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An Empire of 'Growth and Nurture': Agriculture, Documentary Film, and Development in Britain's Empire Marketing Board, 1926-1933

Paul Erickson (1)



Department of History, Wesleyan University, 318 High Street, Middletown, CT 06459, United States perickson@wesleyan.edu

Writing in the mid-1940s, the British civil servant Sir Stephen Tallents would reflect that the interwar period saw a shift in terms of how 'thoughtful Britons' viewed their empire: less in terms of 'machinery and organisation' and more in terms of 'growth and nurture'. This essay interprets Tallents' remarkable observation in light of the history of an organisation with which his career was closely associated: the Empire Marketing Board (1926-33). By examining together the diverse activities of this organisation, which ranged from funding agricultural, ecological, and economic research to producing documentary films, this essay contextualises the emergence of Tallents' view of imperial growth and development.

Sometime in 1944, as he neared the end of a long and distinguished career in the British civil service, and with the end of the war in Europe almost in sight, Sir Stephen Tallents sat down to write up some reflections on a short-lived organisation of which he had been secretary nearly twenty years before: the Empire Marketing Board (EMB). The EMB was established in 1926 to administer some million pounds annually in publicity and economic and scientific research supporting trade within the empire, but disappeared a mere seven years later, a casualty of changing political winds and the great depression.1

Why return to this obscure chapter in imperial history? As Tallents himself acknowledged, the world situation had changed dramatically since the EMB's creation. The empire, on precarious financial footing even as it reached the zenith of its spatial extent following the First World War, was on the brink of upheaval in the wake of the second. Within a decade, Britain would truly be a 'shrinking island' left behind as decolonisation and political devolution stripped it of its overseas assets, and as new global hegemons emerged in the form of the United States and the Soviet Union.² New American-dominated international agencies, operating under the aegis of the United Nations - the International Monetary Fund, the World Bank, the Food and Agriculture Organization, the World Health Organization - would replace the governmental organs of the imperial mandate powers from the interwar years.

Yet Tallents saw in the EMB story a lesson for the present. In his view, the guiding philosophy of the EMB foreshadowed a reconceptualisation of the imperial project itself that was now almost universal in the minds of 'thoughtful Britons'. Gone were the days when empire was largely a matter of territorial conquest and political machinations, of pith-helmeted carbine-carrying soldiers rescuing Mafeking from the Boers or putting down rebellions from Delhi to Beijing. In its place was a view of

¹ On the timing of the writing, see 'The Start', Sir Stephen Tallents Papers, Institute for Commonwealth Studies, London (hereafter 'Tallents Papers'), ICS 79/26, 9.

² Jed Esty, A Shrinking Island: Modernism and National Culture in England (Princeton: Princeton University Press, 2003).

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empire as a 'co-operative enterprise' whose 'biological needs' 'demanded the patient and laborious accumulation of facts, the skillful enlistment of scientific research and economic investigation'. The EMB had dedicated itself to 'bringing the Empire alive' by educating the general public as well as the farmers, ranchers and manufacturers as to the economic and biological potential of the realm. South African wines, Canadian timber, Australian mutton, oranges from Palestine, Tung oil from Burma, and bananas from Trinidad were just some of the products to benefit from EMB research and publicity. In sum, imperial governance had ceased to be a matter of 'machinery and organisation' and had become one of 'growth and nurture'. It was this conception of empire that Tallents saw as relevant to the nascent post-war order.

As rose-tinted as Tallents' retrospective assessment of the late imperial era may have been, something like it certainly was widely held at the time, at least implicitly. As Helen Tilley has shown in her study of the interwar African Research Survey, the British undertook other EMB-like projects in their African territories, funding agricultural research stations and pushing experimental growing practices with the aim of developing the 'living organism' that was the empire - thereby setting the imperial project on a sounder economic footing.⁶ Similar rhetoric and policies can be found in the work of Australians like Frank Lidgett McDougall and Stanley Melbourne Bruce, who ultimately proved influential in shaping the mission of the postwar United Nations Food and Agriculture Organization (FAO). Nor indeed were 'thoughtful Britons' the only ones who came to view empire in organismal, biological terms during the interwar period. During this period, the French adopted the rhetoric of mise-en-valeur or 'development' to cover the building of roads in Cameroon, dams in Mali and mental health clinics in north Africa with an eye toward facilitating market exchange and cultivating the living resources of their empire, both human and agricultural.8 And American foreign policy, always antiimperial at least in name, came to eschew the conquest and settlement that had brought them new territories in the Caribbean and Pacific at the expense of Spain, and to emphasise 'dollar diplomacy', coupled with the transformational power of science, technology, and medicine, with the aim of broadening and deepening transnational flows of capital and commodities.⁹

