁹ JGB to C.A. Pearson. 19 Feb. 1900. NLS: Acc.10222/ Business Record/764.

³⁸⁰ This occurred in eight of the *Graphic's* nine maps depicting political boundaries and 17 of the *Glasgow Herald's* 20 political maps.

³⁸¹ *Glasgow Herald*, 15 Jan. 1900. See also 22 May and 15 June 1900.

³⁸² See Wessels (2000) on the opportunistic, uncoordinated and defensive strategy of the Boers, as opposed to organised expansionism. See Steele (2000) and SurrIDGE (2000) on the government's complex (non-territorial) stance on the war and the *ad hoc* nature of its policies.

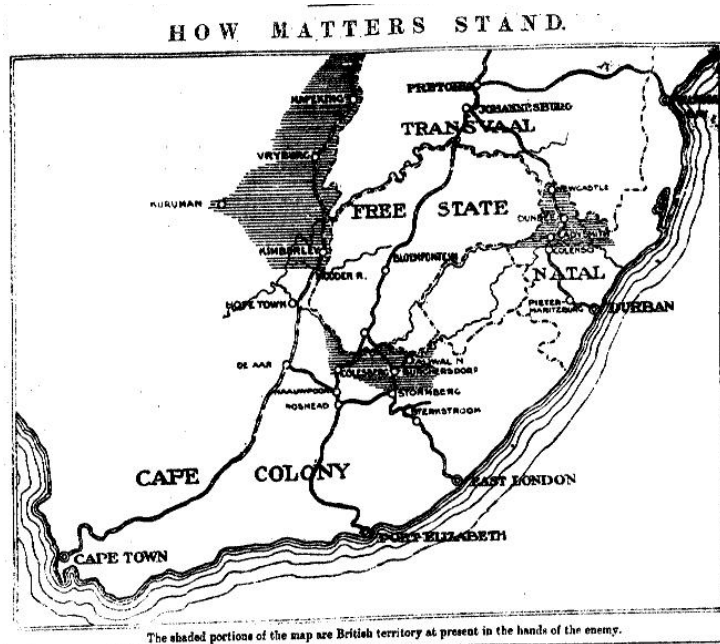


Figure 6.8. 'How matters Stand', *Glasgow Herald*, 30 Jan. 1900. Online '19th Century British Library Newspapers Database'. Reproduced courtesy of the British Library Board.

Maps were apparently the only visual media to engage with the political ramifications of the war. There is no indication in extant literature that pictorial journalism or advertising addressed these issues. Cartographic representations of the conflict were thus highly significant: map-publishers and newspapers created a market for a specific image of the war that was seemingly deemed unnecessary in other media and irrelevant by the Government.³⁸³ Which of the belligerents was motivated by territorial expansionism differed between outlets, but together these maps created a convincing narrative of the Second Boer War as a territorial conflict.

Conclusions

This study examined nearly 400 maps of the Second Boer War produced by the IDWO, *Glasgow Herald*, *Graphic* and Bartholomew firm. This volume of production – coupled with the fact that these maps represented and reflected much more than simply the terrain or events in South Africa – highlights the significance of maps in documenting

³⁸³ The Bartholomew firm were not the only map-publishers producing political maps of the war; they faced stiff competition from a host of other mapmakers.

the war. This contrasts with extant studies which have suggested that cartographic coverage of the conflict was meagre in Britain and it supplements and extends the work of historians who, by shying away from cartography in their analyses, have implied that maps were less significant than other representations.

The institutions studied variously constructed compelling cartographic images of the conflict – of Boer aggression and territorial expansion, of British reactionary and rightful action, and of harsh and hampering terrain – depending on their stances on the war. Whilst some newspapers used cartography to boost their opposition to the war; the maps discussed in this paper were designed, where possible, to reflect positively on British action and involvement in the conflict.³⁸⁴ The evidence is unfortunately not available to ascertain whether, and how, these images bolstered interest, knowledge or support of the war. The most striking conclusion remains, however, that audiences garnered a very different impression of the war depending on which institutions' maps they consulted.

The maps studied in this paper were manifestations of much more complicated contexts than simply mapmakers' perspectives on the war or any all-encompassing imperial ideology: they reflected the very different processes and concerns associated with the different institutions. For the IDWO, mapping the war was about selecting the 'best' sources from a relative wealth of material to produce maps that would aid officials in Whitehall and future analysts in understanding the events and terrain in South Africa, whilst reflecting favourably on British actions in the field and cartographic capacities at home. For the *Glasgow Herald*, it was about rapidly producing quotidian maps to aid interpretations of textual accounts from limited sources and minimal funds, whilst making maximum use of 'official' materials. For the *Graphic*, it was about showcasing a breadth of material, particularly from the field, that would document the conflict but also foster support for it. For the Bartholomew firm, it was about producing maps of the politics and terrain of war for a host of patrons, informed by competition/ markets and

³⁸⁴ On the work of W.T. Stead in opposing the war, see Heffernan, 2009.

the real and perceived demands of the British public, and hierarchizing sources in favour of governmental material whilst maximising profit margins by mass-producing extant cartography.

As highlighted in the introduction, the paper also connects with literature on 'popular imperialism' and media coverage.³⁸⁵ This paper has shed new light on the different sorts of institutionally contingent cartographic images Victorian and Edwardian Britons would have encountered and the different roles maps played comparative to other visual representations. It also introduced the flip-side of this issue, however, highlighting how concern for the public's engagement with the event was one of the most significant and site-specific concerns shaping the institutions' cartographic conduct and content. From the Bartholomews' analysis of reviews that shaped map content, to newspapers' perceptions of demand that determined their quantitative output, to the IDWO's selection of two maps for sale; the British public was a key player shaping the cartography of the Second Boer War.

Finally, this paper also connects with, and informs, that wider range of work regarding the nature of imperialism during the late nineteenth and early twentieth centuries, principally with Porter's model of a 'new' history of 'British imperialism'. Porter argues that this needs to be seen as having been *constructed* for multiple purposes; that 'imperial influences' are inseparable from the '*mélange*' of other discourses and factors shaping the perceptions, discourse, events and artefacts of this era; and that the relationship between imperialism and these perspectives, artefacts and discourses must be seen as "complex, subtle, two-way and mutually transforming". In concluding that maps of the Second Boer War were constructions that reflected composite contexts of ideological and other factors, and by highlighting the mutually constitutive nature of this cartography and popular imperialism, the paper corroborates Porter's model.³⁸⁶

³⁸⁵ MacKenzie, 1984; Stearn, 2000; Porter, 2006; Thompson, 2005.

³⁸⁶ Porter 2008, p. 111. See Edney, 2009a and Chapter 2 on the mutually constitutive nature of empire and cartography.

Porter argues that future studies should focus on the “*process of interaction*” between ‘imperial influences’, other factors/ influences and the “materials they acted upon” in order to understand the “*new, very different discourses their merging and osmosis gave rise to*”.³⁸⁷ This paper has illustrated how the maps of the Second Boer War constitute an example of this process. The maps created new images and discourses of the conflict as they were manifestations of the ‘merging’ of imperial influences, with the ‘material’ of the map, and with logistical questions including credibility, perceptions of audience demand and sources. Most strikingly, the merging of imperial ideology with cartography’s history of political layer-colouring, and with the perceived demands of popular imperialism and desires to save costs fostered a political narrative of the conflict that was unique to popular cartography.

Future studies in both the history of imperialism and of cartography could benefit from embracing this alignment. Historians of imperialism should not shy away from maps. This paper has illustrated how important and unique they are to visual cultures and how they connect to wider explanations of imperialism. At the same time, historians of cartography need to consider the complex and site-specific ‘interaction’ between maps, ‘imperial influences’ and those other factors at work in making and extending the reach of cartography.

Chapter Conclusions

This paper has provided further evidence for the view that maps should be seen not just as repositories of ‘imperial’ information. They are manifestations of complex practical and epistemological processes. It has also revealed the composite nature of the war maps studied. Mapping the Second Boer War involved representing base features (topography, etc) and information regarding events and politics: these different components could be manifestations of different processes and concerns. Representations of politics, for example, principally reflected perspectives on the nature

³⁸⁷ Porter 2008, p. 111. Original emphasis.

of the war, whereas representations of topography reflected more the available resources and concerns for credibility. This findings connects with work by book historians on the compound materialistic hermeneutic of texts.³⁸⁸

Whilst the focus of this paper has been to shed new light on the content and nature of these cartographic representations, it has also raised questions about maps as objects, and connects with more theoretical debates: principally with respect to their 'life-cycles'. Analysing the provenance of maps has been extremely important in this paper in order to better understand their site-specific nature and content. Maps were not, however, 'finished' once produced. Owing to the scarcity of information available and the speed with which maps were required, the linkage of sources and the re-use of maps within and between the War Office, newspapers and commercial publishers such as the Bartholomew firm was one of the main characteristics of the cartography of the Second Boer War in Britain. British mapping of the Second Boer War may be understood as the sum of these institutionally contingent, yet connected, activities. This corroborates work in the history of science which has called for scholars to consider the relative roles of specific sites, but also to consider how groups of institutions functioned like a multi-nodal entrepôt as information and artefacts were imported, exported, collected and distributed between these locales.³⁸⁹ Whilst the exact movement of maps differed dependent on the phenomenon represented, this paper found that: the IDWO supplemented their output with Bartholomew and newspaper maps, and used newspapers to stay informed of public opinion. The Bartholomew firm based their topographic representation on governmental maps, and drew on newspapers' textual material to add detail and consulted review material to inform content. Newspapers shared material between them and were reliant on commercial publishers and IDWO maps (principally IDWO 1449) to inform and perform their mapping. This shared circulation was principally shaped by necessity and site-specific concerns for credibility.

³⁸⁸ MacKenzie, 1982; Mayhew. 2007b.

³⁸⁹ See Heffernan, 2000 and Dritsas, 2005.

These findings also connect with recent debates amongst cartographic theorists seeking to challenge the traditional binary that separates production from consumption and understand the *processes* of cartography and the 'life-cycles' of texts (chapters 2 and 4). Many of the maps of the Second Boer War cannot be seen as simply produced then consumed; they continued to be *re-produced* as they were re-used within and across institutions. In this, the maps corroborate Edney's assertion (Chapter 2) that the 'actual' use could be very different from that which was intended. The *Graphic's* disposable maps became long-lasting images printed in Creswicke's book; the Bartholomew firm's 'Reduced Survey' map – intended for use by the public to follow the conflict – became a field-map issued to British troops and a reference map for officials at home; and the military-produced IDWO 1449 was simplified into newspaper maps.³⁹⁰ This circulation and re-use represents more than just a characteristic of the mapping of the war from Britain, or a corroboration of the need to conceive of maps as on-going processes; it was one of the main ways these institutions functioned and was crucial in enabling them to produce the maps they did.

³⁹⁰ Edney, 2009a.

'Life-histories' of Africa maps: the case of Sir Harry H. Johnston, 1883 – 1915

Introduction

This chapter traces the 'life-histories' of British maps of Africa through the work of Sir Harry H. Johnston between 1883 and 1915. In addition to the impetus for study derived from Chapter 5 – in which Johnston was introduced as one of the Bartholomew firm's most famous, assertive and recurrent clients – this paper addresses in detail two issues that the previous chapters have shown to be significant in shaping the output and content of British maps of Africa during the period of study, namely: authorship and circulation. Whilst in part using the findings to better understand Johnston's maps, this study places greater emphasis on examining and detailing authorship and circulation as important historical phenomena in their own right.

The need to study questions of authorship was introduced as part of Mayhew's framework (Chapter 4). The process was also discussed in relation to the variability of the Bartholomews' work (Chapter 5) and Johnston was briefly detailed as a case-study given the unusual level of authorial control and map content he demanded from the firm. His experience warrants further study, however, in order to explore this process and its ramifications in detail, particularly with respect to institutional variability. The significance of 'dissemination' and circulation was also introduced as part of Mayhew's typology (Chapter 4) and in Edney's model (Chapter 2). Both the study of the Bartholomew firm and the investigation into the cartography of the Second Boer War have highlighted the significance of maps' mobility and the important role networks played in shaping cartographic output and content. This paper addresses such issues in more detail, and through the perspective of an individual, focusing on how Johnston's maps were variously changed in different places as they were circulated within and

between institutions. Chapter 5 indicated that Johnston issued the Bartholomew firm with copies of his maps produced with other institutions; this paper investigates how and why this information changed in the hands of the Bartholomews in relation to its previous form(s). With a career that involved the British Government (Foreign and War Offices), RGS and Bartholomew firm, Johnston's work was fundamentally mobile and he encountered a host of different authorial relationships. He represents a unique opportunity to directly compare these processes and their implications across three of the most significant cartographic institutions introduced in Chapter 3.

The main focus of this paper, which has been submitted to *Imago Mundi: The International Journal for the History of Cartography*, is the understudied process of cartographic authorship and how this complex and institutionally contingent process had an impact upon, and was shaped by, Harry H. Johnston's work. It considers the significance and consequences of authorial processes, reflects on the applications of book history to map history, and proposes some reconceptualisations of British cartography which incorporate maps' complex authorial provenance, mobility and mutability. The chapter concludes by considering how the case of Johnston connects with broader issues in this thesis including reflecting on the work of commercial mapmakers and considering the nature of British mapping of Africa between 1880 and 1915.

**Journal Paper: Map History, Book History and Questions of Cartographic
Authorship: The Africa Maps of Sir Harry H. Johnston, 1883–
1915.**

Abstract

This paper draws on theories from book history and map history to examine the authorship of Sir Harry H. Johnston's maps of Africa in the period 1883–1915. Johnston, a leading African administrator and author, produced the majority of his maps with the British Foreign and War Offices, the Royal Geographical Society and commercial map publishers such as the Bartholomew firm. Study of the production of Johnston's maps

offers new insight into the authors and the processes of authoring maps in these three key map-making institutions during one of the most significant eras in British African cartography. Through comparative examination of Johnston's authorial relationship with these institutions, this paper illustrates the complexities and contingency of 'imperial' map authorship, examines Johnston's maps as expressions of multifaceted authorial intentions and processes, and discusses the implications of these findings for historians of cartography.

Introduction

The Scramble for Africa (commonly, the 'Scramble') was characterised by the exploration, partition and conquest by European powers of nearly 90 per cent of the African continent in little over two decades.³⁹¹ In addition to its political importance, this era (1880–1915) represents one of the most important periods in the history of European mapping of Africa.³⁹² Despite this significance, extant studies of the British mapping of Africa have examined this cartography as "a historically coherent phenomenon" that unquestionably reflected and reproduced broadly defined imperial discourse and that was produced almost exclusively for the purpose of expanding British territory and facilitating British rule in Africa. Studies have also typically focused on the content and agency of the 'finished' map, with insufficient analysis of other processes and factors underpinning the maps.³⁹³

In the past four years, there has been a shift – principally propounded by Matthew Edney and Felix Driver – calling for historians of cartography to consider how the "'imperial map' is not a distinct cartographic category", and to argue that Empire and cartography are discursive constructions that are more complex and variable than is typically recognised. Analyses need to shift away from the study of the 'finished' content

³⁹¹ Young, 2010.

³⁹² Stone, 1988, 1995; Bassett, 1994; Braun, 2008. For Stone (1995, p. 78) this era "contains the seeds of a cartographic revolution, both in its rapidity and in the nature of the change".

³⁹³ Edney 2009, p. 11.

of maps in relation to 'generic' ideological contexts towards studies that engage with how imperial maps were variously "produced, circulated, and consumed" in temporally and spatially contingent ways and understand them as "objects with a life-history".³⁹⁴ This new model informs this study of the cartography of one of Britain's most preeminent Africanists: Sir Harry H. Johnston (1858–1927).

Particular attention is paid in this paper to problematizing and pluralising the authorship of Johnston's maps and examining the ways in which his authorial relations were specific to the three main institutions with which he produced maps, namely the British Government (Foreign and War Offices), the RGS and the Bartholomew map publishing firm. This focus on authorship reflects the prominence of this issue across Johnston's correspondence and, as I shall show, necessitates engaging with the 'life histories' of his maps as called for by the new model.

The aims of this paper are threefold. The first is to shed new light on the sorts of issues men like Johnston faced when trying to map Africa: this paper represents the first sustained examination of Johnston's understudied cartography. The second is to examine the processes of authorship as important and institution-specific historical phenomena in their own right: whilst many scholars have recognised that maps often changed between original sketches and realised prints, few studies have really engaged with the complexities of cartographic authorship or tackled its ramifications for map content. This paper is the first to explicitly illustrate the complexity and contingency of this cartographic authorship and explicate its tangible effects on map content during the late nineteenth and early twentieth centuries. Finally, I consider what the case of Johnston tells us about how we should consider these maps and how theories from book history may be used to inform studies of (imperial) cartography.

³⁹⁴ Edney 2009a, pp. 14–18; Driver 2010, p. 154. These scholars' critiques pertain to the field of the history of 'imperial cartography' more broadly: see Chapter 2.

Locating, problematizing and pluralising authorship

This paper turns to theories from book history since analyses of “the precise processes of production, circulation and consumption”, and authorship, “remain woefully unappreciated in map studies”.³⁹⁵ Harley’s reconceptualisation of the map as a social construction and his engagement with the intentions of the ‘mapmaker’ and the ‘patron’ opened up an opportunity for map historians to question “whose map is it?” but authorial influences embedded in the material content of the map have remained ‘naturalised’ and the process continues to be deemed a ‘normal’ division of labour or a standard process, constant and undemanding of our attention. In 1991, Harley wrote of maps being “sliced through by the pen of the mapmaker” during “the Scramble for Africa”. In 2002, Andrews reasoned that Harley was wrong as “the culprits were surely politicians rather than map makers”. This notion has been pervasive: the Scramble for Africa continues to be seen as the height of European ‘cartographic hubris’ enacted by European politicians. This paper explores how the situation is more complicated than simply ‘mapmakers’ or ‘politicians’.³⁹⁶ Book historians have more fruitfully engaged with questions of situating, pluralising and problematizing authorship in ways which are pertinent for rendering explicit the institutionally contingent personnel and practices underpinning ‘Johnston’s’ maps and, perhaps, maps in general. Three inter-related developments have significantly extended the remit of studies of authorship.

Firstly, book historians have increasingly addressed the contention that the author is “not a lone figure [...] but is enmeshed in a whole set of relations with agents, publishers, printers and booksellers”.³⁹⁷ Secondly, the processes of authoring have also been extended to include editing, printing, censoring and distribution. Thus, whilst Johnston may be the sole *named* author of ‘his’ maps, the undisclosed individuals also ‘authoring’ his work, through a multitude of processes, also need to be accounted for in

³⁹⁵ Edney 2011, p. 338. Use of book history has been advocated by Edney in this regard.

³⁹⁶ Delano-Smith 1996, p. 199; Andrews 2001, p. 226. The quote from Harley is from his unpublished lecture “*What happens when we’ve made a map*” (1991).

³⁹⁷ Mayhew 2007a, p. 27.

order to truly appreciate the nature of his cartographic representations. Even changes to the 'perimap' – "the quality of the paper, the professionalism of the design, the title, legend, scale, cartouches" – must be seen as 'authored' by publishers or printers, and so may influence the meanings communicated.³⁹⁸

In Johnston's case, his authorship was intrinsically linked to questions of movement and reception in what I shall show was the inter- and intra- institutional transit of his maps. Of the 110 map titles Johnston produced with the Government, RGS and Bartholomew Firm, at least 72 were the products of him sending 'originals' to an institution – in the form of manuscript sketches or extant prints – which were then amended at the hands of multiple individuals. These examples form the bulk of the empirical material of this paper. At least 15 maps' titles were used across two or more institutions. Following the prompts offered by Said's 'travelling theory', Secord's ideas of 'knowledge in transit', and Del Casino Jr. and Hanna's work 'beyond binaries', this 'transit' necessarily entailed material and epistemological appropriations of the map. The focus then becomes how maps were appropriated materially and epistemologically as both a pre-requisite to, and result of, their transit around and between institutions. In this, the study of Johnston connects with a third development over questions of authorship which has recently sought to blur understandings of the author and the reader, and distinctions between construction and reception, by considering questions of the transit of knowledge and production *and* consumption, as opposed to the dualities of 'author' or 'reader' and 'production' or 'consumption'.³⁹⁹ My work argues strongly for the idea that authors – albeit many of them – retain control over "the surface details of the work: the site, the literal and symbolic content intended".⁴⁰⁰ It recognises, however, that

³⁹⁸ Kitchin, 2008. Concern for the 'perimap', as part of the broader 'paramap', intersects with work in book history on the 'paratext' which has similarly been concerned with the textual apparatus and sites influencing meaning beyond the 'main' text. Genette, 1997.

³⁹⁹ Del Casino Jr. and Hanna 2011.

⁴⁰⁰ Pickles 1992, p. 224. This is in opposition to the Barthesian post-structuralist conceptualisations of the author as only 'mediator, shaman, or reciter' which have increasingly been deployed by cartographic theorists. These theories conceive of the reader as having ultimate authorial control over the meaning produced.

the process of authorship involved the consumption of 'original' maps *and* the (re-) production of new versions according to institutionally specific protocols, sources, and discourses. This constitutes, I suggest, a pluralisation of authors: the individuals that were often the intended 'readers' of Johnston's maps simultaneously became 'authors' in their capacity to alter his maps and effect control of their production and distribution.

Darnton's idea of the 'communication circuit' is used to explore these issues (Figure 7.1). This schematic emphasises how books are continually being 'authored' at different stages of their 'lifecycle' by the agency of various individuals in addition to the designated author': including publishers, printers and readers, all acting according to "other systems, economic, social, political, and cultural, in the surrounding environment".⁴⁰¹ The actor is one component of wider circuits of intellectual and social capital in which books are made, circulated, and re-made.

I use similar schematic diagrams, drawn from Darnton's model, as a hermeneutic in this paper for Johnston's mapping with the Government Offices, RGS and Bartholomew firm. Darnton's model is one of the principal theories from book history that Edney advocates for use by cartographic scholars as map studies have been characterised by an 'abandonment' of 'communication models' since the 1970s. Cartographers, he suggests, would benefit from applying these theories from book history if we "simply replace the key term[s]...with 'mapping' or 'cartography'".⁴⁰² The circuits developed for Johnston are only loosely based, however, on Darnton's. Darnton himself acknowledges its limited function beyond books, and Withers has illustrated the opportunities and problems the circuit affords with respect to cartography.⁴⁰³ Darnton's model has also been criticised by Adams and Barker for dealing "with people rather than books". They propose an inverted book-centric model focused on the life cycle of

⁴⁰¹ Darnton 1982, p. 68.

⁴⁰² Edney 2011, p. 337. My aims in deploying Darnton's communication circuit differ from Edney's objectives to 'integrate discourse and practice' and 'consider fully the role of the consumer in defining a map's meaning', but his observations are nevertheless pertinent.

⁴⁰³ Withers (2005) comments on the need for an 'engraver' category and the difficulty in obeying Darnton's categories given that people/ processes contribute to multiple components of the model.

‘bibliographical documents’ themselves: their publishing, manufacturing, distribution, reception and survival. These stages remain in a connected circuit, but contextual influences are represented as indirect forces *outside* of this, variously exerting pressure on different phases of the lifecycle.⁴⁰⁴ Whilst this paper heeds Adams and Barker’s calls to foreground the material map in analysis, the schematic diagrams are designed to illuminate the complex human agency in map authoring more akin to Darnton’s model.

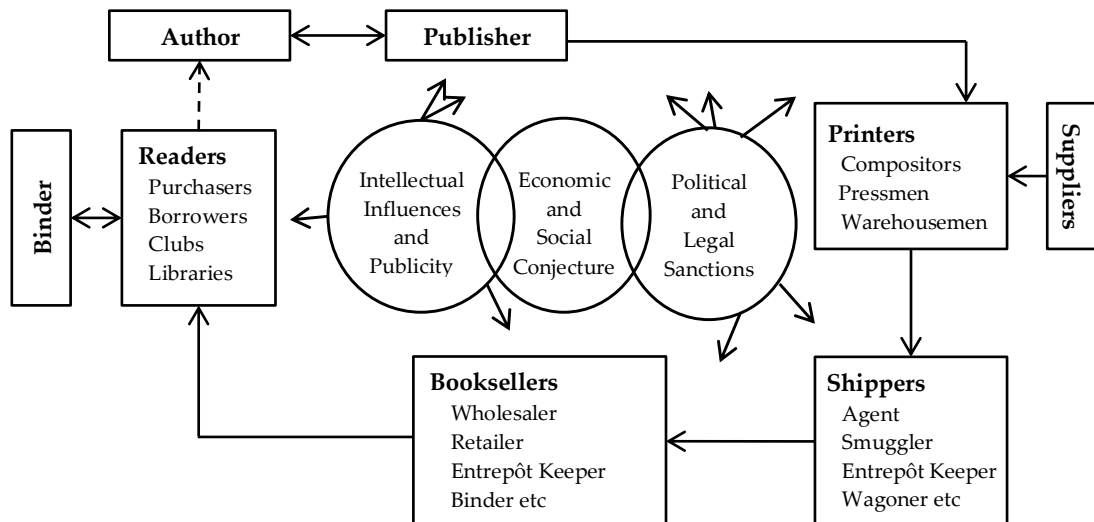


Figure 7.1. Authorship and the Communication Circuit (Adapted from Darnton, 1982).