Seen in this light, Tallents' comments could be read as foreshadowing the age of postwar international development schemes that brought dams, roads, hydroelectric power stations, irrigation systems, synthetic fertilisers and high-yield crops to countries around the globe, or perhaps the economic theories of growth and development that would be the focus of classic works by Walt Rostow or Robert Solow in the 1950s and 1960s. Yet to do so would perhaps underemphasise the deeply biological, agricultural and ecological roots of interwar development thinking, and indeed much economic thought. The concepts of growth and development, so often applied to economies, are fundamentally metaphors drawn from the life sciences. It was, after all, Lamarck, writing in the late eighteenth century who set the discipline of biology apart from classical natural history as the study of living things, entities that exhibited phenomena of growth and transformation. Economics shares much common lineage with biology and its later offshoot, ecology, tracing its deepest intellectual roots to ancient treatises on agriculture and farm management. And since the seventeenth century,

³ 'Prologue', Tallents Papers, ICS 79/25, 2.

⁴ Ibid., 4.

⁵ Ibid., 3.

⁶ Helen Tilley, Africa as a Living Laboratory: Empire, Development, and the Problem of Scientific Knowledge (Chicago: University of Chicago Press, 2011), 21.

Wendy Way, A New Idea Each Morning: How Food and Agriculture Came Together in One International Organization (Canberra: Australian National University Press, 2013).

E.g. Richard C. Keller, Colonial Madness: Psychiatry in French North Africa (Chicago: University of Chicago Press, 2007); Libbie Freed, 'Networks of (Colonial) Power: Roads in French Central Africa after World War I', History and Technology, 26, 3 (2010), 203–23; Laura Ann Twagira, Embodied Engineering: Labor, Food Security, and Taste in Twentieth-Century Mali (Athens, OH: Ohio University Press, 2021).

⁹ The classic sources on 'dollar diplomacy' are Emily Rosenberg, Spreading the American Dream: American Economic and Cultural Expansion 1890–1945 (New York: Hill and Wang, 1982) and Emily Rosenberg, Financial Missionaries to the World (Durham: Duke University Press, 2003).

economic thinking on matters of growth and economic development has frequently been intertwined with debates over the development of natural resources, and especially issues of soil fertility and agricultural productivity.¹⁰

An examination of Tallents' Empire Marketing Board, especially the distinctive way this organisation combined basic research in economics and the life sciences with marketing and advertising activities, reveals the institutional roots of Tallents' biological vision of the imperial enterprise. Tallents imagined the empire as a living thing – but its growth and development was not an obvious fact, simply waiting to be read off of nature. Growth, for the EMB, was a product of artifice as much as nature, something set in motion by agricultural research, the encouragement of international trade, the power of advertising, and most notably, by new media like film. Film, like techniques for visualising economic time-series or fluctuations in the size of wildlife populations, answered a need for a new 'cartography of populations and processes' that emerged during the interwar period, for a variety of reasons. These new techniques grew up alongside of (and ultimately sometimes overshadowed) other forms of knowledge – maps, censuses, bureaucratic records, museums – that were characteristic of the empire in its nineteenth century heyday. The series of the distinctive way this organisation of the distinctive way this organisation of the distinctive way this organisation of the distinctive way this organisation.

The work of the Empire Marketing Board thus offers insight into the development of such new cartographies, especially those emerging from population ecology, economic statistics and documentary film. As Tallents would note in his retrospective account, elements of the board's mission were taken up by other departments of the government after 1933 – for example, the EMB's storied film unit would be scooped up by the General Post Office, and the research facilities that it supported likewise endured after its demise. However, he felt that there was something uniquely productive about an organisation that brought together economic and scientific research with film, art and what would later be practised under the rubric of 'public relations', just as there is something lost today in considering the various portions of the EMB in isolation from each other, as much subsequent historiography has done. Thus historians have focused the overwhelming bulk of their attention on the EMB's marketing posters, or the film unit (especially the career of its prominent staffer, John Grierson), or have glossed the EMB as an episode in the history of public relations or propaganda.

See especially Fredrik Albritton Jonsson, Enlightenment's Frontier: The Scottish Highlands and the Origins of Environmentalism (Chicago: University of Chicago Press, 2013); Margaret Schabas, The Natural Origins of Economics (Chicago: University of Chicago Press, 2006); John Bellamy Foster, Marx's Ecology: Materialism and Nature (New York: Monthly Review Press, 2000).

Gregg Mitman and Paul Erickson, 'Latex and Blood: Science, Markets, and American Empire', Radical History Review, 107 (2010), 45–73, quoted on 54. On new attempts to quantify and visualise the behaviour of the world economy in the interwar period, see especially Rob Aitken, 'The Vital Force: Visuality and the National Economy', Journal for Cultural Research, 10, 2 (2006), 87–112; Stephen J. Macekura, The Mismeasure of Progress: Economic Growth and Its Critics (Chicago: University of Chicago Press, 2020). The close connections between the life sciences and the medium of film has been the focus of a significant literature in the history of science; see especially Hannah Landecker, 'The Life of Movement: From Microcinematography to Live-Cell Imaging', Journal of Visual Culture, 11, 3 (2012), 378–99; Oliver Gaycken, "The Swarming of Life": Moving Images, Education, and Views through the Microscope', Science in Context, 24, 3 (2011), 361–80; Landecker, 'Microcinematography and the History of Science and Film', Isis 97 (2006), 121–32; and Gregg Mitman, Reel Nature: America's Romance with Wildlife on Film (Cambridge, MA: Harvard University Press, 1999).

The notion of a distinctive 'colonial' or 'imperial' style of science guides an extensive literature; for classic statements of this notion, see Benedict Anderson, 'Census, Map, Museum', in Anderson, Imagined Communities: Reflections on the Origin and Spread of Nationalism (London: Verso, 1991), 163–86; and Bernard S. Cohn, Colonialism and Its Forms of Knowledge: The British in India (Princeton: Princeton University Press, 1995).

Much has been written especially about the EMB poster campaigns, as well as the film unit, but this literature tends to focus on these aspects of the organisation in isolation from each other; see e.g. Stephen Constantine, Buy and Build: The Advertising Posters of the Empire Marketing Board (London: HMSO, 1986); Felicity Barnes, 'Bringing Another Empire Alive? The Empire Marketing Board and the Construction of Dominion Identity, 1926–33', The Journal of Imperial and Commonwealth History, 42, 1 (2014), 61–85; Uma Kothari, 'Trade, Consumption and Development Alliances: The Historical Legacy of the Empire Marketing Board Poster Campaign', Third World Quarterly, 35, 1 (2014), 43–64; Scott D. Anthony, Public Relations and the Making of Modern Britain: Stephen Tallents and the Birth of a Progressive Media Profession (Manchester: Manchester University Press, 2012).

This is perhaps understandable: the EMB was an organisation with a complex mission, and was subject to many distinct imperatives, some of which clashed significantly with each other. In the end, it is difficult not to come away with the impression that it was a deeply problematic institution. ¹⁴ Nevertheless, this paper seeks to examine the achievements of the EMB's component parts in concert, with an eye toward understanding how Tallents could come to view the empire as a whole – like its subjects, its grasslands, its cattle, its grape vines and oranges and Tung trees – as a living, growing thing.

The Biological Needs of the Empire

While Tallents would later reminisce that the EMB was guided in its work by 'only the most general terms of reference', his retrospective account of the organisation in fact suggests that its specific focus on phenomena of life and growth was set for it by much broader political forces beyond its control. For the EMB was very much a product of the way that domestic interwar British politics interacted with the politics and economics of the empire, as well as new international organisations like the League of Nations. 15 In Tallents' telling, the circumstances that led to the EMB's founding arose from a 1923 Imperial Economic Conference, one of those regular gatherings of the empire's top ministers in finance and trade. At the time, the conference endorsed proposals by the British government for the imposition of a set of preferential tariffs on various food items imported from outside the empire, with the aim of combating unemployment by raising prices for agricultural products. 16 The proposals were met enthusiastically by representatives of the dominions, whose economies depended heavily on the trade of agricultural commodities with the industrialised metropole. Yet having called for the imposition of preferences, prime minister Stanley Baldwin's government in short order lost an election to the free traders; and although Baldwin would regain power a year later, by that time he had promised to avoid the taxation of food. The political price of raising the cost of an English worker's breakfast was simply too high. Instead, Baldwin suggested 'that the full money equivalent of the advantages which would have been conferred on the Empire in respect of all those duties which are not retained should be devoted to the scheme of developing the trade of the Empire, and in the first case developing schemes of marketing'. This 'full money equivalent' was estimated at one million pounds per year.¹⁷ Hence, from the start, the EMB's mission was envisioned as focusing overwhelmingly on agricultural products, rather than minerals or industrial goods. 18

What would these 'schemes of developing the trade of the Empire' or 'schemes of marketing' actually look like? The form of organisation the EMB ultimately took (and hence the programmes it adopted) was guided substantially by several years of negotiation inside the Imperial Economic Committee (IEC), an inter-imperial organisation emerging from the 1923 conference that would, among other things, draft recommendations for the EMB's plan of work.¹⁹ The IEC issued two

It also, apparently, was not a totally effective organisation in terms of its fundamental mission to promote intra-imperial trade; see David M. Higgins and Brian D. Varian, 'Britain's Empire Marketing Board and the Failure of Soft Trade Policy, 1926–33', European Review of Economic History, 25, 4 (November 2021), 780–805.

^{15 &#}x27;Prologue', in Tallents Papers, ICS 79/25, 10. On the broader economic and geopolitical context behind the EMB's creation and operation, see especially David Thackeray, Forging a British World of Trade: Culture, Ethnicity, and Market in the Empire-Commonwealth, 1880–1975 (Cambridge: Cambridge University Press, 2018); and Tim Rooth, British Protectionism and the International Economy (Cambridge: Cambridge University Press, 1993).