The schematics are necessarily generalisations of highly complex processes and the aim is not to propound a new cartographic model in this paper. They serve, however, to illuminate the complexities and institutional contingency of Johnston’s map authorship, to detail the names of ‘authors’, inform the specific examples examined and complement these cases by relating them to broader contexts. These communication circuits ultimately constitute the ‘transit’ of maps between authors-readers, characterised by the maps’ material appropriation.

Johnston: the man and the maps

Harry H. Johnston was an eminent British ‘Africanist’ and cartography was a significant feature of his polymathic output on the African continent. He produced *c.*190 maps

⁴⁰⁴ Adams and Barker 1993, p. 12.

between 1883 and 1915, 60% of which were made with the British Government, RGS and Bartholomew firm (Figure 7.2).⁴⁰⁵ The original nature of Johnston's maps made him a key figure in African cartography, and he established firm reputations for his maps across each of the institutions analysed. Despite his contemporaneous notoriety, examination of Johnston's maps have been curiously lacking in African historiographies.⁴⁰⁶

Johnston held several consular positions with the British Foreign Office (FO) from 1885 to 1901. He produced over 50 maps, predominantly for this department and the Intelligence Division of the War Office (IDWO), during his official career (Figure 7.2a). He was one of many FO officials deployed to establish and consolidate British rule in Africa which included mapping and surveying new territories. Johnston also produced 19 maps with the RGS between 1883 and 1915 (Figure 7.2b). In this work, he represents the growing number of 'explorers' and governmental officials reporting primary geographical data on Africa to the RGS. Johnston was not, however, opposed to engaging in 'armchair geography' or 'carpet-slipper cartography' whilst resident in England, producing maps for the RGS and for the public using secondary data for regions he had never visited.⁴⁰⁷ Cartography also featured in Johnston's commercial work, particularly during his protracted retirement (1901–1927). A further 107 maps are included in his many books, 36% of which were produced with the Bartholomew firm (Figure 7.2c). In his work for public audiences, Johnston has been labelled an 'imperial populariser', although his later work is characterised by increasing disenchantment with Britain's imperial and colonial activity.⁴⁰⁸ In his varied career, Johnston fits into several broader historiographies of African mapmakers. The ways in which his work spans these

⁴⁰⁵ Of the remaining 40% that are beyond the scope of this paper, 35% were produced by other commercial mapmakers for Johnston's books. The remaining 5% were produced for articles in magazines/ journals such as the *Graphic* and the *National Geographic*.

⁴⁰⁶ The two fullest publications on Johnston's output (as opposed to his political career and actions covered in his auto-biography and biography) are Casada, 1977a and 1977b.

⁴⁰⁷ Casada 1977b, p. 394. Casada coined the term 'carpet-slipper cartography' in his paper on Johnston's contribution to the British expansion of geographical knowledge.

⁴⁰⁸ On Johnston's views on the British Empire, see Oliver, 1959.

groupings and institutions which have hitherto been largely dealt with independently makes him unique to study.

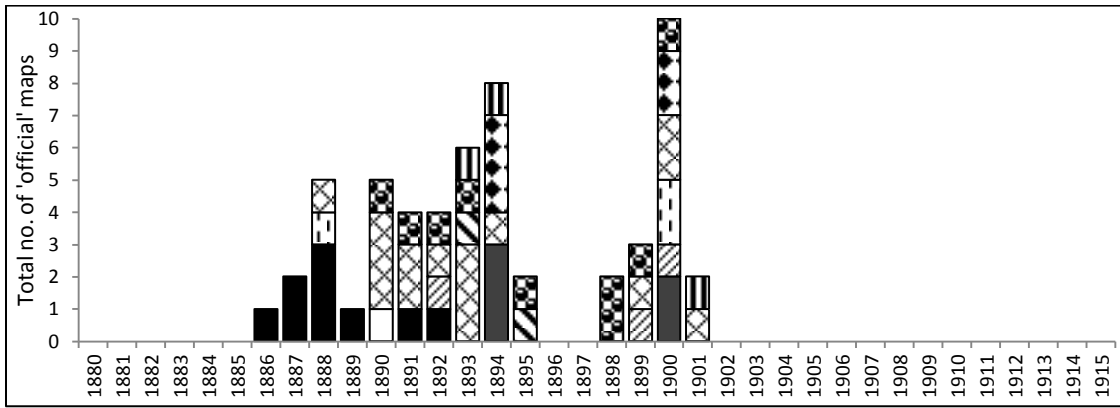
Maps meant many things to Johnston. They were rhetorical devices that he used to support, legitimise and promote his own arguments as well as to illustrate his activities in Africa. Maps were powerful visual symbols, used in conjunction with his sketches, paintings and photographs, to create desired (and often highly artistic) images of the continent and his findings. Johnston also believed such maps would extend the audiences for his work, particularly amongst influential members of the RGS. Like so many of his contemporaries, he was increasingly convinced of the value of geography in the early twentieth century and sought to produce scientific maps as a means of advancing the discipline and educating the public.⁴⁰⁹ Whilst Johnston's aims in mapping were variable, he was always intent on making sure they were realised. Johnston believed himself to be an expert on the subjects he mapped. His views came from reading extensively, travelling widely across Africa, and positioning himself in influential networks of governmental officials and the burgeoning body of 'unofficial imperialists' in London that keep him abreast of the recent events, policies and perspectives pertaining to Africa. He was also a trained artist with a keen eye for detail and belief in the "power of mapping"; he spent a lot of time constructing maps from data in the field and secondary sources in ways that would maximise their impact.⁴¹⁰ Maps were part of his overarching aim of "making my mark and of effecting some good to my country". In order for them to do so, they needed to reflect his aims and perspectives but, as this paper will show, he did not always accomplish this.⁴¹¹

⁴⁰⁹ Some of Johnston's maps also reflected more pragmatic reasons: they were produced for money and out of a perceived expectation.

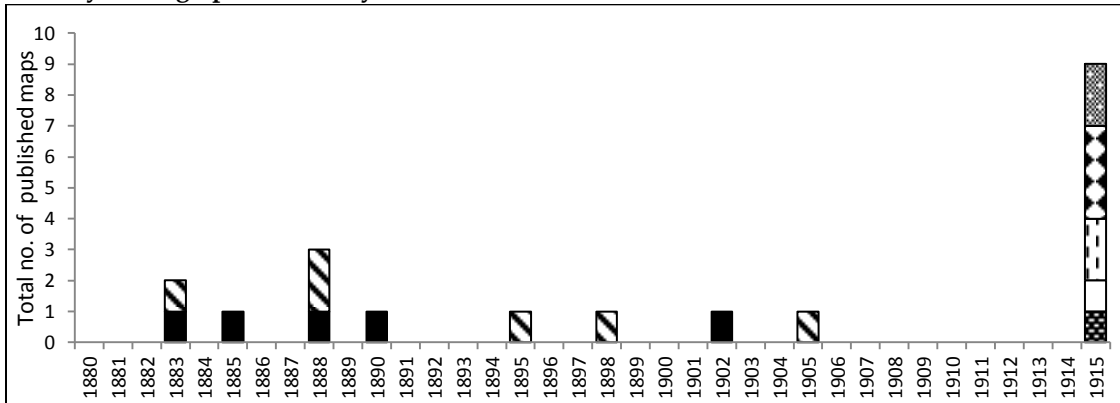
⁴¹⁰ Johnston to A.S. Green, 6 Aug. 1902. RCAS: MC.15. Johnston's passion for maps is evident when comparing the detail and aesthetic of the maps he submitted to the government with those submitted by his contemporaries such as Frederick Lugard and Alfred Sharpe.

⁴¹¹ Johnston to Salisbury, 5 July 1888. Cited in Oliver 1959, p. 144.

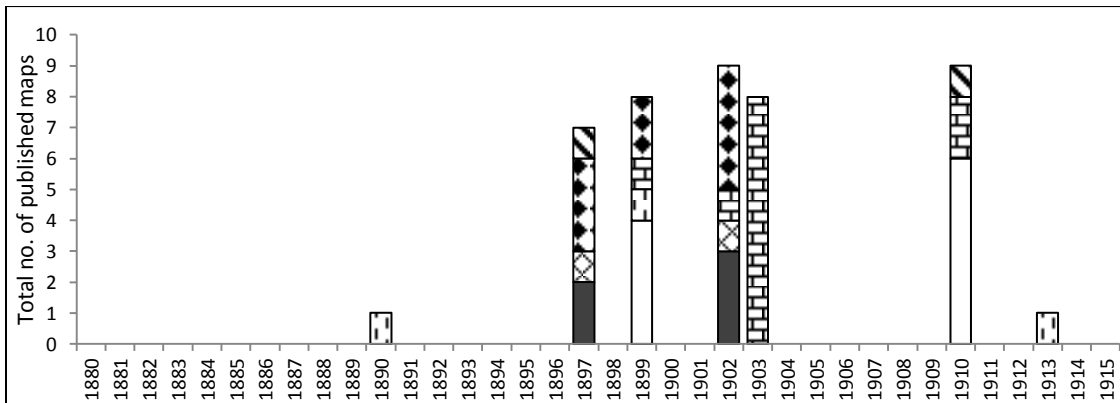
a. Foreign Office and Intelligence Division of the War Office



b. Royal Geographical Society



c. Bartholomew firm



Physical

- Topographic/ survey maps
- Thematic maps of physical features (e.g. rainfall)
- Large scale maps of specific locations

Political

- Current political boundaries and territories
- Future (proposed/ predicted) boundaries and territories
- Johnston's work establishing and consolidating possessions

Other

- Historical (exploration/ geographical knowledge)
- Thematic maps of 'human' features, e.g. religion, race.
- Documenting current events, issues and work
- 'General' maps
- Other

Figure 7.2. The quantity and genres of Johnston's African cartography with the British Government (a), RGS (b), and Bartholomew firm (c).

Johnston's motivations for mapping, irreducible to simply 'imperialistic', were manifest in the variability of his cartography. Johnston's maps were striking in their breadth, particularly in his capacity to draw on multiple 'ideological clusters' of imperialism in his cartography – including racial, religious and historical discourses (Figure 7.2). His maps ranged in content and date from a pioneering survey of 'Kilimanjaro [*sic.*]' in 1883, to a thematic map of 'Germ Diseases' of Africa' in 1915. Johnston's output changed with his shifting relationships with cartography and perspective on British imperialism but his affiliated institutions constitute one of the most significant variables influencing his work. As well as affecting genre and output (Figure 7.2), visual analysis has shown that the style and content of Johnston's maps reflect the institutions with which they were produced. Thus, and to reiterate, the aim of the paper is to expose the institutionally contingent authors and his authoring of his cartography and to investigate Johnston's maps as expressions of multifaceted authorial intentions and processes beyond his own motivations.

Johnston was highly attuned to the specific opportunities and problems he faced when mapping with these different institutions. His motivations for mapping differed with different institutions, and he tailored the sorts of maps he proposed according to his understanding of the demands of institutionally specific audiences.⁴¹² Johnston's emphasis on topographical mapping with the RGS, for example (Figure 7.2b), was due to his perception of the Society's demands for accurate topographic maps, and his resultant submission of more topographical maps to improve his work and reputation, almost as much as the Society's pursuit of 'scientific' cartography. In his awareness and catering for these actual and perceived readerships, we see both one of the first extensions of authorship, and the blurring of production and reception as 'readers' informed the 'author's' output prior to production.

⁴¹² Darnton refers to this process as the effect of 'implicit readers'. The influence of anticipated readers on the 'author' is illustrated in Darnton's communication circuit via the hashed line 'closing' the circuit (Figure 7.1).

The Government deals with Johnston: autocratic re-authorship

The authoring of Johnston's 'official' cartography was characterised by a palpable shift in authorial control of the maps away from Johnston when they entered the FO. Johnston authored the majority of these maps in the field, based on observations and surveys conducted by him and his staff, and with use of reference maps and texts.⁴¹³ The maps that were actually printed or published by the Government departments, however, were only ever *versions* of Johnston's maps, altered to varying degrees by an authorial system that largely neglected Johnston himself.

Most of Johnston's maps were sent to the Secretary of State for Foreign Affairs, although, in reality, they were consulted on their receipt first by the Assistant Secretary of State, leading men of the FO African Department, and then other officials as deemed necessary (Figures 7.3 and 7.4). Johnston's original versions were never directly deployed. The procedure was for all officials' maps to be "put in print" before being "dealt with".⁴¹⁴ This enabled personnel in Whitehall to ensure Africa was being represented as they wished. As Lord Salisbury explained in 1887: "communicating the reports [straight] from our consuls is liable to create embarrassment".⁴¹⁵ The decision as to whether, and how, Johnston's map would be re-printed for official use and distribution was made by FO officials. Notes circulated between these men on the back of Johnston's work often answered a set of unspoken questions about the despatch and the map: who should see them – in governmental offices and beyond? Did they contain any sensitive information? What should become of the map? – should it be ignored; 'printed' for circulation to government departments/ Parliament/ other institutions; or sent to the IDWO for conversion into an IDWO map, whereupon it could be issued to officials,

⁴¹³ Johnston's reference material was a combination of that which he had taken with him, or had dispatched to him by his family, FO and RGS staff. There are multiple requests for up-to-date cartography and geographical publications in his letters to the FO and in his private correspondence, particularly to his sister. See Cambridge University Library Manuscripts Department, Add.9702/1; Add.9702/3 and Add.9702/6.

⁴¹⁴ 'C.B.R.', Apr. 1890, TNA: FO 84/2051, p. 254.

⁴¹⁵ Salisbury, 17 Oct. 1887, TNA: FO 84/1762, p. 74.

broader interested parties and, potentially, made available for sale? ⁴¹⁶ And, most crucially, did it need altering and, if so, how?

Johnston was conspicuously absent, either in consideration of these aspects or with regard to his personal consultation, during this decision making process and in related amendments. The FO and IDWO sought to produce these maps promptly; sending proofs to consuls stationed in Africa was generally deemed too time-consuming. Johnston was contacted only if amendments were deemed especially numerous, or if officials required clarification (Figure 7.3). Men like Percy Anderson, Clement Hill, Lord Salisbury and Lord Lansdowne, nominally the intended ‘readers’ of Johnston’s cartography simultaneously became both authors and distributors of his work.

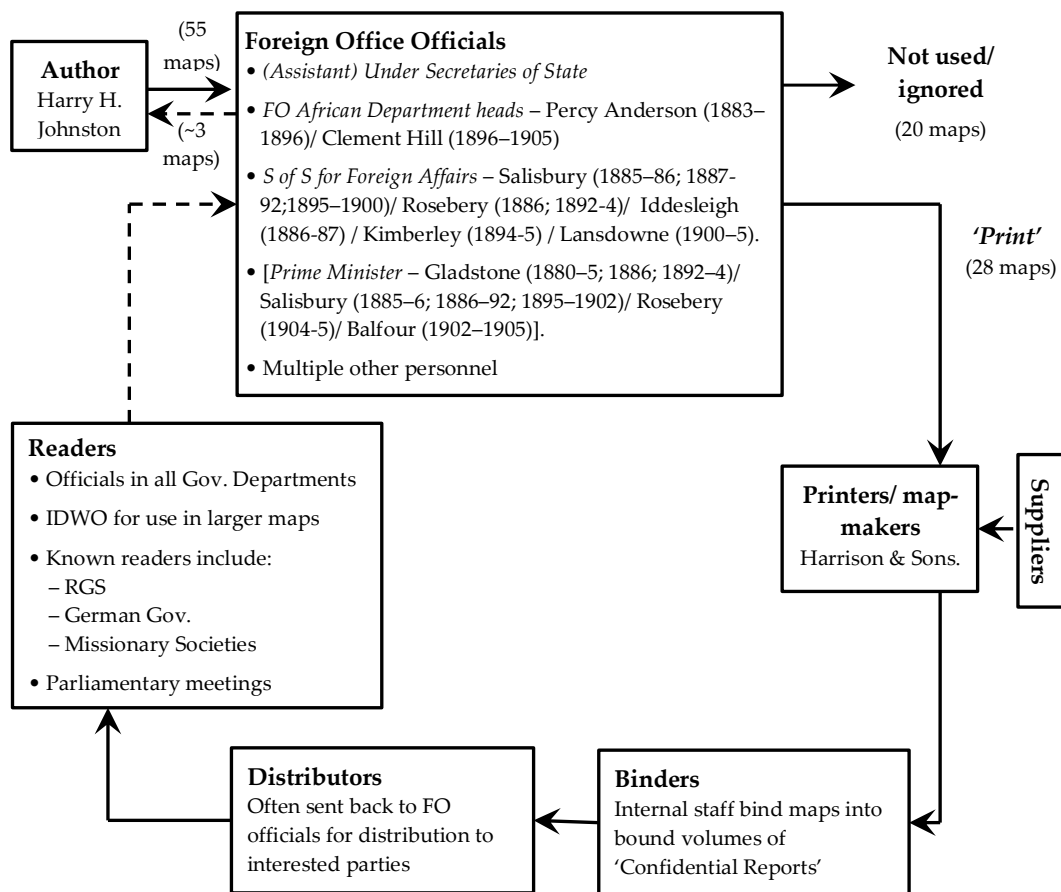


Figure 7.3. Foreign Office Communication Circuit – Johnston’s maps ‘ignored’ and ‘printed’, 1886–1901. Derived from: maps, private and official correspondence, and officials’ notes held at TNA.

⁴¹⁶ These options constitute the three main initial pathways for Johnston’s governmental maps.

Johnston's MS maps were despatched, with comments and amendments, from the FO to the relevant people dependent on their intended use. The 28 maps to be 'printed' were done by Harrison and Sons, 'Printers in Ordinary to Her Majesty' (Figure 7.3). The seven IDWO maps were forwarded to the Director of Military Intelligence (DMI) (Figure 7.4). Printed copies commonly underwent less change than IDWO maps, a distinction that was a function of different authorship and intended audience. The officials of the IDWO, predominantly Sir John Ardagh (DMI), made the most alterations before forwarding the maps to the IDWO or Ordnance Survey staff in Southampton for engraving, lithography and printing. The agency of Harrison and Sons – commonly changing symbols, colour, and the 'perimap' – should not, however, be ignored.

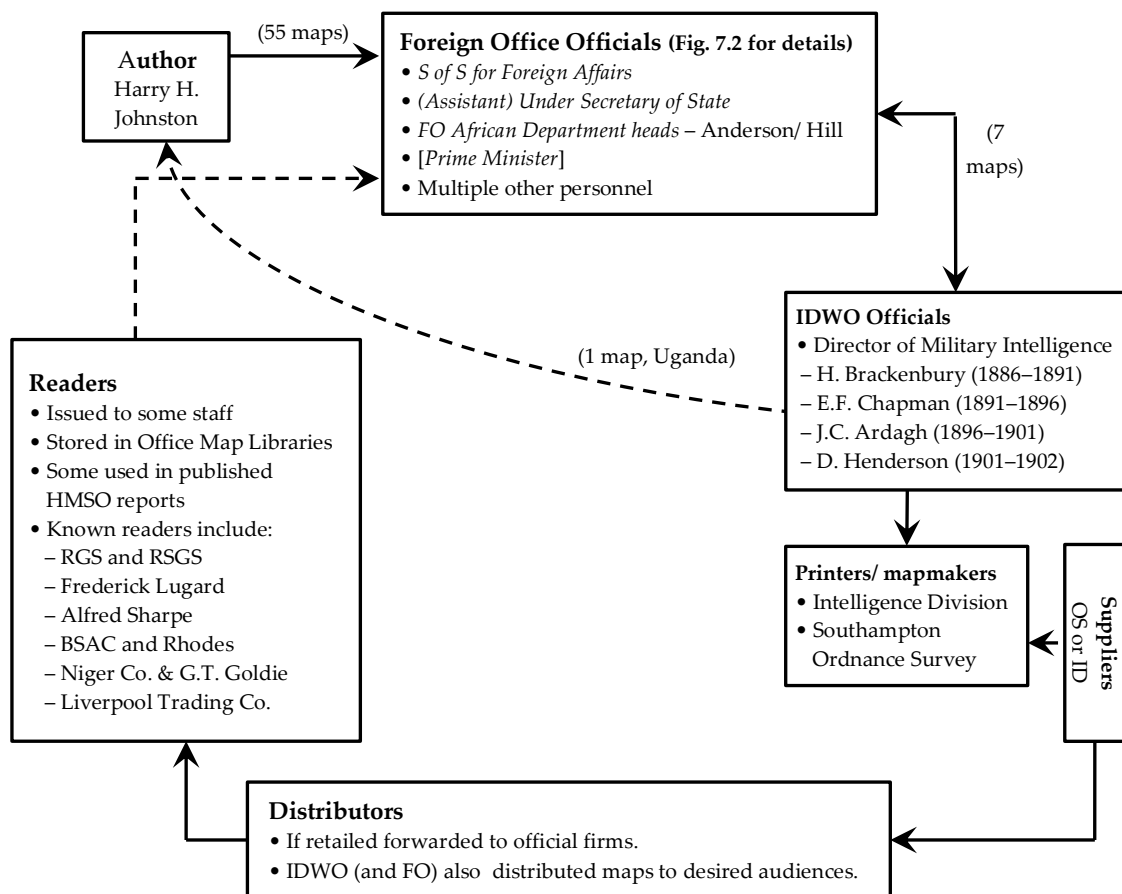


Figure 7.4. IDWO Communication Circuit – Johnston's IDWO maps, 1888–1901. Derived from: maps, private and official correspondence and officials' notes on letters and maps held at TNA. Supplemented with information from Jewitt.⁴¹⁷

⁴¹⁷ Jewitt, 1992.

The autocratic communication circuit characteristic of these governmental offices had material implications for the content of 'Johnston's' maps, most commonly in the representation of political boundaries and orthography. These changes were often physically inscribed onto the map by one of the officials. This was a material and authoritative act, at once reception *and* production, and which ensured Johnston's work could be deemed 'right' for its new intended purpose (Figures 7.5 and 7.6).

Whilst Johnston was aware that such alterations might occur, his attempts to suggest what should become of his maps largely fell on deaf ears. Five out of the seven IDWO maps under Johnston's name underwent boundary alterations in the process of their reproduction, most commonly to remove or blur Johnston's designated boundaries. These changes were ostensibly a product of officials' desires to map Africa 'correctly' according to their semiotic codes and protocols but they also reflected an awareness of intended readership. The removal of political boundaries was largely an act of censorship on the part of these governmental 'authors'. A further layer of 'implicit readers' thus acquired indirect influence over Johnston's maps. The entire thematic component of Johnston's Nyasa-Tanganyika Plateau map was removed such that IDWO 796 bore no indication of Johnston's original aim to delimit European spheres of influence and from a wish to circulate it to those "commercial and evangelistic associations as may be interested in East Central Africa" (Figure 7.5).⁴¹⁸ The potential Anglo-German Agreement lines delimited by Johnston in West Africa were also partially concealed prior to the map being sent to the German Government in 1887. The northern and eastern boundaries prematurely delimited in Johnston's 1899 'Administrative Divisions of Uganda' map were blurred, and the thematic representation was minimised at Lord Salisbury's request to "avoid any precise definitions of the frontiers" such that it could be circulated 'externally' (Figures 7.8a and 7.8b).⁴¹⁹ The politics represented in 'Johnston's' maps were thus expressions of his intentions and targets, mediated by Government officials' concerns with privacy and (international) relations.

⁴¹⁸ Johnston to Salisbury, 17 Mar. 1890, TNA: FO 84/2051, p. 88.

⁴¹⁹ Salisbury, 25 May 1900, TNA: FO 2/666, p. 16.

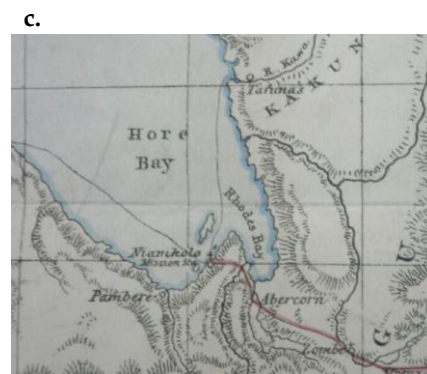
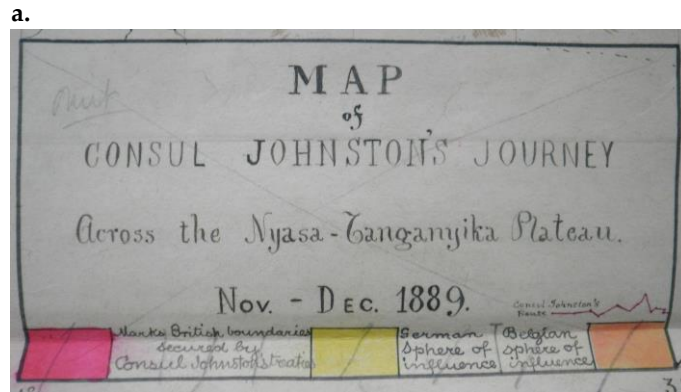


Figure 7.5. The redaction of Johnston's Nyasa-Tanganyika map. Figure 7.5a. Original manuscript key: pencilled amendments instructing the omission of the shading are by an unnamed official prior to production as an IDWO version. TNA: FO 925/415. Figure 7.5b. Original manuscript map: sent to the FO, 17 March 1890. TNA: FO 925/415. Figure 7.5c. IDWO 796 version of Figure 7.5b. TNA: FO 925/416. All reproduced by permission of The National Archives, London.