See e.g. 'Record of Proceedings and Documents, Imperial Economic Conference of representatives of Great Britain, The Dominions, India, and the Colonies and Protectorates, held in October and November 1923' (Ottawa: F.A. Acland, 1924).

¹⁷ 'The Start', Tallents Papers, ICS 79/26, 3. See also the description of the IEC in 'Imperial Economic Committee: A Survey of its Work', *Journal of the Textile Institute Proceedings*, 23, 9 (1932), 237–8: "To consider the possibility of improving the methods of preparing for market, and marketing within the United Kingdom, the food products of the overseas parts of the Empire with a view to increasing the consumption of such products in the United Kingdom in preference to imports from foreign countries, and to promote the interests of both producers and consumers' (237).

Although see 'Imperial Economic Committee: A Survey of its Work', on how the scope of inquiry potentially delegated to the EMB shifted over time.

The IEC was just one of a host of organisations to emerge from this consequential meeting, which also saw the establishment of Councils of Scientific and Industrial Research (CSIRs) in Australia, India, and Canada, among other places; see 'Record of Proceedings and Documents, Imperial Economic Conference', 383.

reports, which among other things suggested the creation of an 'Executive Commission' which would 'initiate a publicity campaign on behalf of empire foodstuffs, undertake a scheme of co-ordinated research into their production and preservation, assist the export of pedigree stock, and develop trade in the Empire's tropical fruits'. ²⁰ On 21 March 1926, the Baldwin government's colonial secretary, Leopold Amery, announced creation of this 'Executive Commission', to be dubbed the 'Empire Marketing Board', which he would chair; he would bring Stephen Tallents on as general secretary soon after. The new organisation now had a name. ²¹ At least initially, the IEC recommended spending roughly 65 per cent of the grant on 'publicity and education for the promotion of Empire buying' and a relatively modest 15 per cent on 'research, chiefly on a commercial scale'. The remaining 20 per cent would be devoted to various other specific schemes with definite constituencies, especially the aforementioned promotion of trade in tropical fruits and export of pedigree cattle stock from the United Kingdom to the overseas empire. ²²

Subsequent resolutions of the 1926 imperial conference, however, had the effect of greatly increasing the EMB's emphasis on research and steering it away from publicity. This was very much to Amery's liking; indeed, he insisted, since the creation of the Colonial Office, a crucial part of its role was the promotion of medical research (after 1927, through a Colonial Medical Research Committee) as well as agricultural research since the late 1910s (overseen after 1927 by an Advisory Committee on Agricultural Research). In addition, a number of more specialised imperial agencies had been created by the Colonial Office from an early date, including the Imperial Bureau of Entomology (1913) and the Imperial Bureau of Mycology (1920).²³ The empire, in Amery's view, represented a terrific opportunity for the application of scientific research, even if a lack of resources in any particular imperial possession made it difficult for them to attract the most ambitious scientific minds. Central imperial institutions, funding, and coordinating leadership were essential. Thus, it was fortunate that a 'research sub-committee' of the 1926 imperial conference called for a significant expansion of the EMB's research efforts, noting that the empire's great competitor in the western hemisphere, the United States, was now spending nearly double the empire's entire research budget on agricultural research alone. To have any hope of keeping 'abreast of its competitors in the economic field', the empire would need to change its priorities toward greater investment in basic research.24

The mixture of awe and envy with which the British regarded American funding for agricultural research draws our attention to the ways in which the EMB, as a 'marketing board', differed from American institutional models for state support of scientific and technological development, despite the significant portion of its budget devoted to research. The literature on American science and technology policy is full of such institutional models: the land grant colleges and experiment stations established from the 1860s onward to train farmers in the latest agricultural techniques; or the Rockefeller and Carnegie foundations with their tradition of contract-based support for 'pure', scientist-directed research at private institutions and universities that would then become the template for the postwar National Science Foundation. There were also the corporate industrial laboratories of Thomas Edison and General Electric, or the project-based military contractors that emerged in great numbers after the Second World War.²⁵

²⁰ 'The Start', Tallents Papers, ICS 79/26, 3-4.

²¹ Ibid., 4

^{&#}x27;Note of Recommendations already made by the Imperial Economic Committee which indicate action by the Empire Marketing Board', Colonial Office Records, National Archives, Kew (hereafter 'Colonial Office Records'), CO 760/1, EMB 1 (27.1.26). See also L.S. Amery, My Political Life, Volume Two: War and Peace, 1914–1929 (London: Hutchinson, 1953), 348. On the history of British cattle and their global export, see Rebecca J. H. Woods, The Herds Shot Round the World: Native Breeds and the British Empire, 1800–1900 (Chapel Hill: UNC Press, 2017).

²³ 'Imperial Institute of Entomology', *Nature*, 150, 3798 (15 Aug. 1942), 205.

²⁴ 'The Start', Tallents Papers, ICS 79/26, 6.

For an entrée into this literature see e.g. Daniel Lee Kleinman, Politics on the Endless Frontier: Postwar Research Policy in the United States (Durham, NC: Duke University Press, 1995).

Marketing boards were not entirely new things in the 1920s, being one of an array of institutions like growers' associations, agricultural co-operatives and industry councils that sought to create value for their members by speaking on their collective behalf, either to consumers or to the government. But far more would be created within the British Empire in the wake of the depression of the 1930s and the Second World War, as the government sought to intervene to prop up depressed agricultural markets for an array of products from West African cocoa and groundnuts to eggs from the home countries. Their nature and aims were often as obscure as their names were bland, yet it is clear that marketing boards potentially engaged in a variety of activities. Such organisations might study existing markets and crops, disseminating market intelligence and scientific information to their members – but their agenda was never simply the contemplation of what was, or even the development of specific improved techniques of production, like an American agricultural research station. Rather, they were concerned with the broader creation and maintenance of smoothly expanding markets in the commodities they represented. Part of their focus thus was frequently on advertising and publicity, or 'propaganda' as some of them put it with refreshing frankness - in other words, on cultivating demand.²⁶ Others sought to enhance the value of their products by introducing schemes of quality control and grading aimed at delivering uniform, consistent goods, or at reducing waste as goods travelled between producers and consumers. Other interventions were more direct - for example, they might involve creating endowments that could be used to purchase crops to prop up prices and smooth out market cycles, or to eliminate the petty traders who could be seen as introducing frictions between producers and their markets in the metropole. Combined in some cases with monopolies on the legal export of certain commodities, marketing boards had the potential to be powerful political as well as economic forces in the countries in which they operated.²⁷

We can see the marketing board-like aspects of the EMB in the way that it was governed and in the portfolio of activities that it supported. By the time of its disbandment in 1933, the board itself was composed of twenty or so high-level officials of the British government (the Secretary of State for Dominion Affairs, the Parliamentary Secretary to the Ministry of Agriculture and Fisheries, and so forth), plus representatives of various dominions and colonies (by the early 1930s, Canada, Australia, New Zealand, South Africa, the Irish Free State, India, Southern Rhodesia and a scattering of other colonies and protectorates) and the board's secretary, Tallents. Beneath this, specific decisions on funding were farmed out to a group of eight expert committees that evolved relatively early in the board's history, dealing with 'research grants', 'statistics and intelligence', 'economic investigation', 'market promotion', 'general publicity', 'press publicity', 'cinema', and a miscellaneous committee focused on finance and general operations. The means for pursuing these activities varied, but most frequently money was passed through to various contracting organisations, whether private companies (in the case of advertising), universities, or miscellaneous private organisations. Some activities, most notably the EMB's work in film, were conducted in-house. But as a result, even at its height, the board had a relatively light administrative footprint, with less than 120 staff all told.²⁸

In broad relief, the activities funded by the EMB likewise reflect the peculiar logic of its agenda as a marketing board. Consider, for example, its first year's progress report, issued in June 1927, which listed as funding categories 'research', 'economic investigation', 'other schemes', and 'publicity'.

²⁶ See e.g. John Grierson and Basil Wright's Song of Ceylon, created on behalf of the aptly-named Ceylon Tea Propaganda Board.

The extraordinary powers of some marketing boards can be glimpsed in William O. Jones, 'Food-Crop Marketing Boards in Tropical Africa', The Journal of Modern African Studies, 25, 3 (Sept. 1987), 375–402. Aspects of the missions of marketing boards and similar organisations can be glimpsed in the literature on British imperial trade; see e.g. Felicity Barnes and David M. Higgins, 'Brand Image, Cultural Association and Marketing: "New Zealand" Butter and Lamb Exports to Britain, c. 1920–1938', Business History, 62, 1 (2020), 70–97; Erika Rappaport, A Thirst for Empire: How Tea Shaped the Modern World (Princeton: Princeton University Press, 2018) on the activities of tea marketing boards; David Higgins, Brands, Geographical Origin, and the Global Economy (Cambridge: Cambridge University Press, 2018), especially chapter 4 on agricultural cooperative marketing schemes.

As the board noted, its portfolio of research funding was mostly contracted out to existing organisations, since its staff did not feel it could muster the expertise to perform it in-house; however, the demands of the EMB and the problems of empire development required a re-orientation of existing scientific research efforts. As the report put it, 'It is plain that Empire development, and therefore Empire marketing, postulate the examination of a wide and diverse range of problems, many of which have not, so far, been subjected to scientific examination at all.'²⁹ Some of these problems were straightforwardly problems of agricultural production. Funding thus went to the operating budgets of two tropical and sub-tropical agricultural research stations, one in Trinidad and the other in Tanganyika; research in entomology at the Imperial Bureau to prevent crop losses to insects; botany at Kew Gardens; the East Malling Fruit Research Station; and so forth. But other problems included the efficient transportation of produce from far-off producers to UK consumers (e.g. support for research on refrigeration techniques at Cambridge's Low Temperature Research Station) and dietetic investigations by the Medical Research Council to gauge the response of Britons to a cuisine already changing in response to a flood of imported foodstuffs from across the empire.