Questions of authorship in Johnston's maps also reveal the significant issue of native orthography. During Johnston's early work in British Central Africa, he repeatedly spelled words using the phonetic phoneme 'tsh', whereas the FO stipulated 'ch' was the official substitute to correspond to the RGS system. Whilst the FO only cautioned Johnston about his non-standard orthography, in four of his IDWO maps the spelling was altered, being then initiated without consultation with Johnston, and in the knowledge that it was against his views. For Johnston, such changes constituted fundamental alterations to his maps as they undermined his attempts to reverse the

“ridiculous and hideous phonographical errors in the past”, and threatened his belief that ‘settling’ orthography was conducive to his Protectorates taking a ‘settled shape’.⁴²⁰

These issues of orthographic change and autocratic re-authorship came to a head when Johnston was invited to be involved in the IDWO’s reproduction of one of his maps – his 1899 ‘Administrative Divisions of Uganda’ map (Figure 7.6). This unusual decision, largely the product of changes in FO personnel, highlighted the temporal contingency and personal nature of Johnston’s authorial relationship with governmental offices. Ardagh (DMI) proposed to the FO that Johnston might be consulted in this instance as he proposed altering *all* of Johnston’s orthography to correspond with official protocol.⁴²¹ Lansdowne, who had become Secretary of State only a month previously, supported and effected the suggestion. It is unlikely that Johnston would have been involved had Clement Hill, Head of the African Department, been in control as he clashed with Johnston and repeatedly ignored his maps. Hill’s only contribution to the decision was blunt: “no doubt he [Johnston] will be furious”.⁴²²

Hill’s prediction was correct. On receipt of an amended version of his Uganda map sent in mid-December 1900, Johnston sent the FO a full and itemised analysis of Ardagh’s amendments and an emotive covering letter justifying his own credentials as an author.⁴²³ Johnston also defended his authorial decisions on the map itself, re-printing his influence over the IDWO version. He made 34 changes to names and spellings, and re-instated stylistic features. Upon its return to the IDWO, the map was subject to further re-authorship. The FO removed Johnston’s pronouncement of a new East African capital as, akin to the blurring of Ugandan boundaries, it was deemed too premature. After Lansdowne’s insistence that “much weight is to be attached to his [Johnston’s] opinions”, Ardagh kept 30 of Johnston’s inscriptions, but removed four, and added eight more without consulting Johnston – including the compromise of ‘Victoria Nyanza’, an

⁴²⁰ Johnston to FO, 17 Aug. 1894, TNA: FO 2/67, p. 118; Johnston to FO, 4 Feb. 1901, TNA: FO 2/666, p. 74.

⁴²¹ Ardagh to FO, 11 Dec. 1900, TNA: FO 2/666, p. 63.

⁴²² Oliver’s biography of Johnston gives greater detail on Hill’s control and strained relationship with Johnston (see note 33), pp. 290–291; Hill, undated, TNA: FO 2/666, p. 64.

⁴²³ Johnston to FO, 4 Feb. 1901, TNA: FO 2/666, pp. 74–80.

amalgamation of Johnston's insistence on 'Lake (Victoria) Nyanza' and Ardagh's preferred 'Lake Victoria'.⁴²⁴ The resultant map became a site in which not only East African orthography was debated, but authorial control was contested (Figure 7.6).

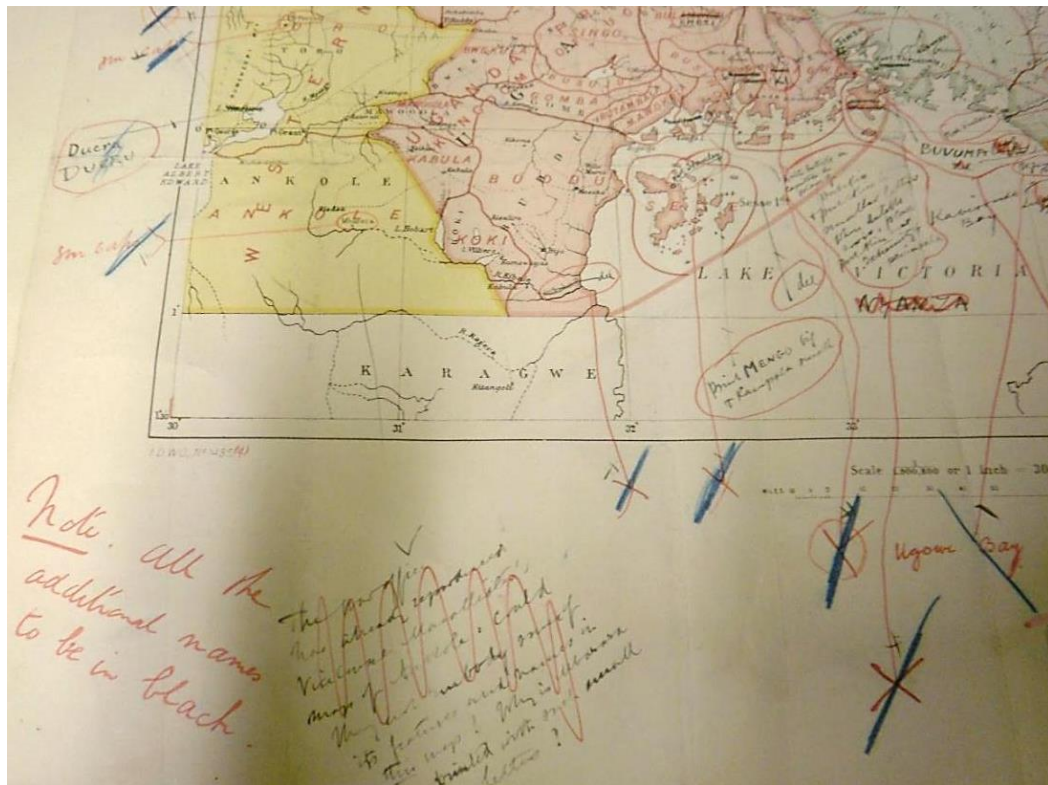


Figure 7.6. Extract from the amended 'Administrative Divisions of Uganda' map. Black pen: Johnston's handwriting in January 1901 (sent to FO 5 February). Red pen: Ardagh's handwriting 6–19 April and notes just prior to the printing. Pencil: FO Officials, March 1901. Blue pencil: Draughtsman's notes. TNA: MPK 1/123/3. Reproduced by permission of The National Archives, London.

This example elucidates how strongly Johnston believed his authorial voice should be heard as his experience and study were greater "than any of my fellow-countrymen now living". His view, directed at the FO, that "I do not think there is anything that Her Majesty's Government could do which would distress me more" [than altering his map], emphasises the significance of the fact that his authorial 'voice' was repeatedly muted, or, even ignored, in favour of the FO's policy of pursuing the RGS's models of orthography and its own political ends. It also reinforced both governmental

⁴²⁴ Lansdowne to Ardagh, 6 Apr. 1901, TNA: FO 2/666, p. 98.

offices' reluctance to consult Johnston when editing his maps.⁴²⁵ Producing an IDWO map without him took on average two months from the date of his MS despatch, whereas it took seventeen months to produce this Uganda map as IDWO 1485(d).

All of Johnston's maps that were used by the governmental offices underwent some sort of re-authorship. The alterations were characterised by numerous 'surface' detail amendments, as opposed to alterations to the 'base map' and topographic information which remained similar to Johnston's originals.⁴²⁶ Political boundaries and orthography were by no means the only alterations. Other common modifications, made at the hands of the mapmakers, included changes in emphasis, colour, symbol size, types and positions, topographic emphasis, and removing Johnston's cartouches. All visual changes to the map and the 'perimap' are important in conveying meaning. Johnston evidently felt the features were sufficiently significant in their meaning to reinstate them when he was given the chance during the re-authorship of the Uganda map. Johnston took the opportunity to reverse the positions of Entebbe and Port Alice and to re-instate his stylistic choices including stipulating the size, style and location of text. He did, however, leave the altered political boundaries.

Whilst Johnston's authorial voice was not entirely erased from his governmental work, the maps that were actually used by these offices were never *solely* Johnston's. They were mutable *versions* of Johnston's maps, manifestations not just of his authorial intentions but of the agency of multiple author-readers who, whilst dependent upon Johnston to do their work, were also prepared to change or amend what he produced.

The RGS: reciprocity in redaction

Johnston's authorial relationship with the RGS was more mutually beneficial. He was actively consulted in the production of 'his' maps. Even so, the maps and cartographic

⁴²⁵ Johnston to FO, 4 Feb. 1901, TNA: FO 2/666, p. 74, p. 77.

⁴²⁶ This reflects the paucity of geographical information available to the Government, and its focus on rapid production and political details. The geographical content of cartography arguably only became the main concern of Government offices in the early twentieth century (Donaldson, 2008). By this time Johnston had left the consular service.

instruction Johnston sent to the Society underwent some of the greatest overall change in their conversion for use in the Society's *Proceedings/ Journal*, or as 'hand-maps' distributed at lectures.⁴²⁷ Even 'official' maps forwarded to the society at Johnston's request – at least four IDWO maps and one FO print – underwent significant re-authorship prior to publication.

For the majority of Johnston's cartographic career with the RGS, his principal contact was with the Secretary, John Scott Keltie (Figure 7.7). Keltie became one of Johnston's few real friends, but it was also his responsibility to decide (in common with the RGS President and Map Curator) whether Johnston's proposed maps should be used. More maps were sent to the Society by Johnston and the FO than were published. Correspondence between Keltie and Johnston illuminates that Keltie's verdict on the fate of Johnston's maps was made according to criteria of originality, quality, potential interest, and available resources. Unlike in the FO and IDWO, however, Johnston was often consulted on this issue. After Keltie queried whether "an outline sketch map would suffice" owing to concerns as to whether "there [is] sufficient new material to justify us in drawing a new map of Uganda", for example, Johnston's affirmation regarding the map's adequate novelty and data quality was heeded.⁴²⁸ The FO controlled the output of Johnston's work to the RGS for the first three years of Johnston's consular career in West Africa. In September 1888, however, Johnston asked Lord Salisbury that he may return to corresponding with the Society directly in matters of cartography, a request that was acceded to.⁴²⁹

The staff in the RGS Drawing Room, and often the Map Curator, had great influence over how Africa was represented in Johnston's work. They ultimately re-drew the maps according to RGS protocols, available sources, and under instruction from

⁴²⁷ The RGS's cartographic lantern slides are largely beyond the scope of this paper.

⁴²⁸ Keltie to Johnston, 8 Oct. 1901 and Johnston to Keltie, 10 Oct. 1901, RGS-IBG: RGS/CB7/50.

⁴²⁹ Johnston to Salisbury, 2 Sept. 1888, TNA: FO 84/1882, pp. 84–85. Johnston really disliked being disassociated from the Society, especially as he had enjoyed four years of direct involvement with the RGS prior to his official career and the FO's mediation reduced the extent to which he benefited from collaboration with the RGS.

members. Their agency is evident in the maps: as a set, Johnston's RGS maps are more characteristic of the RGS' approach and sources than Johnston's style and artistry, and are more consistent in style, typography and emphasis than his output with other institutions.

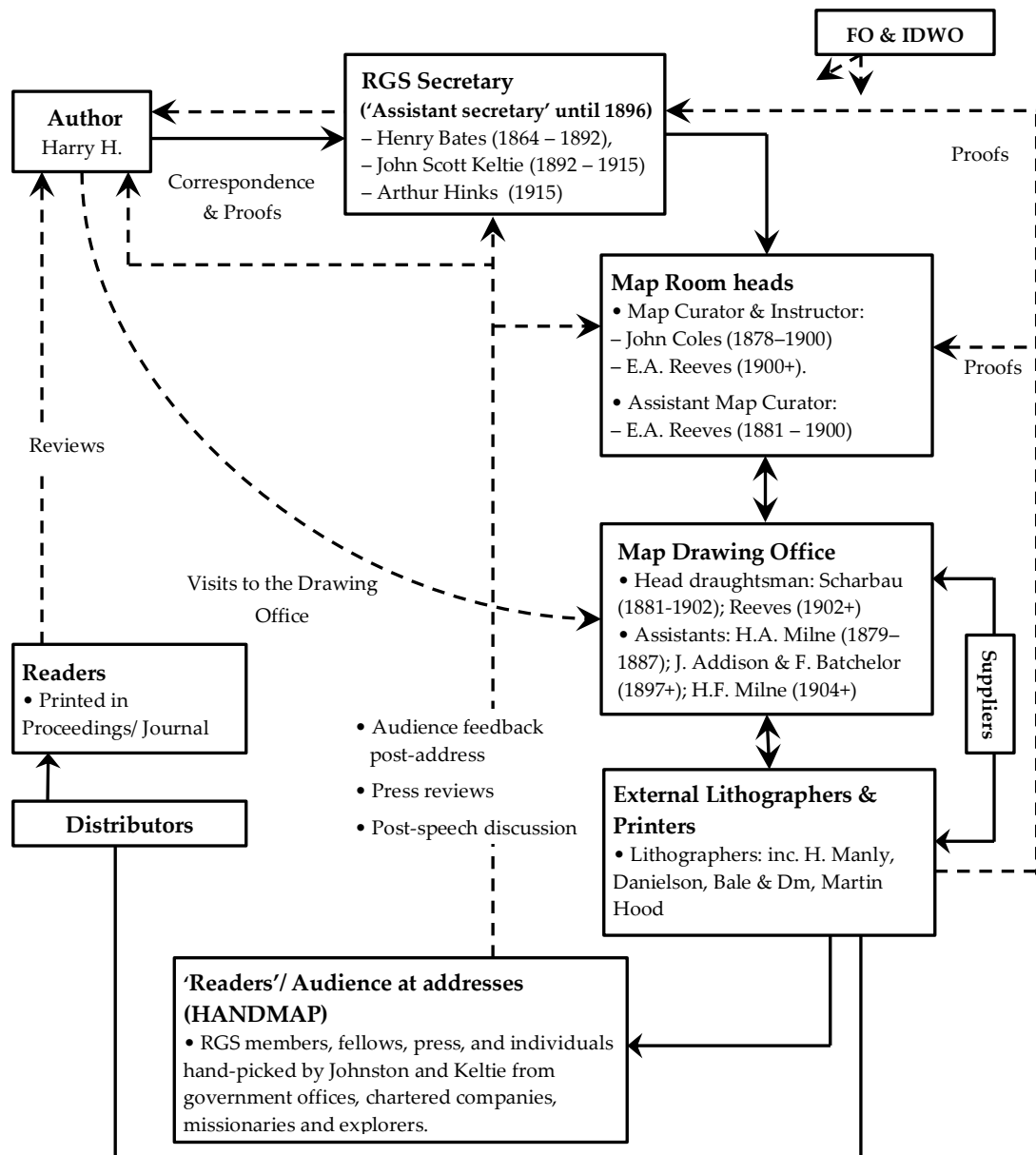


Figure 7.7. RGS Communication Circuit – Johnston's Maps for *Proceedings, Journal* and as 'Hand-maps' for lectures, 1883–1915. Derived from: Johnston's correspondence with RGS staff, and RGS Drawing Room Log Books held in the RGS-IBG Archives.⁴³⁰

⁴³⁰ Supplemented with the following literature: Crone and Day, 1960; Holland, 1980.

Whilst this re-authorship was imposed on Johnston's maps, the outcomes also owed, at least in part, to Johnston's willingness to embrace the changes to his maps due to his perception that the RGS should afford him the opportunity for producing "really good map[s]...in very careful detail" with an 'insurance' of "accuracy and skill in engraving".⁴³¹ Johnston was also occasionally involved in production, and would visit the society to "look at the map in progress".⁴³² He worked especially closely with Henry Scharbau (a RGS draughtsman) to produce his 'Bantu Borderland' and 'Niger Delta' maps, for which Johnston is credited with partial authorship. Lithography and printing were outsourced, with proofs being returned to the Society between these phases. Johnston's texts were sent to referees, but it does not appear that his maps were also subject to this scrutiny.⁴³³ Johnston was, however, usually given proofs prior to the maps' publication. He was able to amend these, commonly adding colouring and detail.

The most prominent effects of RGS re-authorship upon 'Johnston's' cartography were to the base maps on which his detail was transposed. The RGS ultimately controlled the representation of African geography in his maps. The Society's cartography was characterised by greater detail and emphasis on topography, coastlines, river channels, etc than in the FO or IDWO maps and Johnston's original sketches. Whilst the reasons behind such changes are not stated, they probably had to do with the superior stockpile of maps available for consultation in the RGS Map Room, the RGS' willingness to invest more time producing quality cartography, and its concern with the *geographical* value and credibility of their cartography as a matter of reputation. These issues were aligned to their contemporaneous efforts to develop geography as a scientific discipline. As Keltie explained, "we [the RGS] are responsible for it, and it would hardly do for the Society to issue a map that is in several respects not up-to-date."⁴³⁴ Despite such concerns for

⁴³¹ Johnston to FO, 17 Aug. 1894, TNA: FO 2/67, p. 119, original emphasis. Johnston to Salisbury, 2 Sept. 1888, TNA: FO 84/1882, p. 84.

⁴³² Johnston to Keltie, 23 Oct. 1901, RGS-IBG: RGS/CB7/50.

⁴³³ The 'Referee Reports' for most of Johnston's papers are available in the RGS-IBG: RGS/JMS/1 and 2 series.

⁴³⁴ Keltie to the Bartholomew firm, 24 Oct. 1910, NLS: Acc.10222/Business Record/951.

quality, content and reputation, seemingly simple changes to base maps and style could have significant consequences.

The Anglo-German boundary in the Cross River region of West Africa was inadvertently changed in the RGS map (July 1888) from the FO print (sent in June), as the physical features according to which Johnston had defined the boundary (the 'mouth' and 'rapids' of the Rio del Rey) were repositioned in the different base map used by the RGS. This is especially significant as Johnston had surveyed this region for the FO specifically in order to define accurately the Anglo-German boundary. The RGS' amendments partially undermined the purpose of his mission. The editor of the journal appended a note claiming the "boundary between the English and German protectorates has been inserted on the map as shown on the sketch sent by Mr. Johnston".⁴³⁵ The line had been moved, however, by the equivalent total of ~11.5km in latitude and ~19.5km in longitude. This is one of the most significant examples of the RGS' re-authoring but there are many more cases that illustrate the mutability of the African geography in Johnston's maps in its 'transit' from sketches and Government maps, to the RGS.

The conversion of FO and IDWO maps into RGS maps was often associated with their re-politicisation – that is, by adding the political information the Government offices had removed from Johnston's original. Despite being derived from the IDWO version, the Anglo-German-Belgian boundaries that had been omitted in IDWO 796 (Figure 7.5) were reinstated in the RGS' 'Nyasa-Tanganyika Plateau' map with large territorial lettering.⁴³⁶ The European regions of 'British Central Africa' were also given far greater emphasis with colour and text in the *Geographical Journal* map than in the associated IDWO 1023. Such changes were probably, in part, the result of Johnston's greater involvement in production, a fact which gave him the opportunity to reinstate those features on the map he had originally deemed necessary. This greater authorial control

⁴³⁵ 'Ed. "Proc. R.G.S"', In Johnston 1888, p. 438.

⁴³⁶ This was probably also due to the fact that between the production of the IDWO map (Apr. 1890) and the RGS version (Dec. 1890), the Heligoland-Zanzibar Treaty had been signed (July 1890). This defined the Anglo-German boundary as extending from Lake Nyasa to Lake Tanganyika.

did not bear fruit in relation to Johnston's desired orthography however. The RGS system consistently corroborated that of the FO and IDWO as their offices based their principles on the RGS system.⁴³⁷ This angered Johnston to the extent that, in August 1894, he threatened to "decline all further assistance from them [the RGS] and buy my own surveying instruments and send all my materials to the Intelligence Department."⁴³⁸ In reality, however, he was too reliant on the RGS' loan of survey instruments, and he too strongly relished the opportunities the Society afforded him for publicising his work to influential audiences, to jeopardise his career over it. As such, RGS orthography in the British Central Africa and Uganda maps corresponded, as Johnston lamented, "in general with the Hillian rather than the Johnstonian Nomenclature".⁴³⁹

The RGS' communication circuit was characterised by a concern with intended readers of the maps, particularly with regards to credibility and reputation. Such factors ultimately informed Keltie's decisions as to which maps should be used, and the RGS draughtsmen's additions of geographical detail. This too could have interesting consequences. The material influence of 'implicit readers' is evident in the Society's deletion of all four of Johnston's caveats about the accuracy of his work in order ensure the scientific rigour to which they aspired. Johnston's admonition to the FO that parts of his Niger/ Rio del Rey maps "cannot be relied on for absolute accuracy" was replaced by the RGS with the affirmation that their map was "from the best information procurable".⁴⁴⁰

These concerns with audience and with reputation, and the agency of the RGS in altering Johnston's work, came to a head with respect to Johnston's paper on the effects of WWI for European powers' occupation of Africa. Production of the accompanying maps was repeatedly delayed as Keltie, Reeves, Freshfield and Sir Alfred Sharpe (who

⁴³⁷ The FO extensively corresponded with the RGS regarding African orthography. The FO issued the RGS' 1895 memoranda on spelling to its officials in Africa, and Clement Hill corresponded directly with William Everett regarding issues of Johnston's 'tsh' spelling. Oct. 1894, TNA: FO 2/67.

⁴³⁸ Johnston to Anderson, 17 Aug. 1895, TNA: FO 2/67, p. 115.

⁴³⁹ Johnston to Keltie, Undated, RGS-IBG: RGS/CB8/47.

⁴⁴⁰ Johnston to FO, 14 July 1887, TNA: FO 881/5502, p. 10; Johnston, 1888.

was consulted by Keltie) all feared Johnston's work was too 'drastic' in its predictions. They specifically requested that he should not "exclude the Germans altogether from Africa" and that he deal more sensitively with British interests in Morocco in his maps. This was ultimately to avoid potential "political rancur [*sic.*]", and preserve the RGS' reputation, particularly since invitations to the lecture had been sent to Colonial and Foreign Office staff and the material would be seen by German audiences.⁴⁴¹ Johnston only heeded some of the RGS' instruction, as is evidenced in Heffernan's deconstruction of their content.⁴⁴² Nevertheless, Johnston was angered at the re-authorship of his work in this instance, telling Keltie he wished he had never embarked on the paper with the RGS owing to its "quasi-official standing and its enormous and rather 'queasy' fellowship".⁴⁴³

On occasion, 'explicit', as well as these 'implicit', readers of RGS maps acquired authorial agency. Feedback from 'readers' present at the lectures, who had access to 'hand-maps' issued to the audience and cartographic lantern slides, could inform changes in the maps prior to their publication in the Society's journals. After Johnston's address on the potential ramifications of WWI for Africa in February 1915, for example, David Wynter, a member of the audience, pledged to donate twenty pounds in order that the maps could be printed in colour in *The Geographical Journal*. Reeves had earlier threatened to reduce the use of colour in Johnston's maps owing to limitations on his budget. Wynter thus fundamentally shaped the representation of Johnston's work in the April 1915 edition.

All of these amendments were enacted on Johnston's 'Administrative Divisions of Uganda' map by the RGS after a copy of IDWO 1485(d) (above) was sent to the Society at Johnston's request in October 1901. The RGS used a different base map with greater emphasis on topography. This had the effect of 'moving' features such as lakes and coastlines, and altering the details of boundaries along differently represented river courses (Figure 7.9). These alterations to the physical geography were undertaken by E.A.

⁴⁴¹ Keltie to Johnston, 2 Feb. 1915; Alfred Sharpe to RGS, 19 Feb. 1915. RGS-IBG: RGS/CB8/47.

⁴⁴² Heffernan 2002, pp. 214–217.

⁴⁴³ Johnston to Keltie, 20 Feb. 1915, RGS-IBG: RGS/CB8/47.