Meanwhile, 'economic investigation' broadly sought to address 'the efficient organization of Empire marketing and the elimination of waste in its various stages'. This did not involve support of anything like 'economics' as it evolved in the later twentieth century, with its emphasis on the development and testing of austere mathematical models or systematic analysis of datasets. Some programmes, such as the 'Fruit Intelligence Service', aimed 'to provide as complete information as possible regarding actual and prospective supplies of fruit in the United Kingdom, and to furnish timely information as to fruit crop prospects and yields in producing countries'. However, others focused on estimating wastage of different varieties of fruit due to transport, or on studying the 'conditions under which . . . agricultural produce is marketed' and demonstrating 'improved methods of marketing, packing, grading, etc.'³³

The EMB's focus on the cultivation of markets seems to have shaped at least some of the scientific research programmes it funded. This is most notable in the case of the British ecologist Charles Elton, whose work the board supported in the early 1930s. Today, Elton is remembered as a pioneer of animal ecology and population ecology, as a result of his empirical and statistical studies of animal food chains and fluctuations in wildlife populations conducted from the early 1920s onward. In such studies, Elton sought to understand the causes of animal population regulation, focusing especially on the role of disease, predation and macro-environmental fluctuations (for example, changes in solar output over the sunspot cycle). To study such phenomena, Elton ultimately embraced sources and methodologies, if not explanatory frameworks, similar to those employed by interwar economists studying the business cycle. In particular, from the 1920s onward, Elton applied statistical time series analysis to study fur trade records compiled over more than a century by the Hudson's Bay Company, thereby developing models of the population fluctuations of fur-bearing animal species in the Canadian Arctic. What the Colonial Office archives suggest is just how important the EMB saw Elton's

²⁹ EMB Reports, Colonial Office Records, CO 323/982/3, 8.

³⁰ Ibid., 17.

³¹ The literature on the working practices of postwar economics is vast, but for an entry point, see e.g. Mary S. Morgan, The World in a Model: How Economists Work and Think (Cambridge: Cambridge University Press, 2012).

³² EMB Reports, Colonial Office Records, CO 323/982/3, 19.

³³ Ibid., 17.

A review of this research is found in Charles Elton, 'Periodic Fluctuations in the Numbers of Animals: Their Causes and Effects', British Journal of Experimental Biology, 2, 1 (1924), 119–63. On Elton's place in the history of ecology, see especially Peder Anker, Imperial Ecology: Environmental Order in the British Empire, 1895–1945 (Cambridge, MA: Harvard University Press, 2001).

On this point, see Paul Erickson, 'Knowing Nature through Markets: Trade, Populations, and the History of Ecology', Science as Culture, 19, 4 (2010), 529–51. For a critical survey of business cycle theories of the period, see especially Wesley C. Mitchell, Business Cycles: The Problem and Its Setting (New York: National Bureau of Economic Research, 1927).

³⁶ Charles Elton, Voles, Mice, and Lemmings: Problems in Population Dynamics (Oxford: Clarendon Press, 1942).

research in terms of their mission of developing and stabilising markets in wildlife and agricultural products, and how they supported his research (and the creation of the Oxford 'Bureau of Animal Population') during a difficult financial period for Elton, to the tune of £3,010 spread over three years (about £187,000 today). In their view, Elton's work would assist in the prediction and control of some of the greatest threats to the steady expansion of natural commodity markets: outbreaks of disease, the growth of parasite populations, and losses of crops and stocks in transit to vermin.³⁷

Finally, the board's program of publicity dealt with the nitty-gritty of designing and distributing newspaper adverts, poster campaigns, exhibitions, lectures and events. Less clear was what, precisely, they were publicising. As an organisation ostensibly reflecting the interests of *all* the empire's agricultural producers, the board was potentially open to the charge that it favoured some producers over others. Thus, as Tallents would emphasise in his retrospective comments on the EMB's advertising program, the board's publicity was aimed less at promoting particular products and more at 'creating a background against which individual government or trading interests can throw into relief the claims of the particular commodities in which they are interested . . . the Board has set itself to advertise an idea rather than a commodity'. The resulting slogans and themes of publicity thus were frequently vague, aimed at developing a 'consciousness of Empire' or 'a fresh and growing interest in the possibilities of Empire development and trade'.'