Reeves who sought to bring Johnston's map in line with the RGS' extant cartography of Uganda from Ferguson's expeditions. Unlike the IDWO, this suggestion was put to Johnston prior to being enacted. Whilst Johnston affirmed that the details of his map should be given preference (as a re-working of Colonel McDonald's map with a reduction of the latest Belgian maps and his own amendments), the resultant final map was a combination of Johnston's work, with elements altered according to the RGS' 'mother plan' of Uganda.⁴⁴⁴ Ardagh's earlier caveat on the map that it was "not to be understood as containing the latest topographical information" was omitted.⁴⁴⁵ The thematic political colouring was removed because the focus had shifted from Johnston's proposed readjustment of the frontier, to the features of 'The Uganda Protectorate, Ruwenzori & the Semliki Forest'. Greater emphasis was given to the borders previously removed at Salisbury's request, however, now delimited through expansive lettering (Figure 7.9c). In the RGS map, the orthography, which had caused so much angst for Johnston in collaboration with the Government, is evidently based on the final IDWO 1485(d) configuration. Those last elements altered by Ardagh following Johnston's interjection were not contested. Some names do differ, however, after an unnamed missionary had "fallen foul of the names in the leaflet maps presented to the audience on the night of the 11th [November 1901]" when Johnston presented his paper. Johnston consequently asked Keltie whether "the maps [could] be delayed for (say) five days whilst the missionary (a man who knows his subject) corrects a proof & sends it too [*sic*] you?"⁴⁴⁶ This 'reader' was consequently allowed to re-'author' a fundamental component of the map. 'Johnston's' map used in the *Geographical Journal* in January 1902, then, was based on IDWO 1485(d) but had repeatedly been produced, consumed, and reproduced

⁴⁴⁴ Johnston to Keltie, Oct. 1901, RGS-IBG: RGS/CB7/50. The term 'mother plan' was coined by Sir Charles Wilson in correspondence with RGS President Douglas Freshfield. It pertains to the RGS's plans containing all known information of a region, from which any necessary maps could be drawn. Wilson to Freshfield, 17 Nov. 1886, RGS-IBG: RGS/AP/32.

⁴⁴⁵ Ardagh, Apr. 1901, TNA: FO 925/1171.

⁴⁴⁶ Johnston to Keltie, 14 Nov. 1901, RGS-IBG: RGS/CB7/50.

through the authorial influences of a further seven men – Johnston, Keltie, Reeves, Scharbau, H. Manly (lithographer), Beccles (printers) and the unnamed missionary.

Overall, whilst Johnston was more involved in the production of ‘his’ maps with the RGS than was the case with the Government departments, members of the Society acted according to more defined protocols as to what constituted a correct and credible map.⁴⁴⁷ In the maps’ transit to the RGS, and again within the Society, they were repeatedly consumed and reproduced. The maps in question are mutable expressions of Johnston’s work (five were also manifestations of the FO/ IDWO alterations), but they also clearly reflect the individuals involved in the communication circuit(s) (Figure 7.6), and the practices, sources, semiotic codes and protocols specific to the RGS.

The Bartholomew Firm: authorial liberty

In his dealings with commercial mapmakers and publishers, Johnston had authorial control as a client in a way not afforded him as an employee of the FO or a member of the RGS. This is evident most strongly in Johnston’s perception of authorial ‘freedom’. He repeatedly informed Keltie that he sought to be free from the constraints of the RGS so that he could produce work as he pleased with commercial mapmakers, and told Percy Anderson that “[i]n my official despatches I must of course conform to the orders of the Secretary of State [...] but the Secretary of State cannot control my private life or compel me in my writings as a private individual”.⁴⁴⁸

In his books, articles and lectures produced for the public, Johnston retained ultimate authorial control over how Africa was represented cartographically. Proofs of all thirty-six maps produced by the Bartholomew firm were returned to the publishers and Johnston such that they could be approved, amended, altered or coloured as Johnston

⁴⁴⁷ The Society’s responsibility for collating and representing topographic material of African ‘areas’, as opposed to explorers’ route maps, was called for in meetings of the Society and of the British Association by men like Chapman (1895) and Holdich (1901).

⁴⁴⁸ Johnston to Anderson, 17 Oct. 1894, TNA: FO 2/67, p. 118.

saw fit. Whilst Johnston was also given proofs of 'his' maps by the RGS, he had greater control in the commercial sphere. This is evidenced when the Bartholomew firm heeded Johnston's requests for a new set of British Central Africa maps according to the 'latest' data after he deemed their previously-compiled 'patch up' maps insufficient for his 1897 book. The firm produced new maps at two and a half times the original expense to the publisher s Hutchinson and Co. – an outlay that probably would not have been afforded him in other institutions.⁴⁴⁹ In reality, however, Johnston was not entirely unrestricted; his maps were still shaped by multiple 'authors' (Figure 7.8).

Map production within the Bartholomew firm resulted from a combination of Johnston forwarding extant maps for reproduction, or making requests/ instruction for maps he sought. The firm then made new maps from these submissions. At least twelve maps were based on Johnston's previous cartography with Government offices or the RGS. Virtually all of the material intended for use in books went through publishers, both to and from the Bartholomew firm and Johnston. Like Keltie in the RGS, the publishers controlled the fate of the maps – with respect to quantities, qualities, sizes and positions – in conversation with Johnston. In the experience of the Bartholomew firm, the publishers do not appear to have attempted to alter map *content* prior to forwarding the maps. Their authorial influence largely pertained to the 'perimap', namely over matters to do with paper size, quality, borders, folds and colour. Johnston lamented about this irksome lack of interest amongst publishers in harnessing the scholarly quality of his work or in making an 'excellent map', in contrast to their gauging popular markets and estimating profit margins.⁴⁵⁰ Intended readers thus acquired agency as publishers determined the quantity and quality of maps according to perceived markets. Johnston frequently contested or overrode such rulings, however. He produced eighteen maps over two volumes of his book on George Grenfell despite Hutchinson and Co., the

⁴⁴⁹ The Bartholomew firm's original estimate of £18 for 2000 copies was increased to £45 for the same number of copies after Johnston's requests that a new map be produced. Correspondence throughout Jan. 1897: NLS: Acc.10222/Business Record/761 and 762 (outgoing).

⁴⁵⁰ Johnston to Keltie, 19 July 1907, RGS-IBG: RGS/CB7/50.

publishers, informing him “everyone is sick of Africa” and he should keep cost of graphics to a minimum.⁴⁵¹

Once Johnston’s maps or instructions were forwarded to the Bartholomew firm, authorial agency rested with the firm’s staff of draughtsmen, engravers, lithographers, colourists, and printers. Johnston’s instructions were characteristically meticulous. They included details of text style, colour, orthography and proposed sources. Nevertheless, the agency of the Bartholomew firm cannot be ignored. The firm consistently authored new base-maps for Johnston, even when Johnston had sent the firm extant maps. Whilst the authorial relationship was ultimately founded on Johnston’s position as their *customer*, and maps retained more of his specifications and original features than the RGS and IDWO maps, the Bartholomew’s firm’s style, semiotic codes, resources and concerns are also evident in the maps.⁴⁵² This was a combination of the firm’s ethos and reputation for producing ‘good’ maps from “Government surveys as far as available, and failing them the best materials we can get from the carefully prepared maps of specialists, down to travellers’ sketch maps”. It was also a result of their perception of intended readers, borne of sales of previous maps and extensive collation of feedback from ‘readers’ in newspaper reviews. The firm was openly reluctant to invest too much time and money in entirely up-to-date maps of Africa, as public markets meant they would be “no more in demand than the [‘inaccurate’] old ones”.⁴⁵³ They used existing maps held ‘on stone’ that could be re-printed with small amendments for Johnston’s needs. The resultant base-maps of Johnston’s commercial work were more accurate and detailed than Johnston’s sketch maps, but were perpetually at a smaller scale and less detailed than the Governmental and RGS counterparts.⁴⁵⁴

⁴⁵¹ Johnston to Keltie, 17 July 1907, RGS-IBG: RGS/CB7/50.

⁴⁵² Tracing the material ramifications of this authorship is more problematic for Johnston’s work with the Bartholomews as neither Johnston’s MS originals, nor the firm’s proofs, are held in the firm’s archive. Analysis is consequently largely based on correspondence and costing sheets.

⁴⁵³ Bartholomew, 1893. NLS: Acc.10222/Business Record/1887.

⁴⁵⁴ This is judged by the quality of his sketch maps sent to the FO, and those in his personal papers.

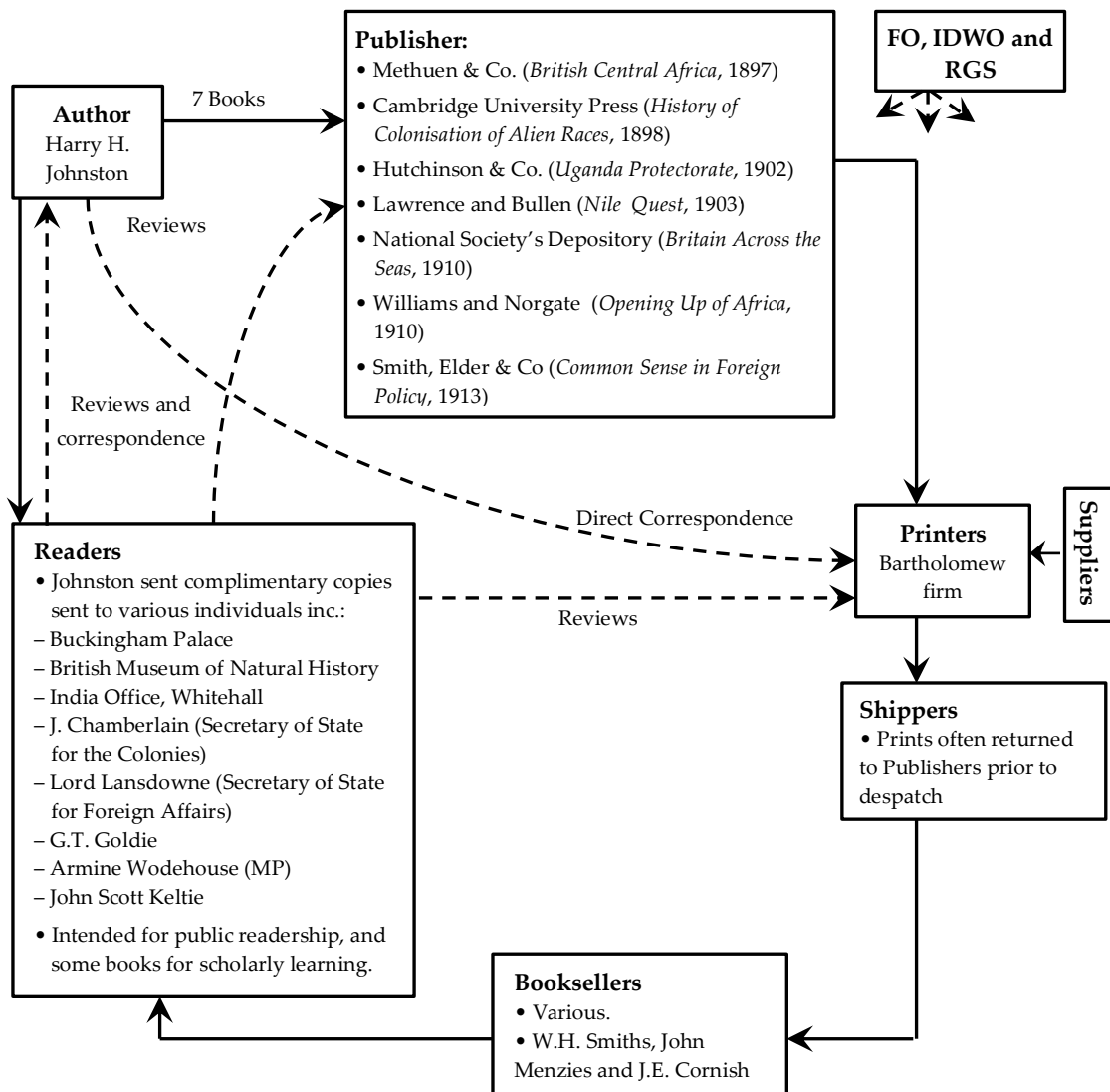


Figure 7.8. Bartholomew Communication Circuit – Johnston’s maps published in books, 1897–1913. Derived from: Correspondence, Invoice Books, Order & Cost Books, and Job Registers held in the ‘Bartholomew Archive’, NLS. Supplemented with Johnston’s private correspondence held at the RCSA, and information in the maps and books themselves.

It appears, from Johnston’s attitude, correspondence and assessment of the maps’ content, that there were no apparent attempts to censor or alter Johnston’s work in ways that angered him like with the RGS and the Foreign and War Offices. Known amendments reported by the Bartholomew firm in correspondence were repeatedly, and at least ostensibly, practical alterations owing to space, sources and logistic – such as dividing one of Johnston’s Uganda maps into two as languages could not “satisfactorily

be combined with racess” in the one map proposed.⁴⁵⁵ Such changes still constitute re-authorship, but the material effects arguably carry less vested motivation

Johnston’s perception of authorial freedom informed which maps he chose to produce. He revelled in the opportunity for making maps as he pleased, particularly of political predictions and recommendations – including his prophetic 1890 Black–White–Yellow map (Figure 5.8) and 1913 cartographic prediction for ‘Africa of the Future’– without the censorship of the government that silenced such details, and the concerns of the RGS which had altered his post-WWI predictions. The FO sought to moderate Johnston’s work in the public domain during the 1890s, ordering him to submit ‘all proofs’ of his more contentious work to the FO ‘for examination’, or risk “difficulty as to your continuing to hold the post of commissioner”.⁴⁵⁶ Johnston largely ignored this.

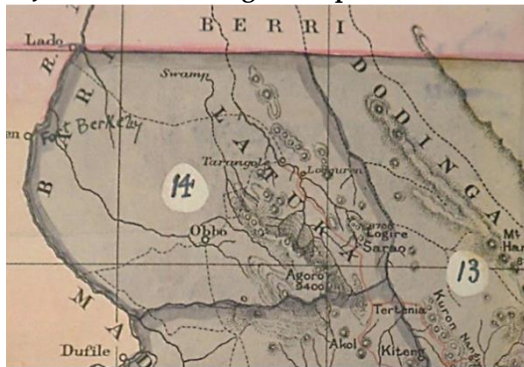
The ‘Administrative Divisions of Uganda’ map is one of the few instances in which it is possible to see the effects of the Bartholomew firm’s authoring in comparison with those versions by the RGS and the IDWO as the firm directly referenced both of these maps under Johnston’s instruction. The base map differs considerably from both the RGS and IDWO (Figure 7.9). It is at the much smaller scale of 1 inch to 63.13 miles, as opposed to the IDWO map at 30.5 miles and RGS version at 31.56 miles. All topographical information was removed, and the location of lakes, rivers and some minor boundaries were again altered. Whilst in this instance this ‘fluid geography’ did not have any major implications, it again highlights the mutability of maps’ geographical representation. Most prominently, the northern and eastern territorial boundaries are again rigidly defined like Johnston’s original despatch map before it was ‘blurred’ at Lord Salisbury’s request. The bold administrative colouring was reinstated, and given greater emphasis than in the IDWO and RGS versions. In final result, the map is a complex manifestation of the influence of the RGS and IDWO versions, of which it

⁴⁵⁵ Bartholomew to Hutchinson and Co. 12 Nov. 1901, NLS: Acc.10222/Business Record/766, p. 538. Original emphasis.

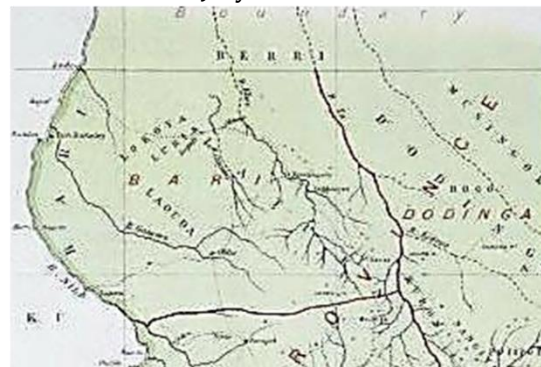
⁴⁵⁶ Anderson to Johnston, 7 Nov. 1894, TNA: FO/65, pp. 142–143. Work necessary of submission to the FO was defined by Anderson as anything “beyond the compass of a lecture such as would be delivered before the geographical society”.

retains features of both, but equally of the agency of the Bartholomew firm as evident in its re-authorship by Johnston. Of all the printed versions, it is the one most like Johnston’s original MS despatch, which probably reflects Johnston’s authorship of the surface features and his ‘freedom’ to represent it as he originally wished (Figures 7.9a and 7.9d). Perhaps most significantly, Johnston was finally granted complete authorial control over his orthography, following his insistence that “the spelling of native names must be completely revised by myself”.⁴⁵⁷

a. Johnston’s MS original (April 1900)



b. IDWO 1485d (July 1900)



c. RGS version, *Geographical Journal* (Jan. 1902)



d. *Uganda Protectorate* book version (July 1902)



Figure 7.9. Extracts of the north-west portion of Johnston’s Uganda map (1900–1902). **Figure 7.9a.** TNA: MPK 1/122/11, reproduced by permission of The National Archives, London. **Figure 7.9b.** TNA: MPK 1/123/2, reproduced by permission of The National Archives, London. **Figure 7.9c.** *The Geographical Journal*, image reproduced courtesy of the Royal Geographical Society (with IBG). **Figure 7.9d.** NLS: Acc.10222/Printing Record/33b, folio 101a, reproduced by permission of the Trustees of the NLS.

⁴⁵⁷ Johnston to Hutchinson and Co., forwarded to Bartholomew, 11 Nov. 1901, NLS: Acc.10222/Business Record/978.

Johnston's authorial relationship with commercial mapmakers and publishers is more difficult to qualify, but is worth elucidating. It serves, not least, to illustrate the extent of difference in the authorial relationships Johnston encountered in the different institutions, especially over his authorial control. Johnston's commercial maps need to be considered as manifestations of Johnston's 'freedom' (or certainly his perception/construction of it), notwithstanding that he still was not the sole author.

Conclusions

This paper has confirmed that the institutional variability evident in Johnston's cartography is, in large part, a product of the fact that he was not the sole author controlling the output and content of 'his' maps. Johnston – as a Foreign Office official, explorer and commercial author – worked with an assortment of institutionally-specific authorial personnel and practices, and his maps were repeatedly re-authored in the process of their 'transit' around multiple communication circuits. It is unfortunately not possible to determine whether Johnston's maps had any different impact on international relations, diplomatic manoeuvrings or perceptions of Africa as a result of the changes made to their content: information on the reception and use of the maps – beyond that which is discussed in relation to their 'life-cycles' – is not available in order to assess the wider impact of these authorial processes. Whilst this imposes obvious limits on the conclusions that can be drawn regarding the consequences of these findings, it does not lessen the significance of authorship or detract from the need to study it.

Investigating what was altered in Johnston's maps and why affords us novel insight into Johnston's cartography and the nature of British mapmaking. Orthography and political boundaries have been exposed as some of the most contested domains of Britain's cartographic construction of Africa. These features, which have been mainstays of the politicised deconstruction of maps since the 1980s, did not simply reflect the imposition of British power over Africa as is typically assumed. Studying the authorship of Johnston's cartography illustrates that these details are also the result of institutionally

contingent questions of credibility, censorship, control and reputation. Perhaps most significantly, particularly from Johnston's perspective, these authorial relations contributed to his failure to enact his system of orthography: 'Tshinde', 'Tshiromo' and numerous other names were lost in favour of 'Chinde' and 'Chiromo' that remain in use today. Understanding the authorship of Johnston's maps is crucial for exposing this complex and contested history of African toponymy rather than assuming it was Johnston's perspective as an 'imperialist' that imposed these anglicised spellings.

One must be cautious in generalising too far from the single case of Johnston. Yet the issues raised by this study are wide ranging. Johnston was not alone in facing the sorts of authorial challenges revealed in this paper: Lugard – Johnston's friend and predecessor in Uganda – faced similar issues in the production of his East Africa maps which were variously authored by the IDWO, the IBEAC, Stanford publishers, E. Ravenstein, and Captain Williams. Nor was Johnston alone in resenting the re-authored alterations to his maps. Livingstone reportedly bore an unshakeable grudge against the RGS cartographer Arrowsmith "for altering one of his manuscript maps for publication", declaring that "he would not let Arrowsmith lay hands on any of his material".⁴⁵⁸ The limited number of channels available for producing cartography meant, however, that Africanists had to produce maps in collaboration with institutions like the government and the RGS if they wanted to produce 'good' cartography, or achieve any sort of impact.⁴⁵⁹ Examining authorship is thus required not just to better understand the content of these maps. Complex and contingent cartographic authorship which enabled the dominant institutions and individuals in Britain to impose their stances regarding what maps could, and *should*, show and on Africanists' maps was a key characteristic of the era in its own right.

The stories of Johnston's maps also attest to the need for broader reconceptualisations of the British maps produced of Africa during the late nineteenth

⁴⁵⁸ Lugard, 1893; Bridges 1968, p. 85.

⁴⁵⁹ Johnston to FO, 17 Aug. 1894, TNA: FO 2/67, p. 119

and early twentieth centuries, and point to the potential for the greater application of book history in explication of the 'life-histories' of these maps as historical artefacts. This study illustrates how these maps may, in part, be seen – as Howsam writes of the printed book – not just as carriers of meaning but as “carrier[s] of relationships”.⁴⁶⁰ This is clear in Johnston's maps, the content of which is not just the result of the involvement of multiple authors, but is partially a function of the institution specific authorial relations Johnston encountered. Beyond Harley's distinction between 'inner' and 'outer' voices, and his emphasis on the imperialistic relationship of the powerful exerting control over the weak; the relationships, of which the map is in part an expression, constitute all those detailed in the communication circuits.

Theoretical conceptions of authorship, and the nature of Johnston's cartography, reinforce the need to consider these maps as mobile, mutable objects. 'Johnston's' maps were characterised by intra-institutional 'transit' around the communication circuits illustrated. The Uganda, Nyasa-Tanganyika and Cross River maps also demonstrate the inter-institutional mobility of maps.⁴⁶¹ These transitory processes were characterised by the attendant appropriation of maps at the hands of multiple reader-authors as the maps were at once consumed *and* (re-)produced in the process. Johnston's maps were *materially* and epistemologically changeable as they were communicated between individuals and institutions. The inter-institutional transit, and intra-institutional circulation, of the Uganda map amongst multiple 'authors' all acting according to site-based nuances in protocol, sources and intended readers, resulted in the existence of four different published versions of this 'same' map. The sharing and circulation of maps – which was necessitated during Johnston's career by their relative paucity – meant that, as Howsam writes of the book, one “text can appear in many different material forms”. 'Johnston's' maps were both “unstable texts” [in the Harleyian sense] and “mutable objects”.⁴⁶²

⁴⁶⁰ Howsam 2003, p. 69.

⁴⁶¹ These examples are three of 15 cases wherein Johnston's maps were circulated and re-used *between* two or more of the three institutions in question: see Appendix 3.

⁴⁶² Howsam 2003, p. 70.

There is, then, much work to be done in the history of cartography regarding questions (and geographies) of cartographic authors and authoring. The case of Johnston has provided further evidence for the potential benefits of drawing on book history in this regard, both with respect to broad trends such as situating and problematizing authorship, and implementing specific theories like Darnton's communication circuit. This paper has advocated a more flexible adoption of these theories, however, than Edney's proposal of simply replacing 'book' with 'map'. Forcing Johnston's work into Darnton's schematic would have undermined its application, and masked much of the institutional contingency exposed. Drawing on Darnton's insights, however, and adapting them for application to the map has been fruitful. Map historians need, for 'imperial' maps, but also in relation to other periods of cartography, to attend to the questions of authors and authoring raised by book historians. This will enhance our understanding of the personnel and practices behind the maps, but also illuminate processes 'within' the maps, uncovering previous versions and exposing the relationships, motivations and discourses that are too commonly taken-for-granted.

Chapter Conclusions

In detailing the authorship of Johnston's maps using Darnton's communication circuit, this paper corroborates and extends the findings of previous chapters. Examining Johnston's experiences across multiple institutions spread across different spheres sheds new light on the role of the Bartholomew firm in Johnston's career. Johnston's Black-White-Yellow map of British Central Africa (Figure 5.8) was unique not only in comparison to the Bartholomew firm's typical African cartography, as was introduced in Chapter 5. This chapter illuminates how the Bartholomew firm's mapping of Johnston's work was unique with respect to the rest of *Johnston's* output, principally with respect to their willingness to afford him authorial control and not censor his work. It is extremely unlikely that the Black-White-Yellow map would have been printed by the RGS as it was

controversial, not in-keeping with their 'scientific' style, and it lacked any new geographical information. Nor would it have been printed by government offices; Johnston sent several similar 'prophetic' maps to the FO detailing his propositions and predictions but they were consistently ignored by officials for fear of them causing embarrassment or diplomatic acrimony. The Bartholomews, then, were not just mapmakers for Johnston; they represented a specific opportunity for him to produce maps of the style and content he desired.