The board's funding and strategy did evolve over time. One key turning point in its history was the onset of the world financial crisis in 1929-30 and the fiscal retrenchment that followed. In 1930, a 'committee for the reconstitution of the EMB' was established that sought to re-orient the EMB's work in light of the new austerity. If anything, this development had the effect of steering the EMB's mission still farther away from publicity and toward research. As Tallents would write to a colleague at the Australian Commonwealth Council for Scientific and Industrial Research in early 1931, 'We met the cut in our resources by a drastic reduction in publicity, especially in press advertising, and I think that our research activities will not suffer too severely.'39 This shift, however, also seems to have been implicated in the EMB's ultimate demise. Without publicity and advertising providing the EMB's major claim to legitimacy, and with research occupying a greater percentage of its budget and focus, it became less clear what the organisation brought to the table that other research funding agencies like the Medical Research Council did not. Ultimately, the question was made moot by the 1932 imperial conference in Ottawa, which led at last to the imposition of tariffs on imports from outside the empire and a corresponding decline in the need to hold imperial trade together by liberal schemes of market promotion. Yet in the seven-odd years of its existence, the EMB would expend somewhere north of £3.2 million, of which better than half was spent on research. 40

Documenting Growth and Exchange: Film

While 'research', broadly conceived, was what the EMB's leadership put first in their annual reports (and in the case of Amery and Tallents, their memoirs), it was the publicity aspects of the EMB that have subsequently claimed the lion's share of attention from historians. ⁴¹ In particular, the output of the EMB's film unit has attracted a great deal of interest given its status as the launching pad for the career of John Grierson, the coiner of the term 'documentary film' and producer of classics like *Drifters* (1929) and *Night Mail* (1936). ⁴² The EMB's film unit was also crucial to the career evolution

^{37 &#}x27;Empire Marketing Board: Note on the Work and Finance of the Board and Statement of Research and Other Grants Approved by the Secretary of State for Dominion Affairs from July 1926 to 31 Mar. 1931', Tallents Papers, ICS 79/14/3, 33.

³⁸ Ibid., 24.

³⁹ Tallents to ACD Rivett, 11 Feb. 1931, Tallents Papers, ICS 79/10/1.

 $^{^{\}rm 40}\,$ 'The Empire Marketing Board, Part I: General', Tallents Papers, ICS 79/14/5-10, 11.

⁴¹ E.g. John M. MacKenzie, Imperialism and Popular Culture (Manchester: Manchester University Press, 1987) and Anthony, Public Relations and the Making of Modern Britain.

⁴² The literature on Grierson is vast, but see e.g. Elizabeth Sussex, ed., *The Rise and Fall of British Documentary: The Story of the Film Movement Founded by John Grierson* (Berkeley: University of California Press, 1975); Forsyth Hardy, *John*

of Stephen Tallents, the EMB's secretary, from mid-level bureaucrat to public relations guru. With the EMB facing financial headwinds in the early 1930s and its staff starting to cast about for new employment, Tallents penned a pamphlet, titled 'The Projection of England', which called attention to the power of film and new media to change the relationship between governments and the public. In his view, the pre-eminence of Hollywood in the global film industry 'turned every cinema in the world into the equivalent of an American consulate', or at least a venue for advertising America's goods, companies, people and government. Britain had to catch up: like all countries, she needed to pay closer attention to the 'projection' of her national image both at home and abroad. Although Tallents did not receive the position with the BBC that he hoped for, he nevertheless would move together with Grierson and the EMB's film unit to the General Post Office, and subsequently to the Ministry of Information during the Second World War. Grierson, likewise, would head to Canada's National Film Board in 1939 and, subsequently, the Wartime Information Board. Such continuities between the EMB's mission in 'public relations' and advertising, and the essentially propagandistic wartime activities of the Canadian NFB and Ministry of Information, have coloured much of the subsequent scholarship on the board's film activities.

The early history of the EMB's involvement in film is fairly well-known. The idea to employ film in service of the board's publicity efforts apparently grew from a conversation in the summer of 1927 between Tallents and Rudyard Kipling, the ageing literary luminary of the empire in its fin de siècle prime. It was from Kipling that the EMB got the recommendation for its first film-maker, Col. Walter Creighton, as well as the plot of the EMB's first film, on which Kipling and Creighton collaborated extensively.⁴⁴ The film, eventually released in 1930 under the title One Family, turned out to be a disaster for the board. Its underlying conceit was rather charming: a young boy dreams of gathering the ingredients for the King's Christmas pudding from all around the empire, retrieving eggs from Ireland, butter from New Zealand, wheat from Canada, brandy from South Africa, grapes from Australia and so forth. The effect was not unlike watching one of the great imperial exhibitions of the late nineteenth and early twentieth centuries unfold on screen. However, the cinematic devices Creighton employed - setting much of the action inside Buckingham Palace (at the invitation of George V), representing the dominions on screen as society dames in court dress, assigning the child a liveried lackey to be his guide as he wanders through coal mines and farmyards - made the fifty-minute film exceptionally expensive to make and widely ridiculed for its underlying premise. Following endless production delays, its initial showing at the Palace Theatre in London was poorly received. When the film's distributors suggested preparing a shorter version in hopes of salvaging something from the project, the board declined to provide funding, and the film unceremoniously disappeared from the board's records.⁴⁵