The case of Johnston confirms the significance of the processes of authorship in shaping British maps of Africa between 1883 and 1915, and illustrates the complexity and institutional contingency of this process. It is striking that even someone as strong-willed as Harry H. Johnston could not evade the changes imposed on his maps at the hands of multiple authors. His experience corroborates the view that British maps of Africa were not simply repositories of 'imperial' information, constructed at the hands of named authors: the cartographic representation of Africa associated with Johnston's name was a manifestation of Johnston's own fluctuating views on the British Empire and cartography, interacting with a host of institutionally contingent authorial relations and issues such as credibility, sourcing and financial concerns. The cases of Lugard and Livingstone, coupled with the limited cartographic outlets available to such men, confirm that this constellation of authorial relations was a key feature of the era.

Johnston's experience also reiterates the importance of inter-institutional circulation in shaping British mapping, although the nature of this process, and the institutions that functioned like an *'entrepôt'* for Johnston's work, differ from that associated with the Second Boer War (Chapter 6). The sharing of Johnston's maps occurred over longer periods of time (up to two years) and was principally governed by Johnston, who sought to minimise costs and maximise the impact of his cartography. This contrasts the map circulation during the Second Boer War which occurred much more promptly (within two months), and was driven by the mutual desperation for maps of South Africa.

In highlighting the mobility and the mutability of Johnston's maps, this study confirms that these maps had complex 'life-histories' that require examination and it feeds into recent theoretical work on maps as on-going processes (Chapter 2). Many of Johnston's maps were "subject to altered understandings, revisions and differing enactments" as they were circulated between and within government offices, the RGS and Bartholomew firm. This had material consequences for the maps, in addition to the implications for their 'meaning' forecast by cartographic theorists.⁴⁶³ In doing so, this paper illustrates how studying the circulation and attendant appropriation of maps using models such as Darnton's communication circuit is one fruitful way of blurring cartographic production and consumption, explicating the on-going use of maps, and embracing their 'ambiguities'. To study the 'Administrative Divisions of Uganda' map used in Johnston's *Uganda Protectorate* book (1902) without considering its circulation and prior authorship/ versions, for example, would be to miss the involvement of eight known men, omit the agency of a further ten draughtsmen/ engravers/ lithographers, neglect crucial stories in its creation, and overlook the significance of its content.

⁴⁶³ Harris and Harrower 2006, p. 4; Hanna and Del Casino Jr., 2003.

Synthesis and Conclusions

Introduction

The overarching goals of my research have been to question the dominant oversimplified 'picture' of British mapping of Africa between *c.*1880 and *c.*1915, and to reflect on how we should conceive of, and study, this cartography in ways that embrace its complexity and variability. Chapters 2 and 3 evaluated extant conceptual and contextual literature on this topic and found that it typically focused too heavily on power-relations, official institutions, and map content; engaged with restrictive and overly homogeneous concepts of imperialism; and analysed maps as static and fixed reflections of almost exclusively imperialistic collusions.

Each of the empirical studies presented in this thesis – on the Bartholomew map-making firm, the cartography of the Second Boer War, and the maps associated with Sir Harry H. Johnston – variously addressed these issues. This was undertaken by: analysing the work of four map-making institutions in addition, and in comparison, to British government offices; investigating what sorts of institutionally contingent issues, discourses and concerns influenced maps and mapmaking beyond any generic 'imperial' zeitgeist; examining the 'life-cycles' of maps in addition to their content; and considering how different cartographic institutions functioned. These chapters consequently contradicted the extant literature – which, by comparison, constructed an over-simplified and overly homogeneous picture of the British mapping of the 'Scramble for Africa' – and created new narratives of the three topics studied which emphasise their complexity and institutional variability.

Rather than re-iterate the conclusions specific to these topics, however, this final chapter draws together the different strands of the thesis in order to provide collective and broader conclusions about the complex and varied nature of the British mapping of

Africa between *c.*1880 and *c.*1915. These points were evidenced and discussed in the papers and were elaborated on in the chapter conclusions.

This chapter is divided into five parts. The first considers what the empirical studies tell us about the content of maps of Africa during the late nineteenth and early twentieth centuries. By studying in detail the production of maps, this thesis has advanced new perspective on how maps came to be the way they are, and what they really reflect. The second section discusses how – in studying not only map content, but also production, consumption and, where possible, use – this thesis offers new perspective on the nature of maps as objects, and their life-cycles during this era. The third section illustrates how the thesis proposes a more nuanced understanding of map-making institutions during the late nineteenth and early twentieth centuries and reflects in particular on how this informs our perceptions of popular cartographic institutions. Each of these sections considers how we may conceive of these phenomena, summarises the supporting findings across the chapters, and reflects on the significance of this in relation to extant literature. The final two sections reflect on the limitations of the thesis and consider the implications of its findings for future research.

The Content of Maps: Production and Representation

British maps of Africa produced between *c.*1880 and *c.*1915 were not simply repositories of geographical knowledge, ‘imperial’ machinations or authorial certainty. This thesis has illustrated and discussed how map production was a complicated process and, as a result, the maps of this era need to be seen as highly variable manifestations of manifold material, intellectual and redactive processes specific to this period and to their institutional provenance. In this, the thesis corroborates recent arguments that cartography was more complex and variable than has hitherto been studied and is irreducible to simply ‘imperial’ during the period studied.⁴⁶⁴ It goes beyond general forecasts, however, to elucidate which issues variously shaped map making and content

⁴⁶⁴ Akerman, 2009; Edney, 2009a; Driver, 2010.

Firstly, maps engaged with a host of 'ideological clusters' of imperialism. All three empirical studies illustrate how cartography was used by a range of individuals and institutions to engage with a plethora of issues. The Bartholomew firm's output was characterised by its multiplicity. Chapter 5 introduced 15 different map genres produced by the firm, ranging from war maps to tourist maps and from missionary maps to orographic maps. Chapter 6 discussed how maps of the Second Boer War engaged with a host of different discourses including 'enemy' aggression, British obligation and territorial expansionism. Chapter 7 identified 11 different map themes produced by Johnston which ranged from those promoting cultures of explorative adventure, to historical reflection, to pioneering survey. This variability, both within and between the papers, corroborates the work of scholars such as MacKenzie and Porter (Chapter 3) who conceive of imperialism during this era as a multifaceted collection of discourses, and it contradicts much of the extant literature that has engaged with a limited definition of imperialism as almost exclusively expansionist (Chapter 2).⁴⁶⁵

Ideological content and influences have, however, been secondary concerns in this thesis to better understanding the hitherto under-studied 'common discourses' and logistical factors shaping the maps (Chapter 2). Each of the empirical papers discussed the manifold concerns and factors that influenced the maps. In addition to logistical concerns, such as sourcing and available time/ funds, we can identify three main issues spanning the empirical papers: credibility, authorship and intended audiences. These factors not only contributed to the 'complexity' of cartography, as maps must be seen as the result of interactions between a variety of (imperial) discourses and these other factors/ influences.⁴⁶⁶ They are also what made the maps of this era so variable as these issues were highly institutionally contingent.

Cartographic credibility was not a fixed standard during the late nineteenth and early twentieth centuries: the variety of source material and the utilitarian nature of much of the mapmaking, in particular, made credibility a complex issue. Different map-

⁴⁶⁵ MacKenzie, 1984, 1986; Porter, 2006.

⁴⁶⁶ Porter, 2008.

making institutions had different ideas about what made a credible map, and particularly which sources were trustworthy. Mapmakers worked hard, in their own ways, to try to authenticate the contents of the maps – principally in their selection and promotion of sources, the deployment of ‘scientific’ features, and in appeals to named authors. Chapter 5 illustrated how the Bartholomews’ output was influenced by their hierarchizing of source material which, at least ostensibly, privileged governmental cartography. Chapter 6 discussed how institutionally specific concerns for credibility – principally the extent to which different institutions felt the need to make maps credible, and their perspectives on the relative merits of field and governmental sources – played a key role in shaping the representation of the Second Boer War. Chapter 7 elucidated how Johnston’s maps were re-authored, in part, depending on how credible the different institutions deemed his work, and to ensure the maps conformed to institution-specific principles of credibility. Credibility, aligned to concerns for reputation, was one of the most influential factors shaping the institutional variability of Johnston’s work.

These findings contradict the pervasive notion that Victorian and Edwardian map-users simply adopted the “standard scientific model of knowledge and cognition” and thus whole-heartedly believed in the inherent credibility of maps as ‘truthfully’ reflecting a real and objective reality (Chapter 2). This view has tended to undermine the need to study the nuances of credibility underpinning cartography.⁴⁶⁷ The thesis has shown, by contrast, that Victorian and Edwardian mapmakers were not convinced of their audiences’ unquestionable acceptance of maps’ veracity and so worked hard to bolster the credibility of their maps. In this, the thesis connects with literature by book historians and historians of science which has emphasised the need to understand the making of credibility and creditworthiness as a historically and spatially contingent process that fundamentally shaped the production of knowledge.⁴⁶⁸

⁴⁶⁷ Harley 1989b, p. 3. On the ‘Scramble for Africa’, see Huggan, 1989; Bassett, 1994; Driver, 2000; Heggund, 2012. Credibility has been addressed by some map historians, such as Withers (2005) and Anderson (2009), but it remains under-studied overall, particularly for imperial maps which have so strongly been linked to empiricist notions of cartography (Chapter 2).

⁴⁶⁸ Johns, 1998; Secord, 2004.

Authorship of maps was a complex and contingent process shaping the cartographic representation of Africa. Chapter 4 illuminated the tendency amongst historians of cartography to attribute map content only to named author(s) and to see mapmakers as synonymous with imperialists. Questions of authorship were foregrounded in Chapter 7 on Johnston and were raised with respect to the Bartholomew firm in Chapter 5. The examples illustrated that – through sourcing, editing and circulation – many more people were involved in the making of maps than just the named author(s), and that these people had different ideas and vested interests which often worked in opposition to each other. Authorial relations were not fixed: Johnston's experience illustrated how they differed – particularly in the levels of authorial control afforded him – depending on whether he was working with the Bartholomew firm, governmental offices or the RGS. The Bartholomews' records reveal how the firm's authorship was specific to each patron.

Understanding authorship is significant not only for appreciating the precariousness of attributing a map to an individual, but also because it was an active process in and through which maps were changed. Censorship and changes to political boundaries and orthography through this authorship were especially rife during the period of study. The examples of the 'Bartholomews'' political maps in Chapter 5 and 'Johnston's' work in Chapter 7 proved that the work of all those people involved in the production of a map was manifest in the map content.

These findings contradict the pervasive notion that Africa was simply "sliced through by the pen of the mapmaker" or by politicians using maps as tools to enact its partition.⁴⁶⁹ Rather, maps need to be seen as the result of negotiations between multiple authors, and as carriers of these manifold relationships. Very little has been written about the authorship of maps in this period, and more generally. This reconceptualisation instead connects with recent work by book historians that has argued the need to bring authorial "relationships that lie within and behind printed

⁴⁶⁹ Harley, 1991, cited in Andrews 2001, p. 226.

works” into sharper focus in order to better understand the conditions of print’s making and the true nature of its content.⁴⁷⁰

The audiences for which maps were intended to be supplied also played an important role in shaping map content. Chapter 5 discussed the Bartholomew firm’s perceptions of the lack of critical appreciation of cartographic quality in Britain and the role this played in stifling its progress towards better maps. Chapter 6 exposed how the different intended audiences for the cartography of the British War Office, newspapers and Bartholomew firm shaped these institutions’ representations of the Second Boer War, particularly with respect to the stances on the conflict and how much effort was deemed necessary. Chapter 7 illustrated how Johnston often tailored his maps to suit the institutions to which he intended to submit them, and how individuals within these institutions then re-authored his work so that it was appropriate for their own intended audiences. This was most marked when the Foreign Office and RGS altered Johnston’s political representations owing to the fact that governmental officials and diplomats from other countries, particularly Germany, may potentially have found them inflammatory. Map-making institutions ultimately tailored their maps to the real and perceived demands of their audiences. In this, intended audiences were some of the most influential factors shaping the content of the maps studied. How this finding relates to recent scholarship that questions our conceptions of the categories of author and reader, and of production and consumption, is discussed below.

Whilst it was not my aim to question the nature of British imperialism *per se*, this thesis connects with such issues. The conceptions of maps discussed in this section may be appropriately connected to recent scholarship on the nature of imperialism as they recognise and embrace an understanding of imperialism not as a fixed and assured encounter with Africa but as a heterogeneous assemblage of practices whose material expression – in the form of maps in this instance – reflects a multitude of discourses and processes. Chapter 2 introduced the notion, propounded principally by Edney, that

⁴⁷⁰ Withers and Keighren 2011, p. 561; Mayhew, 2007a.

imperialism and cartography were 'mutually constitutive'. This thesis corroborates the interaction between these phenomena: they were both influenced by, and influential upon, each other and a host of other 'common discourses' and concerns.⁴⁷¹

The Nature of Maps: Mobility, Mutability and Life-cycles

British maps of Africa were mobile and mutable objects that were potentially re-used and re-produced in different ways across different settings during the late nineteenth and early twentieth centuries. The 'complexity' of maps and mapping during this period thus arises not only through maps' complicated production, and the fact their content reflects a plethora of issues and processes; but also in relation to maps as material objects with life-cycles.

Chapters 2 and 4 introduced the importance of studying the circulation and 'life-histories' of maps, and Chapter 3 raised the possibility of there being more interaction between map-making institutions in Britain than has hitherto been examined. Cartographic mobility is one of the dominant themes of the thesis and is crucial for understanding the British cartography of the late nineteenth and early twentieth centuries. All three empirical studies contain instances of the inter- and intra-institutional re-use and sharing of maps. Chapter 5 discussed the significance of the Bartholomew firm's position amongst manifold 'imperial trajectories' through which cartographic information and maps were moved to and from the firm. Chapter 6 exposed how the circulation and sharing of maps between the IDWO, *Glasgow Herald, Graphic*, and Bartholomew firm was one of the key processes enabling these institutions to map the Second Boer War. Chapter 7 illustrated in detail how Johnston's maps were circulated around the Foreign Office, IDWO, RGS and Bartholomew firm, and how fifteen of his maps were re-used and re-produced inter-institutionally. It is unfortunately not possible to summarise a 'typical' life-cycle or route taken by maps in this era. These networks were only partially established and were usually constructed contingently,

⁴⁷¹ Edney, 2009a. See Chapter 5 in particular on this interaction, and Porter, 2008.

depending on: who, or what, was instigating the circulation, the perceived credibility of maps, and the time-scales by which maps were needed. The process differed markedly between that inaugurated by the Second Boer War, and that instigated by Johnston.

In all instances, however, maps were not just mobile; they were also mutable. As maps were moved both within and between institutions they were changed, not least according to new standards of credibility, the demands of new intended audiences, and the redaction imposed by new authors/ readers discussed above. This mutability was indicated in the first two empirical chapters: the Bartholomew firm amended incoming sources and edited existing maps when re-using them for different purposes; and the maps of the Second Boer War were changed markedly as they were circulated between institutions. Questions of mobility were examined in detail in Chapter 7 where I showed how it was possible to trace the intra- and inter- institutional circulation of Johnston's work and exposed how the 'same' map took multiple forms as a result. This, I argue, may be interpreted as a pluralisation and problematization of the authorship of maps.

The mobility and mutability of these maps were products of the era. The paucity of maps, the reluctance of most institutions to spend money on cartography, and the overlap of people between institutions and spheres – discussed in Chapter 3 – necessitated, prompted and enabled this circulation and re-use of maps. The mutability of maps reflected the variability of this period with regards to stances on Britain's involvement with Africa, perceptions of what makes a 'good' and credible map, available resources, and intended audiences. It was the fact that maps were repeatedly changed and re-interpreted to comply with these varying needs and standards that made them so mutable. Such circulation was much more than just something that happened during this era. The 'mobilisation' of maps was crucial in enabling institutions and individuals to produce their cartography: they were ultimately reliant on this system whereby maps' cumulative 'local' making (discussed above) had extra-local consequences.

These findings also connect with broader theoretical debates. Firstly, they support the significance of circulation as a complex and influential process in its own right, and one that represents much more than just the dissemination of maps. In particular, they corroborate the work of scholars such as Secord (Chapter 4), who have argued that historic knowledge and artefacts cannot be seen as simply local and static; they were mobile and this mobility entailed their appropriation.⁴⁷² Political boundaries were most frequently altered on the late nineteenth and early twentieth century British maps of Africa, although no aspect of the maps was beyond appropriation, including the physical geography of Africa, the events of the Second Boer War, and African orthography. In this, the findings also relate to recent scholarship amongst cartographic theorists on the nature of maps as objects. The thesis provides further evidence against the traditional notion of the 'fixity' of map content by showing how British maps of Africa were not fixed at the moment of production. Instead, the thesis supports Pickles' notion of maps as "unstable and complex texts" and confirms, for the first time in this historical context, how "maps may be continually reproduced with changes in context" as they were perpetually made and re-made^{both} epistemically and materially.⁴⁷³

Finally, by recognising the significance of intended audiences in influencing map content (above), and that maps were not static or fixed, the thesis corroborates the interdisciplinary body of recent scholarship that has sought to blur the traditional binary of production *or* consumption and author *or* reader, in favour of considering the process of production *and* consumption, and author *and* readers. The thesis does not support a full disintegration of this traditional dualism: maps, the thesis has shown, were produced by authors (albeit many of them) who imprinted on maps their institutionally contingent views and concerns; and maps were 'read' and used by people in ways that could not evade this authorial intention. However, my studies have also elucidated how maps were at once consumed *and* (re-)produced as they were moved, and users became producers not only in their influence on map production, but also in their capacity to re-

⁴⁷² Edney, 2009a; Secord, 2004.

⁴⁷³ Pickles 2004, cited in Kitchin *et al.* 2009, p. 15; Hanna and Del Casino Jr. 2003, p. xv.

produce maps and alter their meaning and content. The work of Del Casino Jr. and Hanna is especially salient here: British maps of Africa need to be understood as perpetually providing new (re)presentations, new moments of production *and* consumption, and authoring *and* reading during the late nineteenth and early twentieth centuries.⁴⁷⁴

Map-making Institutions: their Workings and Roles

Map-making institutions in Britain between *c.*1880 and *c.*1915 were not simply sites of production: they are better conceived of as ‘dynamic localities’ and ‘centres of calculation’ – theories borrowed from the history of the book and the history of science, respectively. Across the papers, it was illustrated that each of the six institutions studied – the Bartholomew firm, War Office, Foreign Office, *Glasgow Herald*, *Graphic*, and RGS – constituted a discrete site that “both exhibited and was constructed by particular clusters of representations, practices and skills” and not only functioned to produce maps, but also served as a site through which maps were circulated, hierarchized, amassed, edited, stored, and consumed *and* (re)produced in specific ways.⁴⁷⁵

Both the theories of dynamic localities and centres of calculation emphasise the importance of also understanding such sites in relation to the broader networked entrepôts of which they are a part. Through the inter-institutional circulation of maps (above), all of the papers provide evidence of when, how, and why, map-making institutions functioned collectively during the period of study. The thesis consequently corroborates recent work in the history of science which has shown that whilst British ‘imperial’ institutions functioned as centres of calculation, they cannot be “assumed to be the end of the line where all the further analytical work was performed”, but must, rather, be seen as “particular locales that fit into a larger, distributed pattern of knowledge generation necessary for the whole project to succeed.”⁴⁷⁶ Appreciating this is

⁴⁷⁴ Del Casino Jr. and Hanna 2006, p. 36.

⁴⁷⁵ Johns 1998, p. 59; Latour, 1987.

⁴⁷⁶ Dritsas 2005, pp. 50–52.

necessary in order to understand how different institutions contributed to projects – such as the cartographic reporting of the Second Boer War and Harry H. Johnston’s collection of maps – whose remit extended beyond that typically associated with these institutions.

It is also only when we look at institutions in these ways that we can really appreciate their relative roles in mapping Africa between c.1880 and c.1915. In particular, the thesis illuminates the role played by popular map-making institutions that have hitherto been overlooked (Chapter 3). The Bartholomew firm’s work was significant not only in its quantity of output (producing c.2.5 million maps of Africa between 1880 and 1915). Chapter 5 discussed how the firm was situated as part of numerous distributed networks of influential clients and institutions that constitute the broader ‘imperial’ project and archive. Chapters 6 and 7 then allowed us to directly compare the Bartholomew firm’s work and roles to those of other institutions. These studies revealed that the firm was typically freer from the constraints of censorship and concerns with international relations than governmental offices and ‘unofficial’ institutions such as the RGS. It was also more willing to afford authorial control to its clients than these other institutions. As a result, the Bartholomew firm played specific roles in both of the projects examined: its maps of the Second Boer War engaged with the politics of the conflict that were not represented by the Government. For Johnston, the Bartholomew firm was the only institution that allowed him to map Africa as he wished; it thus represented a significant opportunity for him, and played a largely liberating role in his cartography.

The thesis has also shed new light on the work of newspapers and found that they engaged more substantially with mapping Africa during the late nineteenth and early twentieth centuries than extant analyses suggest.⁴⁷⁷ Chapter 6 discussed how the *Glasgow Herald* and *Graphic* produced c.300 maps of the Second Boer War between them, many of which were carefully crafted to create specific narratives of the conflict. Chapter 5 illustrated how the Bartholomew firm received large, and usually unique, orders for

⁴⁷⁷ Stone, 1995; Heffernan, 2009.

Africa maps by a range of newspapers throughout the period; and both of these studies illustrate how newspaper maps served as sources for other institutions' cartography. Commercial map-publishers and newspapers must thus be recognised not only as producing different cartographic representations of Africa comparative to other institutions, but also as providing different opportunities, and as both influenced by, and influential upon, the broader cartographic project.

Limitations and Reflections

In the introduction to the thesis I discussed the benefits of constructing the study in the form of journal papers: this approach has fostered in-depth analyses of the complexity and variability of maps and mapmaking that are individually tailored to the topics and findings, whilst still accessing a breadth of insight into the period. This method nevertheless poses several challenges, including the word limits and stylistic restrictions imposed by editorial guidelines, and the fact that each paper was 'pulled' in a different direction by the various demands of editors and reviewers, and the different opportunities of the archival materials. The main limitation, however, is the fact that, whilst the papers themselves are comprehensive, the broader conclusions of this thesis are ultimately based on three empirical case-studies that were only in part constructed to work together. There is also no easy way to ascertain how representative these instances are of the broader issues offered by way of conclusion.⁴⁷⁸ 'Scaling up' from these instances must thus be done with care; the inclusion of material from other institutions, case-studies and stances may well alter these conclusions. In particular, these studies have not engaged with the technical developments in mapping and surveying during this period. Nevertheless, the arguments that British cartography of Africa produced between c.1880 and c.1915 constitutes a diverse collection of mobile and mutable maps which reflected a host of issues, and that book history theories and under-used archival

⁴⁷⁸ Assessing this is rendered more problematic by the fact that the Second Boer War and Johnston were selected for study precisely because they were unusual in quantity and content comparative to the rest of the Bartholomew firm's output (Chapter 4).

materials can play a role in better understanding this, are amply demonstrated and discussed in this thesis such that they may be seen as robust conclusions.

Chapter 4 introduced the notion that, in undertaking my archival research, I constructed by own archive of material that informed my papers and conclusions. To quantify this, I: examined the work of six institutions, across 13 repositories; documented *c.*530 different maps; deconstructed 43 maps, of which 17 have been discussed in the thesis; traced the origins (manuscript versions and/ or redactive notes and letters) of *c.*84 maps; followed the circulation of *c.*62 maps; examined 132 reviews; and consulted an estimated 1000 items of correspondence. Even so, the archive that is my thesis contains several gaps and limitations. Firstly, some maps are missing, including: 86 orders for Bartholomew maps, the 26 despatch maps which are known to have informed 28 of the IDWO maps of the Second Boer War, eight printed versions of these IDWO maps, and at least six RGS draft maps of Johnston's work.

Secondly, much of the contextual history of maps and information on their life-cycles could not be located. This was largely lost through the processes of extraction, discussed in Chapter 4, wherein correspondence and editorial materials were divorced from the map by contemporaneous users and archivists. Information on the production of maps and their life-cycles is consequently often irretrievable, in part, since sources were destroyed because they were not considered important, or are held in unknown locations that are not cross-indexed to the maps. I conducted a lot of what Dritsas calls "arduous sleuthing" to try to find and reconnect such sources in order to reconstruct the making of maps but this was met with mixed success.⁴⁷⁹ Records of the movement of maps were also not diligently kept, probably as this process was so regular it was not deemed worthy of documentation. I therefore relied on tracing the circulation of maps individually – often through trial and error – rather than relying on its documentation. This was achieved, albeit often only partially, for *c.*62 maps, although I did not attempt this for every map.

⁴⁷⁹ Dritsas 2005, p. 51. Specific archival limitations are detailed in each of the papers.

The papers are also limited by the difficulties of securing information on map use and interpretation. It would have been highly desirable to assess how the Bartholomew firm's maps informed contemporaneous decision-making, or how Victorian audiences developed different perspectives on the Second Boer war from the varying cartographic images, or how the re-authorship of Johnston's maps influenced diplomatic relations, but this information was simply not available. I found some evidence of map-users leaving 'marks' of their engagement with maps.⁴⁸⁰ The Bartholomew firm recorded modifications in the margins of maps when editing sources, and the Foreign and War Offices made physical changes and editorial notes on the maps by Johnston and by the Bartholomew firm. These sources, along with reviews and correspondence, have informed the inferences made in this thesis about the use and interpretation of these maps at the time of their making. Such 'marginalia' and information on the general use and agency of maps is sporadic, however, and I have been reluctant to offer much analysis in this sense without these sources owing to the recent scholarship that has emphasised the difficulty of reconstructing how contemporaneous audiences *constructed* their own meanings from maps, which were not fixed (above), and inevitably differ from our interpretations as modern commentators.⁴⁸¹

This binary between my modern assessment of maps and institutions, compared to what contemporaneous interpretations might have been, is most acute when studying map interpretation, but it is not limited to it. This dualism runs through all of my work and constitutes the final limitation of the study. Every effort has been made to understand the maps in relation to the era – informed, not least, by the contextual work in Chapter 3, and from conducting extensive archival research to ensure analyses were derived principally from evidence rather than inference – but my work is necessarily influenced by current conceptions of cartography and its study. Elucidating how maps were complex manifestations and mobile and mutable objects ultimately connects to

⁴⁸⁰ This contrasts Jacob's claim (1996, p. 192) that "when people look at maps they leave no visible marks on the maps themselves" (see Chapter 4).

⁴⁸¹ This is not to undermine other scholars' interpretations in this respect, but to draw attention to the risk of misinterpretation when inferring contemporaneous interpretations and uses of maps.

how we, as historians, conceive of the cartography of this era rather than how Victorian and Edwardian Britons viewed their maps.

Implications for Future Research

One of the most significant implications of this thesis for future research is how it has shown that the Bartholomew firm played a significant and unique, yet interconnected, role in British mapping during the late nineteenth and early twentieth centuries. The Bartholomew Archive has also been confirmed as a particularly rich and comprehensive repository that is already well structured – by the Bartholomews themselves, and by archivists – for linking maps to the redactive processes behind and within them, and for tracing the movement of maps to, within, and from, the firm.⁴⁸² This thesis has provided a comprehensive examination of the firm's work. But it also encourages further research – using Chapter 5 as a platform – to examine the firm's involvement in other projects to do with mapping Africa such as other events (Figure 5.4), the 1:1 million map of Africa project, and missionary cartography. In addition, it points to the possibilities for research beyond this period, particularly after the 1920s when the Bartholomew Archive becomes still richer and more comprehensive, particularly in its economic sources. Chapter 5 illustrated how the firm's mapping of Europe increased substantially in 1914 and 1915. Examining the Bartholomews' cartography of WWI in a similar manner to the study of the Second Boer War, and with respect to Heffernan's study of the work of geographical societies during this conflict, could be an especially fruitful avenue.⁴⁸³

In illustrating that British cartography of Africa produced between c.1880 and c.1915 is more variable than traditionally assumed, this thesis should pave the way for further research bringing a 'geography' to analyses of this, and other, eras. The institutional spatiality of British mapping investigated in this thesis is but one of many factors contributing to the construction of a nuanced British cartographic history of

⁴⁸² This in part reflects the fact that the Bartholomew Archive is the only repository consulted that pertains to a specifically cartographic institution; maps were a smaller component of the other institutions/ individuals, and thus their archives are not so well structured with respect to maps.

⁴⁸³ Heffernan, 1996, 2000.

Africa. There are other possible 'geographies' that could be analysed. Drawing on recent scholarship on the contingencies of British imperialism for inspiration – which has been fruitful in this study – possible avenues include *directly* comparing how maps differ in relation to African territory, British regional geographies, and political stance.⁴⁸⁴

In the reconceptualisations of maps and institutions presented above, however, the main implications of this thesis extend beyond the temporal and geographical contexts of this thesis. In summary, historians of cartography need, where possible, to deal with the complex and contingent processes of maps' making – particularly their processes of redaction, concerns with credibility, and intended audiences – and consider how these manifold processes, people and concerns are manifest in map content. This is also to engage with the many 'instabilities' of cartographic print – such as the category of 'author'/ 'mapmaker' and the boundaries between institutions – and embrace the blurring of production and consumption. In addition, we must now take seriously maps' mobility and only apparent fixity as a form of print culture. This is not to suggest that maps cease to be examined and deconstructed for their content, even though this has not been the focus of this thesis. It is to argue that such analysis must be performed with great care, and through the diligent study of map-making institutions' archives.

The thesis has implications for *how* future studies could engage with such issues. In particular, it helps to re-cast and to clarify the emergent relationship between book history and map history. This thesis provides ample evidence in support of using theories from the history of the book to aid our understanding of the complex content and life-cycles of historical cartography. This is evident in the use of Mayhew's typology as a framework for analysis (Chapter 4), in the deployment of book history theories across the papers, and in the extent to which the conclusions presented in this chapter connect with literature from this field. Whilst Edney proposes applying such theories by "simply replac[ing] the key term in each [theory/ model] with 'mapping' or 'cartography'", this thesis suggests such an approach is inappropriate.⁴⁸⁵

⁴⁸⁴ Porter, 2006; Thompson, 2005. See Chapter 3.

⁴⁸⁵ Edney 2011, p. 337; Crampton, 2001.

Historians of cartography would do well to engage with the language and theories of book historians that would aid in: examining institutions as dynamic localities; problematizing and situating authorship; foregrounding concerns with contingent credibility; engaging with questions of production and consumption, the nature and relations of which are increasingly blurred; analysing maps as complex manifestations of numerous site-specific issues; and bringing a 'geography' to such analyses. There is scope, too, for using specific theories, exemplified through the application of Johns' 'dynamic localities' to the Bartholomew firm (Chapter 5), and Darnton's 'communication circuit' to the making of Johnston's maps (Chapter 7). This thesis encourages map historians to continue to draw on both of these theories. Forcing cartographic phenomena into such frameworks originally developed for a very different type of 'text', however, could undermine their application and potentially misrepresent the nature of the maps and processes under study. Map historians need to adapt these theories for application to maps and reflect on their pertinence, rather than using them prescriptively.

The ways in which this thesis connects with recent debates amongst book historians, and cartographic theorists, regarding the 'blurring' of the traditional binary of production and consumption has been discussed above. The practical implications of these findings for future studies are worth elucidating here, however. These papers in part corroborate those scholars who argue that we cannot fully capture the blurring of these historical processes: there is a disjuncture between the production and consumption of maps in the archival record.⁴⁸⁶ This thesis has illustrated, however, how tracing the circulation of maps can serve as a means of engaging with, and accounting for, this blurring when we consider this movement as an active process wherein mutable maps were at once consumed, reproduced and appropriated.

Finally, the thesis has two main implications for archival research. The first is its promotion of the value of lesser-studied cartographic materials such as editorial

⁴⁸⁶ Culcasi 2008, p. 51; Dwyer, 2003; Parker, 2006; Crampton and Krygier, 2006.

correspondence and notes, private letters, original manuscript versions of maps, reviews, newspaper cuttings and promotional material. It is through these 'epimap' sources that we may garner insight into the discourses, processes, people and motivations shaping the map that cannot necessarily be read off the map itself. These materials have been invaluable in this thesis: some of the most instructive sources include the surprisingly astute newspaper interviews with the Bartholomew firm, informal editorial notes amongst War Office officials on how to represent the Second Boer War, and Johnston's private letters to Keltie. The availability of these sources varies enormously between institutions and archives, however. The newspapers studied unfortunately had almost no known surviving material of this kind with the exception of adverts and editorial notes within the content of the papers. The Bartholomew Archive, The National Archives and RGS-IBG collections, by contrast, have proved to be the richest in these materials for this thesis and I would direct further research to make use of these repositories and materials.

The thesis also highlights the utility of under-used quantitative analysis in the history of cartography. The Bartholomew firm's production ledgers are extremely valuable and can be used to interrogate commercial map publishers' output over time, theme and (immediate) clientele. Whilst similar records could not be found for the other institutions studied, counting and coding the number of map titles in these instances was still valuable. Conclusions must be cautiously drawn from such material, particularly with regards to cause and effect, but the thesis provides ample evidence of the value of quantitative analyses. Map producers' archives must be engaged with carefully, however, mindful of the fact that such sites were complex centres whose functions were more complex than simply map production, and that the distinctions between production and consumption, and producers and users, are increasingly blurred.

The second archival implication from this thesis is to be aware of, and account for, the fact that few archives are structured to aid the sorts of cartographic analyses I am proposing – work that reconstructs the production and authorship of maps, and traces

their circulation and use. Archives rarely cross-index maps to their contextual correlates and even other versions, and there are few, if any, ready-made methods that aid reconciling these documents, particularly across different archives.⁴⁸⁷ In recognising this, however, scholars should approach this research mindful of the fact that, as Edney warns, it takes “time and a certain creativity” to trace maps’ life-cycles in archives, and requires thinking beyond the structures of these repositories to find and reconnect relevant documents, and trace the movement of maps.⁴⁸⁸

In some instances, the complications may be insurmountable; this thesis encountered its fair share of ‘dead-ends’. Nevertheless, my work has shown that it is possible – across a range of topics and archives – to reconstruct the geographies of the production and authorship of maps, and to trace their circulation. It is certainly feasible that scholars within the history of cartography, and related fields, can attend to these issues more commonly than is currently attempted, and thus advance our understanding of the complex and nuanced nature of the British cartography of Africa between *c.*1880 and *c.*1915, and in other historical and geographical contexts.

⁴⁸⁷ It is for these reasons that, in the appendices and carto-bibliographies that follow, I make explicit links between the references for maps and their attendant correspondence/ editorial material across archives. This may aid future research.

⁴⁸⁸ Edney 2011, p. 338.

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- Wood, D. and Fels, J. (2008) *The Natures of Maps: Cartographic Constructions of the Natural World*, Chicago: University of Chicago Press.
- Wood, D. and Krygier, J. (2009) "Maps", in Kitchin, R and Thrift, N. [Eds.] *International Encyclopaedia of Human Geography*, Vol. 1, Oxford: Elsevier, pp. 421–430.
- Young, E. (2010) "Scramble for Africa", In Appiah, A. and Gates, H.L. [Eds.] *Encyclopaedia of Africa*, Vol. 1, Oxford: Oxford University Press, pp. 359–360.

Appendix 1

Bartholomew Firm (Chapter 5) Materials

Primary Unpublished Sources

Emboldened text indicates that sources were cited in Chapter 5. Other entries informed my comments and conclusions but were not explicitly cited.

Bartholomew Archive

Production Ledgers

Acc.10222/Business Records/281	Jobs register July 1888 – Dec. 1899.
Acc.10222/Business Records/282	Jobs register Jan. 1900 – Dec. 1925.
Acc.10222/Business Records/297	Day book no.2 Jan. 1875 – Aug. 1880.
Acc.10222/Business Records/298	Day book no.3 Sept. 1880 – Mar. 1885.
Acc.10222/Business Records/299	Day book no.4 1885 – June 1888.
Acc.10222/Business Records/300	Day book no.1 July 1888 – Dec. 1892.
Acc.10222/Business Records/301	Day book no.2 Jan. 1893 – Mar. 1897.
Acc.10222/Business Records/302	Day book no.3, Mar. 1897 – Apr. 1902.
Acc.10222/Business Records/303	Day book no.4, Apr. 1902 – Sept. 1907.
Acc.10222/Business Records/304	Day book no.5 Sept. 1907 – Mar. 1913.
Acc.10222/Business Records/305	Day book no.6 Mar. 1913 – July 1919.
Acc.10222/Business Records/621	Invoice book no.1 July 1888 – Dec. 1892.
Acc.10222/Business Records/622	Invoice book no.2 Jan. 1893 – Sept. 1898.
Acc.10222/Business Records/623	Invoice book no.3 Oct. 1898 – Sept. 1904.
Acc.10222/Business Records/624	Invoice book no.4 Oct. 1904 – June 1910.
Acc.10222/Business Records/625	Invoice book no.5 July 1910 – Aug. 1915.
Acc.10222/Business Records/626	Invoice book no.6 Sept. 1915 – June 1921.

Outgoing Correspondence

Acc. 10222/Business Record/749	Old private letter book, letters written by John George Bartholomew, 1891 – 1894, 1903.
Acc. 10222/Business Record/750	Letter book Jan. – Feb. 1885, Mar. 1888 – Mar. 1892.
Acc. 10222/Business Record/755	Letter book Sept. 1890 – Sept. 1891.
Acc. 10222/Business Record/766	Letter book May 1901 – Apr. 1902.
Acc.10222/Business Record/837	Letter book No. 1 1900 – 1903.
Acc.10222/Business Record/838	Letter book No. 2 1903 – 1906.
Acc.10222/Business Record/839	Letter book No. 3 1906 – 1911.
Acc.10222/Business Record/840	Letter book No. 4 1911 – 1913.
Acc.10222/Business Record/841	Letter book No. 5 1913 – 1916.

Incoming Correspondence

Acc.10222/Business Record/920	Album of autograph letters, 1857, 1869 – 1905.
Acc.10222/Business Record/921	Letters received by J.G. Bartholomew 1884 – 1894.
Acc.10222/Business Record/922	Letters received by J.G. Bartholomew 1895 – 1900.
Acc.10222/Business Record/941	Correspondence: J.M. Dent and Co. 1910 – 1914.
Acc. 10222/Business Record/951	Correspondence: Keltie, Sir John Scott [RGS] 1891, 1894, 1902 – 1910, 1916 – 1919.
Acc. 10222/Business Record/976	Letters received, Jan.1899 – Dec. 1900.
Acc. 10222/Business Record/977	Letters received, Jan. – June 1901.
Acc. 10222/Business Record/978	Letters received, July – Dec. 1901.
Acc. 10222/Business Record/979	Letters received, Jan. – Mar. 1902.
Acc. 10222/Business Record/990	Letters received, 1905 – 1906.
Acc. 10222/Business Record/996	Letters received, April 1908 – Feb.1909.
Acc. 10222/Business Record/1007	Letters received, Aug. – Nov. 1912.
Acc. 10222/Business Record/1016	Letters received, July – Aug. 1914.
Acc. 10222/Business Record/1023	Letters received, Oct. – Dec. 1915.

Newspaper cuttings and reviews

- Acc.10222/Business Records/1881** **Reviews 1: album of cuttings of reviews of Bartholomew maps and atlases, 1866 – 1894.**
- Acc.10222/Business Records/1885** **Album of reviews and articles on maps and atlas publications by other publishers, 1890 – 1897.**
- Acc.10222/Business Records/1886** **Album of reviews and articles on maps and atlas publications by other publishers, 1896 – 1899.**
- Acc.10222/Business Records/1887 Newspaper cuttings, mainly reviews, 1888 – 1992.
- Acc.10222/Business Records/1889 Newspaper cuttings (general) c.1872 – 1892.
- Acc.10222/Business Records/1890 Newspaper cuttings (general), 1903 – 1916.
- Acc.10222/Business Record/1894** **Newspaper cuttings (general), 1862 – 1922.**
- Acc.10222/Business Record/1895** **Newspaper cuttings (loose), c.1879 – 1964.**

Other

- Acc.10222/Business Record/1861 Miscellaneous items, c.1870 – 1985.
- Acc.10222/Business Record/1863 Prospectuses, covers, flyers and other publicity for Bartholomew atlases and maps, c.1865 – 1982.
- Acc.10222/Business Record/1864.** **‘Prospectuses, etc. Bartholomew maps and Atlases’, c.1884 – 1895.**

Cartographic materials

- Acc.10222/Printed Maps/3 Loose sheets of Bartholomew maps, 1826 – c.1980.
- Acc.10222/Printing Record/146** **Johnston’s Black – White–Yellow map and RSGS Political map of Africa.**
- Acc.10222/Reference Maps/10** **Africa: series map sheets references.**
- Acc.10222/Reference Maps/11** **Africa: single map sheets 1875 – 1980.**
- Acc.10222/Reference Maps/12** **Africa: single map sheets 1895 – c.1920.**
- Acc.10222/Reference Maps/26 Proof maps and Plans: Printed sheets, engravings, tracings, 1895 – 1971.

Appendix 2

Second Boer War (Chapter 6) Materials

Primary Unpublished Sources

Emboldened text indicates that sources were cited Chapter 6. Other entries informed my comments and conclusions but were not explicitly cited.

Bartholomew Archive

Production Ledgers

Acc.10222/Business Records/281	Jobs register, July 1888 – Dec. 1899.
Acc.10222/Business Records/282	Jobs register, Jan.1900 – Dec. 1925.
Acc.10222/Business Records/302	Day book No. 3, Mar. 1897 – Apr. 1902.
Acc.10222/Business Records/303	Day book No. 4, April 1902 – Sept. 1907.
Acc.10222/Business Records/623	Invoice book no.3, Oct. 1898 – Sept.1904.

Correspondence

Acc.10222/Business Records/764	Letter book No. 12 Mar. 1899 – Mar. 1900.
Acc.10222/Business Records/765	Letter book No. 13 Mar. 1900 – May 1901.
Acc.10222/Business Records/766	Letter book No. 14 May 1901 – April 1902.
Acc.10222/Business Records/767	Letter book No. 15 Apr. 1902 – Mar. 1903.
Acc.10222/Business Records/976	Letters received, Jan. 1899 – Dec. 1900.
Acc.10222/Business Records/977	Letters received, Jan. – June 1901.
Acc.10222/Business Records/978	Letters received, July – Dec. 1901.
Acc.10222/Business Records/979	Letters received, Jan. – March 1902.
Acc.10222/Business Records/980	Letters received, April – May 1902.
Acc.10222/Business Records/981	Letters received, June – Sept. 1902.
Acc.10222/Business Records/982	Letters received, Oct. – Dec. 1902.

Reviews and Newspaper cuttings

Acc.10222/Business Records/1886

Album of reviews and articles on maps/
atlas publications by other publishers,
1896 – 1899.

Acc.10222/Business Records/1887

Newspaper cuttings, mainly reviews,
1888 – 1992.

British Library (Colindale Newspaper branch)

Glasgow Herald Microfilms

M.17030	1 Jan. – 30 Mar. 1901.
M.17031	1 Apr. – 29 Jun. 1901.
M.17032	1 July – 30 Sept. 1901.
M.17033	1 Oct. – 30 Dec. 1901.
M.17034	1 Jan. – 31 Mar. 1902.
M.17035	1 Apr. – 30 Jun. 1902.
M.17036	1 July – 30 Sept. 1902.
M.17037	1 Oct. – 30 Dec. 1902.

Graphic Microfilms

MLD.46 '85	Jan. – Apr. 1901.
MLD.46 '82	May – Aug. 1901.
MLD.46 '80	Sept. – Dec. 1901.
MLD.46 '73	Jan. – Apr. 1902.
MLD.46 '74	May – Aug. 1901.
MLD.46 '75	Sept. – Dec. 1901.

British Library (St. Pancras)

Reports

- DS OP-RC/423 v.1. *Royal Commission on the War in South Africa. Report and Minutes of Evidence (Vol. 1).*
- DS OP-RC/424 v.1. *Royal Commission on the War in South Africa. Report and Minutes of Evidence (Vol. 2).*
- Gen.Ref.Coll. South African War Commission Summary booklet.
8156.c.76

Officers' materials

- MSS Eur F 108/53 White Collection – Despatches, dated 2 Nov. and 2 Dec 1899.
- MSS Eur F 108/64 **White Collection – Notes about publishing his despatches.**
- MSS Eur F 108/60 Maps, used during the Siege of Ladysmith.

The National Archives

PRO 30 Series: Papers of Governmental officials

- PRO 30/40/3 Correspondence: Ardagh's misc. private and official papers.
- PRO 30/40/16 **Ardagh's Official and private papers: South African War.**
- PRO 30/67/6 Correspondence: Brodrick, Secretary of State for War.
- PRO 30/67/7 **Correspondence: Brodrick, Secretary of State for War.**
- PRO 30/67/8 **Correspondence: Brodrick, Secretary of State for War.**

WO 32 Series: War Office and successors: Registered Files (General Series)

- WO 32/7863 Reports on situation and defence of Natal.
- WO 32/7874 Despatch from Gatacre on action at Stromberg 10 Dec 1899.
- WO 32/7882 General White's Report on operations in the Colony.
• *Original versions of maps IDWO 1487 b and c extracted.*
- WO 32/7887 **Report by General Buller on action at Colenso.**
• *Information on map IDWO 1457.*

WO 32/7891 Reports by General Lord Methuen and local commanders on operations at Belmont and Enslin.

- *Original versions of maps IDWO 1495 a–c extracted.*

WO 32/7945 **Report by Coleridge: Question of publication of dispatches of officers commanding Naval Bridges at battles of Colenso and Grspan.**

- *Information on map IDWO 1457.*

WO 32/7984 Dispatch from Major General Baden-Powell on siege of Mafeking, 13 Oct. 1899 to 17 May 1900.

- *Maps IDWO 1486 a–c included in report.*

WO 32/7996 Lord Roberts' dispatch covering operations from May – June 1900.

WO 32/8000 Report by Lord Roberts on operations. June – Oct. 1900.

WO 32/8096 Dispatches relating to General Buller's advance across Tugela River and capture and evacuation of Spion Kop with intention of relieving Ladysmith: Publication of dispatches.

WO 105 series: War Office: Papers of Lord Roberts

WO 105/5 **Despatches and reports of operations in South Africa by C-in-C and commanders in the field.**

WO 105/6 **Despatches and reports of operations in South Africa by C-in-C and commanders in the field.**

WO 105/7 Despatches and reports of operations in South Africa by C-in-C and commanders in the field.

WO 105/8 Despatches and reports of operations in South Africa by C-in-C and commanders in the field.

WO 108 series: War Office: Correspondence and Papers, South African War

WO 108/376 History of telegraph operations during the South African War.

WO 108/409 Lord Roberts' correspondence: 12 Dec. 1899 – 4 June 1900.

WO 108/410 Lord Roberts' correspondence: 5 June – 5 Sept. 1900.

- WO 108/411 Lord Roberts' correspondence: 5 Sept. 1900 – 1 Jan. 1901.
- WO 108/415 Statement of the IDWO, particularly concerning its work prior to the South African War.

National Army Museum

- 1993-07-14 **Papers relating to Censorship during the Boer War.**
- 1996-09-46 Reports on Survey and Mapping Sections in South Africa.

Carto-bibliography: Second Boer War Maps

*IDWO maps*ⁱⁱ

No.	Date	Name	Reference
1367	1899	Orange Free State and Transvaal (28 sheets, listed as Nov.)	BL: Maps.MOD. IDWO 1367
1445	Aug. 1899	Diagram Transvaal and Orange Free State, Shewing Special Maps by Intelligence Division	BL: Maps.MOD. IDWO 1445
1448a	Sept.1899	Sketch of Position N.W. of Ladysmith	BL: Maps.MOD. IDWO 1448
1448b	Sept.1899	Sketch of Position N.E. of Ladysmith	BL: Maps.MOD. IDWO 1448
1448c	Sept.1899	Sketch of Country Round Colenso	<i>Not found</i>
1448d	Sept.1899	Plan of Estcourt	<i>Not found</i>
1449	Dec. 1899	Sketch map of Country Round Ladysmith	BL: Maps.MOD. IDWO 1449
1457	Jan. 1900	Sketch Map of Engagement on the Tugela near Colenso on 15 th December 1899	BL: Maps.MOD. IDWO 1457
1459a	Feb. 1900	Sketch of Belmont Engagement	BL: Maps.MOD. IDWO 1459

ⁱⁱ This list is adapted from Jewitt's (1992) carto-bibliography: it excludes two 'reproduction' sheets (IDWO 1526 and 1527) and adds IDWO 1468 which was missing from Jewitt's anthology.

1459b	Jan. 1900	Sketch of Country near Belmont Station	<i>Not found</i>
1459c	Jan. 1900	Sketch of Enslin Engagement 25 th November 1899	BL: Maps.MOD. IDWO 1459
1460	Feb. 1900	Rough Sketch of Country Round Magersfontein	BL: Maps.MOD. IDWO 1460
1463	Feb. 1900	Plan Showing the Position of the Proposed New Location and the Old Location, with reference to the Post Office, Johannesburg	BL: Maps.MOD. IDWO 1463
1465	Mar. 1900	Sketch showing General Gatacre's Operations on 10 th December 1899	BL: Maps.MOD. IDWO 1465
1468	Mar. 1900	Eye Sketch of Enemy's Position West of Spion Kop January 22 nd –25 th 1900 (Map)	BL: Maps.MOD. IDWO 1468
1468a	Mar. 1900	Eye Sketch of Enemy's Position West of Spion Kop January 22 nd –25 th 1900 (View from A)	BL: Maps.MOD. IDWO 1468
1468b	Mar. 1900	Eye Sketch of Enemy's Position West of Spion Kop January 22 nd –25 th 1900 (View from B)	BL: Maps.MOD. IDWO 1468
1468c	Mar. 1900	Eye Sketch of Enemy's Position West of Spion Kop January 22 nd –25 th 1900 (View from C)	BL: Maps.MOD. IDWO 1468
1469	Mar. 1900	Rough Sketch of Site and Capture of Armoured train 15 th Nov. 1899	BL: Maps.MOD. IDWO 1469
1472a	April 1900	Sketch of Country Round Paardeberg	BL: Maps.MOD. IDWO 1472
1472b	April 1900	Sketch of Camp near Paardeberg, Shewing works and Protected Bivouacs	BL: Maps.MOD. IDWO 1472
1472c	April 1900	Rough Sketch of Boer trenches on Banks of Modder	BL: Maps.MOD. IDWO 1472

1472d	April 1900	Koorn Spruit	BL: Maps.MOD. IDWO 1472
1473	April 1900	Natal, Plan to Illustrate Action at Rietfontein 24 th Oct. 1899	BL: Maps.MOD. IDWO 1473
1474a	April 1900	Sketch Illustrating the Fight at Lombard's Kop Oct. 30 th 1899	<i>Not found</i>
1474b	April 1900	Reconnaissance Survey. Ostfontein and Poplar Grove	<i>Not found</i>
1475	April 1900	Sketch Map of South Africa	BL: Maps.MOD. IDWO 1475
1478	May 1900	Pretoria and Surrounding Country	BL: Maps.MOD. IDWO 1478
1483a	Nov. 1900	Plan of the Country near Spion Kop. To Show the Position of Troops After Reinforcements had been Sent to Spion Kop 24.1.1900	BL: Maps.MOD. IDWO 1483
1483b	Nov. 1900	As 1483b. To Show Positions of Troops Before Retirement on the 26.1.1900	BL: Maps.MOD. IDWO 1483
1486a	Aug. 1900	Siege of Mafeking. Sketch to Show the State of Defence at the Time of Relief	TNA: WO 32/ 7984
1486b	Aug. 1900	Siege of Mafeking. Sketch map to Illustrate the Positions of Troops on the Western Frontier of the Transvaal Shortly After the Beginning of the Siege	TNA: WO 32/ 7984
1486c	Aug. 1900	Siege of Mafeking. Sketch of Typical Boer Field Work Employed	TNA: WO 32/ 7984
1487b	June 1900	Sketch illustrating the Fight at Talana Hill on 20 th October 1899	BL: Maps.MOD. IDWO 1486

1487c	June 1900	Sketch illustrating the Fight at Eland's Laagate on 21 st October 1899	BL: Maps.MOD. IDWO 1487
1495	Aug. 1900	Pretoria. To Accompany F.M. Lord Roberts, Despatch dated Aug. 14 th 1900	BL: Maps.MOD. IDWO 1495
1506	Dec. 1900	Map of South Africa Shewing Principal Triangulation completed December 1900	BL: Maps.MOD. IDWO 1506
1512	Jan. 1901	Sketch Map Shewing Relative Sizes of S. African Colonies and British Isles	BL: Maps.MOD. IDWO 1512
1514	Jan. 1901	Signal Communications of 5 th Division at Noon 24/10/00	BL: Maps.MOD. IDWO 1514
1520	Feb. 1901	Sketch map, Operations VIIIth Division, May to Aug st	BL: Maps.MOD. IDWO 1520
1550a	Feb. 1902	Skeleton Map of S. Africa (Northern Section) Shewing the Blockhouse Lines up to Mar. 15. 1902 and Boer Positions (in blue) on Mar. 8. 1902	BL: Maps.MOD. IDWO 1550
1550b	Feb. 1902	Skeleton Map of S. Africa (Southern Section) Shewing Blockhouse Lines up to Mar. 15. 1902 and Boer Positions (in blue) on Mar. 8. 1902	BL: Maps.MOD. IDWO 1550
1550c	Feb. 1902	Skeleton Map of S. Africa (Northern Section) Shewing Existing and Proposed Railways	BL: Maps.MOD. IDWO 1550
1558	Mar. 1901	Spion Kop and Vaal Krantz	BL: Maps.MOD. IDWO 1558
1559	Mar. 1901	Spion Kop (West) and Venters Spruit	BL: Maps.MOD. IDWO 1559
1560	Apr. 1901	Natal. Proposed districts (1901)	<i>Not found</i>

1564	May. 1901	Colenso and Pieters	BL: Maps.MOD. IDWO 1564
1568	June 1901	Magersfontein (Enlarged from a Sketch by N ^o 1 F ^d Survey Section)	BL: Maps.MOD. IDWO 1568
1586	Mar. 1902	Sketch Map of South Africa Shewing Districts in Cape Colony Occupied by Boers	<i>Not found</i>
1598	Mar. 1902	Eye Sketch of Boer Position on 28.1.00. from Zwartz Kop	BL: Maps.MOD. IDWO 1586
1618	May 1902	Sketch Illustrating a Memorandum on Nicholson's Nek	BL: Maps.MOD. IDWO 1618
1621	May 1902	Battle of Gras Pan, November 25 th 1899	BL: Maps.MOD. IDWO 1621
1622	May 1902	Battle of Magersfontein	<i>Not found</i>
1623	June 1902	Battle of Belmont November 23 rd 1899	BL: Maps.MOD. IDWO 1623
1628	Sept. 1902	Battle of Modder River. November 28 th 1899	BL: Maps.MOD. IDWO 1628
1669	Oct. 1902	Sketch map of Cape Colony. Shewing Military Pigeon Post Stations 1902	BL: Maps.MOD. IDWO 1669

Graphic newspaper maps

British Library 19th Century Newspaper Database

Map Title	Date
Map Showing the Railway Lines in South Africa	30 Sept. 1899
Distribution of the British and Dutch Elements in S. Africa	14 Oct. 1899
The Graphic Map of the Boer Republics	21 Oct. 1899
Position of Forces before the Battle of Dundee October 19	28 Oct. 1899
Position of Forces after the Battle of Dundee October 20	28 Oct. 1899
Position of Forces before the Battle of Elandslaagte, Noon, October 21	28 Oct. 1899
Position of Forces after the Battle of Elandslaagte, Evening, October 21	28 Oct. 1899
Map Showing the Railway Connection between Cape Colony and the Orange Free State	18 Nov. 1899
The Seat of War in South Africa: The Lines of Advance of the Three British Columns	16 Dec. 1899
Northern Frontier of Cape Colony, the Scene of Operations of Generals French and Gatacre	16 Dec. 1899
Plan of Kimberley and Beaconsfield	23 Dec. 1899
Map Showing the Relative Positions of the Boers under Cronje and Lord Methuen's Force	23 Dec. 1899

Map Showing the Attempted Passage of the River by General Buller on December 15 th	23 Dec. 1899
Map Showing the Operations of Generals Gatacre and French	23 Dec. 1899
<i>No title</i>	13 Jan. 1900
The Siege of Ladysmith	13 Jan. 1900
Relief of Ladysmith	20 Jan. 1900
Operations of Methuen, Wood, and French in the South-West Corner of the Orange Free State	20 Jan. 1900
Sketch map Showing the Country to the West of Ladysmith in which Generals Buller and Warren are Operating	27 Jan. 1900
Siege of Mafeking: Topographical Sketch Showing British and Boer Positions	3 Feb. 1900
Sketch Map of the Seat of War in the Orange Free State	24 Feb. 1900
The Relief of Ladysmith – Buller’s First Advance	10 Mar. 1900
The Relief of Ladysmith – Buller’s Second Advance	10 Mar. 1900
Buller’s Final Advance February 19 th – 28 th	10 Mar. 1900
<i>No title</i>	10 Mar. 1900

Rough Sketch of the Battle of Spion Kop	10 Mar. 1900
Sketch Plan Battle of Spion Kop	10 Mar. 1900
The Line of Lord Roberts's Advance from Jacobsdal to Bloemfontein	17 Mar. 1900
Plan of Ladysmith	7 Apr. 1900
Sketch Map Showing the Campaigns on the Western Frontier from the Orange Free State. Nov. 1899 – Mar. 1900	7 Apr. 1900
Map Showing the Advance from the North and the South for the Relief of Mafeking	21 Apr. 1900
Sketch Map Showing Lord Roberts's Operations to the South East of Bloemfontein	28 Apr. 1900
Facsimile of a Boer Plan of the Fight	5 May 1900
Boer Plan of Magersfontein found at Bloemfontein by an Officer	5 May 1900
Sketch Map Showing the Operations on the Western Frontier, in the Orange Free State, and Natal	19 May 1900
Relief of Mafeking: Sketch map Showing the Advance of the Relief Column	26 May 1900
View Looking North from Elands Laagte Showing the Positions taken up by General Clery's and General Warren's Divisions after the Shelling of our Camp by Boers on April 10	2 June 1900
Defence of Wepener: The Scene of Colonel Dalgety's Successful Resistance	9 June 1900

The Operations at Dewetsdorp: A Sketch from the Right of the Boer Position	9 June 1900
<i>No title</i>	16 June 1900
How Mr. Kruger 'Staggered Humanity'	16 June 1900
The Event of the Year – How Lord Roberts Wrote Bovril	29 Dec. 1900

British Library (Colindale Newspaper Branch)

Map Title	Date	Reference
Sketch Map to Illustrate the Line of De Wet's Advance through the Orange River Colony and the Invasion of Cape Colony by the Boers	5 Jan. 1901	BL MLD 46 85
Map Showing British Possessions	7 Sept. 1901	BL MLD 46 80
The Pursuit of Botha	19 Oct. 1901	BL MLD 46 80
Map of the Scene of Operations in South Africa, Showing the Lines of Blockhouses Constructed or in the Course of Construction	8 Feb. 1902	BL MLD 46 73
The Scene of the Reverse to Lord Methuen's Troops	15 Mar. 1902	BL MLD 46 73
Map Showing the Position of Ookiep, which has been Besieged	10 May 1902	BL MLD 46 74

Glasgow Herald newspaper maps

- This list is not included owing to its size (250 maps). List available on request.

Bartholomew maps

Map Title	Client	Ref. (Acc.10222/...)
War Map of the Natal frontiers	<i>Glasgow Herald</i>	PR/30c/ folio 223a
Bartholomew's Reduced Survey (Tourist) Map	Bartholomew Publication	PR/30c/ folio 228a PR/31a/ folios 9 & 30b PR/31b/ folio 101b PR/32a/ folio 83b PR/32b/ folio 188b
' <i>The Strand</i> ' War Map	George Outram/ <i>The Strand</i>	PR/30c/ folio 232a
Maps Illustrating the Transvaal situation	<i>Glasgow Herald</i>	PR/30c/ folios 203b & 206a
Bartholomew's War (Special) Map	Bartholomew Publication	PR/30c/ folios 213 & 221 PR/31a/ folios 3b, 5a, 5b, 14
Map of the Seat of War	C.A. Pearson	PR/31a/ folio 51.

Seat of War	Creswicke/ T.C. and E.C. Jack	PR/31a/ folio 51b PR/32a/ folios 21b & 55b PR/33a/ folio 39a PR/34a/ folio 51a
British South Africa in 1800 and 1900	Prof. Meiklejohn	PR/31a/ folio 71a
Seat of War – Natal Frontier	Steevens/ Wm. Blackwood	PR/31a/ folio 48b & 54b
Seat of War of the Seat of War in South Africa	Steevens/ Wm. Blackwood	PR/31a/ folios 32b, 38b, 48b & 54b
General Map of British South Africa	Creswicke/ T.C. and E.C. Jack	PR/31a/folios 11b & 51b PR/32a/ folio 45b PR/33a/ folio 39a
Cape Colony, Natal and Transvaal	Relfe Bros.	PR/32a/ folio 59b
South Africa	John Walker and Co.	PR/32a/ folios 60b & 91a
General Map of South Africa – 1902	de Wet/ A. Constable and Co.	PR/34a/ folio 31b
Commercial Map of South Africa	Creswicke/ T.C. and E.C. Jack	PR/34a/ folio 32b

Bartholomews' maps in the Government (The National Archives, Kew)

For copies of the Bartholomew maps use by Foreign Office and IDWO, see:

Map

Copy of the Reduced Survey map with MS additions showing districts placed under Martial Law

Copy of the Reduced Survey map with MS additions giving numbers and location of fighting men

Copy of the Reduced Survey map extracted from PRO 30/40/16

Copy of the Special/ War map extracted from PRO 30/40/16

Reference

TNA: FO 925/1184

TNA: FO 925/1185

TNA: MPI 1/719/1

TNA: PRO 30/40/16/5

Appendix 3

Harry H. Johnston (Chapter 7) Materials

Primary Unpublished Sources

Emboldened text indicates that sources were cited in Chapter 7. Other entries informed my comments and conclusions but were not explicitly cited.

Bartholomew Archive

Correspondence

Acc.10222/Business Record/761	<i>British Central Africa</i> book – outgoing correspondence Dec. 1896 – Apr. 1897.
Acc.10222/Business Record/762	<i>British Central Africa</i> book – outgoing correspondence Apr. 1897 – May 1897.
Acc.10222/Business Record/763	<i>History of Colonization</i> book – outgoing correspondence Nov. 1898 – Feb. 1899.
Acc.10222/Business Record/766	<i>Uganda</i> book – outgoing correspondence Nov. 1901 – Apr. 1902.
Acc.10222/Business Record/978	<i>Uganda</i> book – incoming correspondence Nov. – Dec. 1901.
Acc.10222/Business Record/979	<i>Uganda</i> book – incoming correspondence Jan. 1901 – Mar. 1902.
Acc.10222/Business Record/980	<i>Uganda</i> book – incoming correspondence Apr. 1902.
Acc.10222/Business Record/767	<i>Nile Quest</i> book – outgoing correspondence Jan. – Mar. 1903.
Acc.10222/Business Record/768	<i>Nile Quest</i> book – outgoing correspondence Mar. – Aug. 1903.
Acc.10222/Business Record/983	<i>Nile Quest</i> book – outgoing correspondence Jan. – Mar. 1903.

Acc.10222/Business Record/984	<i>Nile Quest</i> book – outgoing correspondence Apr. – Jun. 1903.
Acc.10222/Business Record/985	<i>Nile Quest</i> book – outgoing correspondence July – Aug. 1903.
Acc.10222/Business Record/776	<i>Britain Across the Seas</i> book– outgoing correspondence Oct. 1909 – Mar. 1910.
Acc.10222/Business Record/999	<i>Britain Across the Seas</i> book– incoming correspondence Oct. 1909 – Jan. 1910.
Acc.10222/Business Record/1000	<i>Britain Across the Seas</i> book– incoming correspondence Feb. – Mar. 1910.
Acc.10222/Business Record/777	<i>Opening up Africa</i> book– outgoing correspondence July – Nov. 1910.
Acc.10222/Business Record/1000	<i>Opening up Africa</i> book– incoming correspondence July – Aug. 1910.
Acc.10222/Business Record/1001	<i>Opening up Africa</i> book– incoming correspondence Sept. – Nov. 1910.
Acc.10222/Business Record/780	<i>Common Sense</i> book– outgoing correspondence Sept. 1912 – Jan. 1913.
Acc.10222/Business Record/1007	<i>Common Sense</i> book– incoming correspondence Sept. – Nov. 1912.
Acc.10222/Business Record/1008	<i>Common Sense</i> book– incoming correspondence Dec. 1912 – Jan.1913.
Acc.10222/Business Record/951	General corres: Keltie, Sir John Scott [RGS] 1891, 1894, 1902–1910, 1916–1919.
<u>Others</u>	
Acc.10222/Business Records/1885	Album of reviews and articles on maps and atlas publications by other publishers, 1890 – 1897.

- Acc.10222/Business Records/1886 Album of reviews and articles on maps and atlas publications by other publishers, 1896 – 1899.
- Acc.10222/Business Record/1887 Newspaper cuttings, reviews, 1888 – 1992.

Cambridge University Library Manuscripts Department

- Add.9702/1 Johnston papers. Letters to/ from his father.
- Add.9702/2 Johnston papers. Letters to/ from his mother.
- Add.9702/3 Johnston papers. Letters to/ from to Lily (his sister).
- Add.9702/4 Johnston papers. Letters to/ from John.
- Add.9702/5 Johnston papers. Letters to/ from various family members.
- Add.9702/6 Johnston papers. Misc. letters.

Churchill Archive Centre (Cambridge)

- STED/1/43 W.T. Stead papers Part II. Letters with Johnston, 1888–1908.

Kew Archive (Royal Botanic Gardens)

- AEX/3/1 East Africa Kilimanjaro Expedition 1881–1890. Misc.

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West Africa: Despatches

- FO 84/1762 Vice Consul in Cameroons. Johnston. 1886.
- *Original version of map WA.1.*
- FO 84/1839 Vice Consul in Cameroons. Johnston. 1887.
- *Map WA.2 extracted.*
 - *Original version of map WA.3.*
- FO 84/1881 Africa W. Coast, Oil Rivers. Johnston, Hewett. 1888 (Vol. I).
- *Map WA.4 extracted.*
- FO 84/1882 Africa W. Coast, Oil Rivers. Johnston, Hewett. 1888 (Vol. II).
- *Maps WA.6 and WA.8 extracted.*

West Africa: Reports

- FO 403/ 73 Affairs in the River Niger and Adjoining Districts. 1886 – July 1887.
- FO 403/ 74 Affairs in the River Niger and Adjoining Districts. 1888.
- FO 881/ 5309 Report. Visit to Cameroons River. June 17 1886.
- FO 881/ 5502 Report. Survey of Rio del Rey and Anglo-German Boundary. 1887.
- FO 881/ 6004 Memo. Administration of the Oil Rivers. Aug. 11 1890.

East and Central Africa: Despatches

- FO 84/1968 Portugal. Consuls at Mozambique. Despatches. 1889.
- FO 84/1969 Portugal. Consuls at Mozambique. Despatches. 1889.
- FO 84/2050 Portugal. Consuls at Mozambique. Despatches 1–25. 1890.
 • *Original version of map BCA.1.*
- FO 84/2051 Portugal. Consuls at Mozambique. Despatches. 1890. Jan. –Apr.
 • *Original versions of maps BCA.3 and BCA.6.*
 • *Maps BCA.2, BCA.4 and BCA.5 extracted.*
- FO 84/2114 Central Africa Despatches. 1891
 • *Original versions of maps BCA.9 and BCA.10.*
- FO 84/2197 Central Africa Despatches. 1891
 • *Original versions of maps BCA.11, BCA.12 and BCA.13.*
- FO 2/54 Johnston. Despatches. 1–40. Jan. – Aug. 1893.
 • *Original versions of maps BCA.14, BCA.15 and BCA.16.*
- FO 2/55 Johnston. Despatches. 41–70. Sept. – Dec. 1893.
 • *Original version of map BCA.17.*
 • *Maps BCA.18 and BCA.19 extracted.*
- FO 2/66 Johnston. Despatches. 1–44. Jan. – June 1894.
 • *Maps BCA.20, BCA.21, BCA.22, BCA.23, BCA.24, BCA.25
 extracted.*

- FO 2/67 Johnston. Despatches. 45–94. 1894 July – Oct.
- FO 2/68 Johnston. Despatches. 95–115. 1894 Nov. – Dec.
- FO 2/69 Drafts. Despatches. 1895.
- FO 2/88 Johnston. Despatches. 1–84 . 1895. Jan – Jun.
- *Map BCA.26 extracted.*
- FO 2/89 Johnston. Despatches. 85–151. 1895. July – Dec.

East and Central Africa: Reports

- FO 403/157 Affairs North of Zambesi River. Correspondence 1891.
- FO 403/174 Affairs North of Zambesi River. Correspondence 1892.
- FO 403/185 Affairs North of Zambesi River. Correspondence 1893.
- FO 403/197 Affairs North of Zambesi River. Correspondence Jan. – Jun. 1894.
- FO 403/198 Affairs North of Zambesi River. Correspondence July – Dec. 1894.
- FO 403/212 Affairs North of Zambesi. Correspondence Jan. – June 1895.
- FO 403/213 Affairs North of Zambesi. Correspondence July – Dec. 1895.

Tunisia: Correspondence

- FO 27/ 3345 Diplomatic, Consular, Commercial and Treaty Correspondence, 1897.
- FO 27/3419 Diplomatic, Consular, Commercial and Treaty Correspondence, 1898.
- FO 881/7134X Tunis: Report. Commerce and General Progress. May, 1899.

Uganda: Despatches

- FO 2/204 Uganda. Despatches, 220–280. 15 Sept. – Dec. 1899.
- *Original versions of maps U.1, U.2 and U.3*
- FO 2/297 Uganda. Despatches, 1–65. Jan. – 21 Mar. 1900.
- *Maps U.4, U.5, U.6, U.7 and U.8 extracted.*

- FO 2/298 Uganda. Despatches, 66–101. 23 Mar. – 27Apr. 1900
 • *Maps U.9, U.10, U.11, U.12 and U.13 extracted.*
- FO 2/299 Uganda. Despatches, 102–194. Apr. – Aug. 1900.
- FO 2/300 Uganda. Despatches, 195–277. Sept. – Dec. 1900.
- FO 2/666 Official Nomenclature and Administrative Divisions in East Africa and Uganda. 1900–1902.
 • *Information on redaction of U.13*

Uganda: Reports

- FO 403/283 East Africa Further Correspondence Oct. – Dec. 1899.
- FO 403/294 East Africa Further Correspondence Apr. – June 1900.
- FO 403/295 East Africa Further Correspondence July – Sept 1900.
- FO 403/308 East Africa Further Correspondence Jan. – Mar. 1901.
- FO 403/309 East Africa Further Correspondence Apr. – June 1901.
- FO 403/310 East Africa Further Correspondence July – Sept 1901.
- FO 403/311 East Africa Further Correspondence Oct. – Dec. 1901.
- FO 881/7405 Zanzibar. Further Correspondence East Africa. Apr. – June 1900.

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Additional Papers (Map Room) Series

- AP/32 Map Room/ Drawing Dept. Correspondence 1884 – 1896.**
- AP/34 Map Room/ Drawing Dept. Correspondence 1893 –1895.
- AP/35 Map Room, Map Drawing Dept. Instructions from the President to the Librarian (?1890).
- AP/36 Map Room/ Drawing Dept. Library Committee, 1913–1922.
- AP/38 Map Room/ Drawing Dept. Memoranda.

Correspondence

- CB7/50 H.H. Johnston letters 1883 – 1910.**
- CB8/47 H.H. Johnston letters 1911 – 1919.**
- CB8/50 J.S. Keltie Collection 1870 – 1926.
- CB8/51 J.S. Keltie Collection 1885 – 1913.

LB 1881 – 1888	Letter Book. Outgoing Correspondence. 1881 – 1888.
LB 1888 – 1894	Letter Book. Outgoing Correspondence. 1888 – 1894.
LB 1893 – 1916	Letter Book. Outgoing Correspondence. 1893 – 1916.
LB 1894 – 1911	Letter Book. Outgoing Correspondence. 1894 – 1911.
SCC/86	Papers relating to Johnston's travels in Africa, S. America and the Caribbean.

Referee Reports

JMS/1/132	Johnston: The Niger Delta (1888).
JMS/2/222	Johnston: The River Congo (1883).
JMS/2/240	Johnston: Kilimanjaro (1885).
JMS/2/268	Johnston: British Central Africa (1890).
JMS/2/309	Johnston: British Central Africa Protectorate (1895).
JMS/2/340	Johnston: Uganda (1902).

Royal Commonwealth Society Archives (Cambridge)

MC.15	A – Letters received by Sir and Lady Johnston, 1894–1928.
MC.16	B – Sketchbooks. C – Notes for various publications. D – Diaries, 1878–1887, with a fragment of 1900.
MC.17	E – Diary of the Congo expedition of 1883. F – Original drawings, photographs, and proofs of illustrations. G – Cape Town (Kimberley) office of the British South Africa Company. Letters to and from Johnston, 1891 – 1898 (Part I).
MC.18	G – Cape Town (Kimberley) office of the British South Africa Company. Letters to/ from Johnston, 1891 – 1898 (Part II).
MC.19	Misc. Letters to Sir H. Johnston 1879–1897.
MC.20	Misc. Letters to Sir H. Johnston 1897–1901.

Carto-bibliography: Harry H. Johnston's Maps

This carto-bibliography lists the maps Johnston produced with the Foreign and War Offices of the British Government, the RGS and the Bartholomew firm. A full list of Johnston's maps produced with other institutions is available on request.

This appendix is arranged chronologically and by African region in order to emphasise the overlap of material between institutions.

Congo

- 1882 – 1883: Johnston travelled in Angola and through a large section of the Congo with Lord Mayo, then with Africans.

	Institution	Map Title	Date	Reference
C.1	RGS ⁱⁱⁱ	The Congo River from its mouth to Bolobo to illustrate the Journeys of H.H. Johnston	Oct. 1883	PRGS, 5, p. 582.
C.2	RGS	Physical map of West Coast of Africa	Dec. 1883	PRGS, 5, p. 712.

Kilimanjaro

- 1884: Johnston was appointed leader of an 1884 scientific expedition to Mount Kilimanjaro by the RGS and British Association.

	Institution	Map Title	Date	Reference
K.1	RGS	Sketch map of Mt Kilimanjaro	Mar. 1886	PRGS, 7, p. 161.
		<i>FO: Map used in Kitchener's Despatch with MS amendments on map</i>	<i>30 June 1886</i>	<i>TNA: MPK 1/254/7</i>
		<i>FO: Map re-printed with amendments in Report of Kitchener's Zanzibar despatches</i>	<i>30 June 1886</i>	<i>TNA: MPK 1/160/6</i>

ⁱⁱⁱ RGS dates pertain to the date the map appeared in the Society's journal rather than at meetings.

West Africa

- Late 1885 – 1888: Vice Consul (and at times Acting Consul, predominantly for Hewett) of the Oil Rivers and the Cameroons

	Institution	Map Title	Date	Reference
WA.1	FO	[MS] Sketch map of the Cameroons Region illustrating its chief physical features	17 June 1886	TNA: FO 84/1762
		<i>FO: Printed version in FO library</i>	1886	TNA: FO 925/116
		<i>FO: Printed version in FO Confidential Reports / Volumes</i>	1886 & 1887	TNA: FO 403/73 TNA: FO 881/ 5309
WA.2	FO	[MS] Map of the Rio del Rey and the District lying between Old Calabar and the Cameroons Mountain	14 July 1887	TNA: FO 925/882
		<i>FO: Smaller Print in FO library</i>	1887	TNA: FO 925/1171
		<i>FO: Smaller print in FO Confidential Report</i>	1888	TNA: FO 881/5502
WA.3	FO	[MS] Sketch Map of the Lower Course of the Opobo River	11 Sept 1887	TNA: FO 84/1839
		<i>FO: Printed version included in FO Conf. Volume</i>	1887	TNA: FO 403/73
WA.4	FO	[MS] Sketch map of the Cross River by Acting Consul Johnston. Showing area previously under British protection and area added by recent treaties	9 Feb. 1888	TNA: MPK 1/135/1
		<i>FO: Printed version included in FO Conf. Vol.</i>	1888	TNA: FO 403/74
		<i>RGS Basis of RGS map (WA.5)</i>		

WA.5	RGS	[MS] West Africa. Map of the Cross River (Old Calabar) <i>FO:</i> Original sketch WA.4 sent to the FO and then printed (above)	July 1888 9 Feb 1888	PRGS, 10, p. 439.
WA.6	FO	Map of the Rio del Rey (Altered version of WA.2 above) <i>FO:</i> Circulated in 1888 FO Confidential Volume	23 Oct. 1888 1888	TNA: MPK 1/154/2 TNA: FO 403/73
WA.7	RGS	The Cameroons District showing the Bantu Borderland in West Africa	Oct 1888	PRGS, 10, p. 638.
WA.8	FO	[MS] Sketch map of the Rio del Rey and the rapids on the Cross River, showing proposed Anglo-German boundary and territory of the Calabar chiefs	23 Oct 1888	TNA: MPK 1/154/1
WA.9	RGS	Map of the Niger Delta by H.H. Johnston, and H. Sharbau <i>FO:</i> Imported from RGS in FO library. Additional MS colouring <i>FO:</i> Copy of RGS map in smaller scale in FO library <i>FO:</i> Smaller scale RGS map in FO library. MS additions of Oil Rivers Admin, Royal Niger Co. Territory boundaries <i>IDWO:</i> Basis for IDWO 718 (WA.10)	Dec. 1888 1889 1889 1889	PRGS, 10, p. 764. TNA: FO 925/889 TNA: FO 925/192 TNA: FO 925/193
WA.10	IDWO	The Niger Protectorate mainly based on maps made by Mr. H. H. Johnston. IDWO 718. <i>RGS:</i> Based on the RGS "Niger Delta" map (WA.9) <i>FO:</i> Printed version in Colonial Office	Feb. 1889 1889	TNA: FO 925/ 571 TNA: CO 700/ NIGERIA/6

East and Central Africa

- 1889 – 1896: Johnston was Her Majesty's commissioner and consul general for Mozambique and the Nyasa districts.

	Institution	Map Title	Date	Reference
BCA.1	FO	[MS] Map indicating “District already secured by Consul Johnston’s Treaties” and “country in which Treaty-making is going on”	7 Feb. 1890	TNA: FO 84/2050
BCA.2	FO	[MS] Sketch map of British Central Africa showing limits of district intended to be secured by treaties already made and in process of making <i>FO: Printed version included in Confidential Volume</i>	17 Mar. 1890 1891	TNA: FO 925/167 <i>FO 881/5966X FO 403/127</i>
BCA.3	FO	[MS] Map of River Shire showing extent of British Protectorate as secured by treaties <i>FO: Printed version included in Confidential Volume</i>	17 Mar. 1890 1891	TNA: FO 84/2051 <i>FO 881/5966X FO 403/127</i>
BCA.4	FO	[MS] Map of the Nyassa- Tanganyika plateau, 1889, showing Consul H.H. Johnston's journey <i>IDWO: Basis for IDWO 796 (BCA.5)</i>	17 Mar. 1890	TNA: FO 925/415
BCA.5	IDWO	Map of the Nyassa- Tanganyika plateau, 1889, showing Consul H.H. Johnston's journey IDWO 796 <i>FO: Amended from MS map submitted to the FO (BCA.4)</i>	April, 1890	TNA: FO 925/416

BCA.6	FO	[MS] Map of province of Mozambique, showing distribution of Portuguese Government	18 Apr. 1890	TNA: FO 84/2051
BCA.7	BART	British Central Africa: Black, White and Yellow	6 Nov. 1890	NLS: Acc.10222/ PR/146, f. 162b
BCA.8	RGS	Map of the Nyassa- Tanganyika plateau Reduced From Official Documents <i>IDWO: Based on IDWO 796 (BCA.5)</i>	Dec. 1890 <i>Apr. 1890</i>	PRGS, 22, pp. 740
BCA.9	FO	[MS] Sketch map of Milanji Region	27 June 1891	TNA: FO 84/2114
BCA.10	FO	[MS] Sketch Map of South Nyasa-land to illustrate relative portion of leading chiefs and slave-traders <i>FO: Printed version included in Confidential Volume</i>	24 Nov. 1891 <i>1892</i>	TNA: FO 84/2114 <i>TNA: FO 403/174</i>
BCA.11	FO	[MS] Sketch map of ITAWA, etc	13 Feb. 1892	TNA:FO 84/2197
BCA.12	FO	[MS] Sketch Plan of Tshiradzulu Mountain	11 Oct. 1892	TNA: FO 4/2197
BCA.13	FO	[MS] Sketch map of Shire Province Showing Caravan Routes and Great Coast Road to Quilmane <i>FO: Printed version included in Confidential Volume</i>	19 Oct. 1892 <i>1892</i>	TNA: FO 84/2197 <i>TNA: FO 403/174</i>

BCA.14	FO	[MS] Sketch map of Vice Consul Sharpe's Route from Lake Tanganyika to Lake Mweru and the R. Luapula, 1892 <i>FO: Printed version included in Confidential Volume</i>	2 Jan. 1893 1893	TNA: FO 2/54 TNA: FO 403/185
BCA.15	FO	[MS] Plan of Proposed Mikorongo Estate	5 Jan. 1893	TNA: FO 2/54
BCA.16	FO	[MS] "Extra Concession" diagram at Tshinde <i>FO: Printed version included in Confidential Volume</i>	5 June 1893 1893	TNA: FO 2/54 TNA: FO 403/185
BCA.17	FO	[MS] Sketch map of Northern Frontier of British Central Africa in the District between Lakes Tanganyika and Mweru. With inset "Sketch map of General boundary of Northern part of British Central Africa" <i>FO: Printed version included in Confidential Volume</i>	25 Sept. 1893 1893	TNA: FO 2/55 TNA: FO 403/185
BCA.18	FO	[MS] Sketch map of the British Central Africa Protectorate, Extent of Sanctioned Claims <i>FO: Compiled into IDWO 1023 (BCA.26)</i>	14 Oct. 1893	TNA: FO 925/615
BCA.19	FO	[MS] Sketch map of the British Central Africa Protectorate, Extent of Sanctioned Claims <i>FO: Compiled into IDWO 1023 (BCA.26)</i>	14 Oct. 1893	TNA: FO 925/615
BCA.20	FO	[MS] Eastern part of British Central Africa. Population and Race Distribution Map <i>BART: Version used in Bartholomew book (below)</i>	31 Mar. 1894 May 1897	TNA: FO 925/233/A

BCA.21	FO	[MS] Eastern part of British Central Africa. Slave Trade Map <i>BART: Version used in Bartholomew book (below)</i>	31 Mar. 1894 <i>May 1897</i>	TNA: FO 925/233/B
BCA.22	FO	[MS] Eastern part of British Central Africa. Rainfall Map <i>BART: Version used in Bartholomew book (below)</i>	31 Mar. 1894 <i>May 1897</i>	TNA: FO 925/233/C
BCA.23	FO	[MS] Eastern part of British Central Africa. Agricultural Map <i>BART: Version used in Bartholomew book (below)</i>	31 Mar. 1894 <i>May 1897</i>	TNA: FO 925/233/D
BCA.24	FO	[MS] Eastern part of British Central Africa. Administrative Divisions <i>BART: Version used in Bartholomew book (below)</i>	31 Mar. 1894 <i>May 1897</i>	TNA: FO 925/233/E
BCA.25	FO	[MS] Eastern part of British Central Africa. Orographical Map <i>BART: Version used in Bartholomew book (below)</i>	31 Mar. 1894 <i>May 1897</i>	TNA: FO 925/233/F
BCA.26	FO	[MS] Sketch map showing position of coal fields in West Shire District	15 June 1895	TNA: MPK 1/99/2
BCA.27	IDWO	Sketch map of the British Central Africa Protectorate, showing extent of sanctioned claims. IDWO 1023 <i>FO: Copied from original MS despatches (BCA.17 and BCA.18)</i> <i>RGS/ Bart Basis for RGS map (BCA.27) and Bartholomew maps (BCA.28 – BCA.33)</i>	Jan. 1894 <i>14 Oct. 1893</i> <i>Mar. 1895 & 1897</i>	TNA: FO 925/614

BCA.28	RGS	Map of the British Central Africa Protectorate. Prepared from a drawing compiled at the Intell. Div., War Office, for H.H. Johnston	Mar. 1895	GJ, 5, p. 215.
		CO: <i>Copy in the Colonial Office Map Library</i>	1895	TNA: CO700/ RHOD ESIAANDCENTRAL18
		IDWO: <i>Based on IDWO 1023 (BCA.26)</i>	Jan. 1894	
		BART <i>Basis for Bartholomew maps (BCA.28 – BCA.33)</i>	1897	
BCA.29	BART	Map of British Central Africa, showing approximate rainfall, navigability of rivers, etc	May 1897	<i>British Central Africa</i> book, p. 41.
		IDWO <i>Based on IDWO 1023 (BCA.26) and the RGS map (BCA.27)</i> and RGS	Jan. 1894 and Mar. 1895	
BCA.30	BART	Map of British Central Africa, showing orographical features	May 1897	<i>British Central</i> <i>Africa</i> book, p. 46.
		IDWO <i>Based on IDWO 1023 (BCA.26) and the RGS map (BCA.27)</i> and RGS	Jan. 1894 and Mar. 1895	
BCA.31	BART	Map of British Central Africa, showing Administrative Divisions	May 1897	<i>British Central</i> <i>Africa</i> book, p. 154.
		IDWO <i>Based on IDWO 1023 (BCA.26) and the RGS map (BCA.27)</i> and RGS	Jan. 1894 and Mar. 1895	

BCA.32	BART	Map of Shire Highlands	May 1897	<i>British Central Africa</i> book, p. 188.
BCA.33	BART	Map of British Central Africa, showing density of population and distribution of native tribes <i>IDWO Based on IDWO 1023 (BCA.26) and the RGS map (BCA.27) and RGS</i>	May 1897 <i>Jan. 1894 and Mar. 1895</i>	<i>British Central Africa</i> book, p. 392.
BCA.34	BART	Map of British Central Africa, showing Mission Stations and Foreign Settlers and Settlements <i>IDWO Based on IDWO 1023 (BCA.26) and the RGS map (BCA.27). and RGS</i>	May 1897 <i>Jan. 1894 and Mar. 1895</i>	<i>British Central Africa</i> book, p. 392.

Tunisia

- 1896 – 1898: Johnston was Consul General in Tunis.

	Institution	Map Title	Date	Reference
T.1	RGS	Sketch map of Southern Tunis to illustrate Sir Harry Johnston's journeys 1898	June 1898	<i>GJ</i> , 11, p. 692.

Misc.

- The following maps were used in Johnston's (1899) book *A History of the Colonization of Africa by Alien Races*

	Institution	Map Title	Date	Reference
HCA.1	BART	Africa as known to the Ancients	Jan. 1899	Book, p. 4.
HCA.2	BART	Muhammadan Africa	Jan. 1899	Book, p. 26.

HCA.3	BART	The Portuguese in Africa	Jan. 1899	Book, p. 60
HCA.4	BART	The Slave Trade	Jan. 1899	Book, p. 91.
HCA.5	BART	The French in Africa	Jan. 1899	Book, p. 145.
HCA.6	BART	The British in Africa	Jan. 1899	Book, p. 231.
HCA.7	BART	The Colonizability of Africa	Jan. 1899	Book, p. 275.
HCA.8	BART	Political Map of Africa in 1898	Jan. 1899	Book, End of Vol.

Uganda

- 1899 – 1901: Johnston was Special Commissioner for Uganda.

	Institution	Map Title	Date	Reference
U.1	FO	[MS] 'Sketch map to illustrate the text of this despatch' – details the arrangement of local districts in this eastern part of the Uganda Protectorate	14 Nov. 1899	TNA: FO 2/204
U.2	FO	[MS] Sketch Map of North-East Uganda Protectorate, showing Area from which it is proposed to exclude European and Arab Caravans temporarily	17 Nov. 1899	TNA: FO 2/204
U.3	FO	[MS] Sugota Game Reserve	20 Nov. 1899	TNA: FO 2/204
U.4	FO	[MS] Kavirondo Ugowe Bay Sketch Map, showing route of expedition against the Uyome Semi people	5 Feb. 1900	TNA: MFQ 1/262/1
		<i>FO: Printed version in Confidential Volume</i>	1900	TNA: FO 403/294

U.5	FO	[MS] Sketch map of the site and surroundings of proposed Capital in the Mau Plateau (Nyando Valley) compiled from Railway surveys and notes	18 Feb. 1900	TNA: MFQ 1/262/2
U.6	FO	[MS] Sketch Map showing relative position of Proposed Capital of East African Dominion and of Entebbe and Fort Portal, etc.	18 Feb. 1900	TNA: MFQ 1/262/3
U.7	FO	[MS] Uyome-Semi Expedition Dec. 1899	26 Feb. 1900	TNA: MFQ 1/262/4
U.8	FO	[MS] Map of Uganda Protectorate To Illustrate Sir H. Johnston's Agreement with Kingdom of Uganda	12 Mar. 1900	TNA: MFQ 1/262/5
		<i>FO: Printed version in multiple other reports/ volumes</i>	<i>July 1900 – Feb. 1901</i>	<i>TNA: MFQ 1/207 TNA: MFQ 1/222/1 TNA: MFQ 1/261–2</i>
		<i>FO: Lithographed Library version</i>	<i>1900</i>	<i>TNA: FO 925/4370</i>
		<i>FO: Base map originally published by the RGS</i>	<i>1899</i>	
U.9	FO	[MS] Map of Uganda Protectorate showing distribution of chieftainships among adherents of different religions in the Kingdom of Uganda	6 Apr. 1900	TNA: MPK 1/122/1

U.10	FO	[MS] Map of Uganda Protectorate to Illustrate the Average Altitudes and the Salubrity and Insalubrity of each district <i>IDWO: Compiled into IDWO 1485 (b)</i>	27 Apr. 1900 <i>July, 1900</i>	TNA: MPK 1/122/8 <i>TNA: MFQ 1/222/2 TNA: CO 700/EAST AFRICA9/2</i>
U.11	FO	[MS] Map of Uganda Protectorate Showing Relative Density of the Native Population and Settlements of Europeans etc. <i>IDWO: Compiled into IDWO 1485 (c)</i>	27 Apr. 1900 <i>July, 1900</i>	TNA: MPK 1/122/9 <i>TNA: MFQ 1/222/4 TNA: FO 925/172</i>
U.12	FO	[MS] Map of Uganda Protectorate Showing Approximate Rainfall and Degree of Navigability of Lakes and Rivers <i>IDWO: Compiled into IDWO 1485 (a)</i>	27 Apr. 1900 <i>July, 1900</i>	TNA: MPK 1/122/10 <i>TNA: MFQ 1/222/3</i>
U.13	FO	[MS] Map of Uganda Protectorate Showing Proposed Administrative Divisions <i>IDWO: IDWO 1485 (d) printed version by Ardagh</i> <i>IDWO: Printed version altered by Johnston, FO and Ardagh</i> <i>IDWO: Map used in the official report (IDWO 1485 d)</i>	27 Apr. 1900 <i>July 1900</i> <i>Sept. 1900 – Feb. 1901</i> <i>July 1901.</i>	TNA: MPK 1/122/11 <i>TNA: MPK 1/123/2</i> <i>TNA: MPK 1/123/3</i> <i>TNA: FO 925/7761</i>

U.14	IDWO	Map of Uganda Protectorate showing Rainfall and Degree of Navigability of Lakes and Rivers. From a map accompanying Sir H. Johnston's despatch No 101, dated April 27th 1900. IDWO 1485(a) <i>Based on U.12</i>	July 1900	TNA: MFQ 1/222/3
U.15	IDWO	Map of Uganda Protectorate showing the Average Altitudes and the Salubrity and Insalubrity of each district. From a map accompanying Sir H. Johnston's despatch No 101, dated April 27th 1900. IDWO 1485(b) <i>Based on U.10</i>	July 1900	TNA: MFQ 1/222/2
U.16	IDWO	Map of Uganda Protectorate showing Relative Density of the Native Population and Settlements of Europeans etc. From a map accompanying Sir H. Johnston's despatch No 101, dated April 27th 1900. IDWO 1485(c) <i>Based on U.11</i>	July 1900	TNA: MFQ 1/222/4
U.17	IDWO	Map of Uganda Protectorate showing Proposed Administrative Divisions. From a map accompanying Sir H. Johnston's despatch No 101, dated April 27th 1900. IDWO 1485(d) <i>Based on U.13</i>	July 1900	TNA: MFQ 1/222/1
U.18	RGS	Map of the Uganda Protectorate to illustrate the paper of Sir Harry Johnston <i>Based on IDWO 1485d (U.13)</i> BART: <i>Used to inform Bartholomew maps (U.19 – U.20 and U.21 – U.26)</i>	Jan. 1902 <i>July 1901</i>	<i>GJ, 19, p. 39.</i> TNA: FO 925/7761

U.19	BART	Uganda Protectorate showing Administrative Divisions	Apr. 1902	<i>Uganda Protectorate</i> book, p. 1.
		<i>Based on IDWO 1485 (U.17) and the RGS map (U.18)</i>		
U.20	BART	Uganda Protectorate showing general orographical features and salubrity	Apr. 1902	<i>Uganda Protectorate</i> book, p. 209.
		<i>Based on IDWO 1485 (U.15) and the RGS map (U.18)</i>		
U.21	BART	Sketch maps showing our knowledge of the equatorial lakes according to different travellers at different periods	Apr. 1902	<i>Uganda Protectorate</i> book, p. 222.
U.21	BART	Uganda Protectorate showing density of native population and European settlements	Apr. 1902	<i>Uganda Protectorate</i> book, p. 248.
		<i>Based on IDWO 1485 (U.16) and the RGS map (U.18)</i>		
U.22	BART	Uganda Protectorate showing prevailing religions and forms of belief	Apr. 1902	<i>Uganda Protectorate</i> book, p. 276.
		<i>Based on IDWO 1485 (U.16) and the RGS map (U.18)</i>		
U.23	BART	Uganda Protectorate showing distribution of rainfall and navigable waterways	Apr. 1902	<i>Uganda Protectorate</i> book, p. 302.
		<i>Based on IDWO 1485 (U.14) and the RGS map (U.18)</i>		

U.24	BART	Uganda Protectorate showing general distribution and range of vegetation	Apr. 1902	<i>Uganda Protectorate</i> book, p. 312.
		<i>Based on IDWO 1485 (U.14) and the RGS map (U.18)</i>		
U.25	BART	Uganda Protectorate showing the character and distribution of the native races	Apr. 1902	<i>Uganda Protectorate</i> book, p. 486.
		<i>Based on IDWO 1485 (U.14) and the RGS map (U.18)</i>		
U.26	BART	Uganda Protectorate showing general distribution of language groups	Apr. 1902	<i>Uganda Protectorate</i> book, p. 884.
		<i>Based on IDWO 1485 (U.14) and the RGS map (U.18)</i>		

Maps produced during Johnston's retirement

Nile Quest Book

	Institution	Map Title	Date	Reference
NQ.1	BART	Dapper's Map (Amsterdam: 1686) giving falsified results of Portuguese explorations	Aug. 1903	Book, p. 59.
NQ.2	BART	D'Anville's Map of the Nile Basin	Aug. 1903	Book, p. 71.
NQ.3	BART	Bruce's Map of the Nile Sources	Aug. 1903	Book, p. 80.
NQ.4	BART	Map of Africa by Williamson, Longon, 1800	Aug. 1903	Book, p. 90.

NQ.5	BART	Map published in Penny Magazine of 1852	Aug. 1903	Book, p. 108.
NQ.6	BART	Sketch Map by Burton and Speke, 1858	Aug. 1903	Book, p. 123.
NQ.7	BART	The last Map issued to illustrate Speke's Theories, 1865	Aug. 1903	Book, p. 171.
NQ.8	BART	Schweinforth's Map	Aug. 1903	Book, p. 223.

Liberia

	Institution	Map Title	Date	Reference
L.1	RGS	Sketch map of the Republic of Liberia	Aug. 1905	GJ, 26, p. 152.

Britain across the Seas: Africa: A History and Description of the British Empire in Africa

	Institution	Map Title	Date	Reference
BA.1	BART	Africa and South America from the early part of the Tertiary Epoch	Mar. 1910	Book, p. 1.
BA.2	BART	Sketch map of Kaffraria	Mar. 1910	Book, p. 80.
BA.3	BART	British South Africa	Mar. 1910	Book, p. 258.
BA.4	BART	British West Africa	Mar. 1910	Book, p. 318.
BA.5	BART	Egypt and the Egyptian Sudan	Mar. 1910	Book, p. 342.

BA.6	BART	British East Africa	Mar. 1910	Book, p. 378.
BA.7	BART	Political Map of Africa	Mar. 1910	Book, p. 410.

The Opening Up of Africa

	Institution	Map Title	Date	Reference
OU.1	BART	Sketch-Map of Africa showing; in white the areas of land which from ten to fifty thousand years ago were probably covered with shallow water-lakes, or inlets of the sea, or were uninhabitable swamps. The shaded area has not been under water to any extent since the close of the Tertiary Epoch	Nov. 1910	Book, p. v.
OU.2	BART	Map of Africa showing relief of land surface, principal rivers, countries, towns, and tribal names mentioned in the book.	Nov. 1910	Book, p. vi.

Common Sense in Foreign Policy

	Institution	Map Title	Date	Reference
BP1	BART	Africa of the Future	Jan. 1913	Book, p. 60.

WWI Mapping

	Institution	Map Title	Date	Reference
WW.1	RGS	The Political Map of Africa in July 1914	Apr. 1915	<i>GJ</i> , 45, EOI.
WW.2	RGS	Africa as it might have been in 1916	Apr. 1915	<i>GJ</i> , 45, EOI.
WW.3	RGS	Africa as it may be when the war is finished	Apr. 1915	<i>GJ</i> , 45, EOI.
WW.4	RGS	Africa and the White Man or Caucasian sub-species	Apr. 1915	<i>GJ</i> , 45, EOI.
WW.5	RGS	Africa and the Black, Brown and Yellow races	Apr. 1915	<i>GJ</i> , 45, EOI.
WW.6	RGS	The Future Great Railways of Africa	Apr. 1915	<i>GJ</i> , 45, EOI.
WW.7	RGS	The Mineral and Vegetable Values of Africa	Apr. 1915	<i>GJ</i> , 45, EOI.
WW.8	RGS	The Dominant Languages of Africa	Apr. 1915	<i>GJ</i> , 45, EOI.
WW.9	RGS	The Germ Diseases of Africa: Man and Beast	Apr. 1915	<i>GJ</i> , 45, EOI.