In his account of the EMB's PR efforts, Scott Anthony has identified the failure of *One Family* as a crucial turning point, leading the board to move in the direction of instructional and 'specialist' films. ⁴⁶ In fact, the turn away from big-budget staged productions began well before 1930, in tandem with the rise in influence of John Grierson inside the EMB. At the ripe age of twenty-nine in 1927, Grierson was fresh back in the United Kingdom from a multi-year tour of universities in the

Grierson: A Documentary Biography (London: Faber & Faber, 1979); Gary Evans, John Grierson and the National Film Board: The Politics of Wartime Propaganda (Toronto: University of Toronto Press, 1984); Joyce Nelson, The Colonized Eye: Rethinking the Grierson Legacy (Toronto: Between the Lines, 1988); Paul Swann, The British Documentary Film Movement, 1926–1946 (Cambridge: Cambridge University Press, 1989); Ian Aitken, Film and Reform: John Grierson and the Documentary Film Movement (New York: Routledge, 1990); Brian Winston, Claiming the Real: The Griersonian Documentary and its Legitimations (London: BFI, 1995); Jack C. Ellis, John Grierson: Life, Contributions, Influence (Carbondale: Southern Illinois University Press, 2000) and Jamie Sexton, 'Grierson's Machines: "Drifters", the Documentary Film Movement, and the Negotiation of Modernity', Canadian Journal of Film Studies, 11, 1 (Spring 2002), 40–59; Gary Evans, John Grierson: Trailblazer of Documentary Film (Montreal: XYZ Publishing, 2005).

⁴³ Anthony, Public Relations and the Making of Modern Britain, 64.

⁴⁴ See document EMB/C/1 (28.1.27) in Colonial Office Records, CO 760/37, 'Film Committee'.

⁴⁵ Minutes of the 14th meeting of the Film Committee, 28 July 1930, Colonial Office Records, CO 760/37.

⁴⁶ Anthony, Public Relations and the Making of Modern Britain, 66.

United States on a Rockefeller Research Fellowship, studying the 'psychology of popular appeal' with the likes of political scientist Charles Merriam. Grierson's first major contribution to the EMB in the spring of 1927 was a magisterial series of reports assessing the state of cinema in the United States, England and Europe, and the potential of various traditions of film-making – dramatic, naturalistic, educational - for influencing public opinion. Ultimately, Grierson recommended that EMB filmmakers re-invigorate the English 'naturalistic' (as opposed to staged) film tradition, making films 'on the spot with every dramatic aid from the real atmosphere of workmen and colonists', thereby showing up the 'comparative dramatic shallowness' of typical Hollywood productions. As models worthy of emulation, Grierson held up a number of recent films: Robert Flaherty's 1922 Nanook of the North, the account of Eskimo culture for which Grierson would coin the term 'documentary film'; Flaherty's 1926 depiction of Samoan life in Moana; and Sergei Eisenstein's 1925 historical drama, Battleship Potemkin, among others. 47 Before long, following its approval at a meeting of the board in the spring of 1928, Grierson was to begin a film of his own 'on the subject of the herring industry' that would eventually be released as Drifters in late 1929. This film, instantly acclaimed as a classic, documented the life of North Sea herring fishermen, from the moment they walk down to the docks in the morning to the time they return with the catch at night.⁴⁸

The unanticipated runaway success of *Drifters* did somewhat revive hopes among the board members that they could develop mass-marketed motion pictures that would actually turn a profit in box offices around the world.⁴⁹ But the EMB's films clearly served multiple purposes and had multiple intended audiences.⁵⁰ Both *One Family* and *Drifters* were also designed to advertise specific products to the general public. The release of *One Family* was deliberately timed to coincide with the 1930 Christmas shopping season. And on at least one occasion, the film committee of the board discussed how to connect *Drifters* with supplementary film materials on how to purchase and prepare herring – though it is unclear if this was ever done.⁵¹ In some instances, film would also hopefully serve to advertise the activities of the EMB itself to the general public, as in the case of a proposed piece on EMB-funded ecological research on grassland nutrient cycles being carried out by the Rowett Research Institute at the University of Aberdeen.⁵²

However, the EMB staff also recognised the significance of film for more traditionally instructional purposes, and it was in purpose-made instructional films that the work of the film unit most noticeably connected with the board's research activities. As Grierson's initial survey of films undertaken for the board demonstrated, instructional and educational film was already a well-established genre in the mid-1920s, with organisations like the United States Department of Agriculture (USDA) turning out dozens of titles on topics ranging from sheep breeding to rural electrification to assist the agricultural extension service in its mission of bringing the latest scientific and technical advice to farmers. In particular, the USDA Motion Picture Service provides an interesting point of comparison for the EMB's endeavours in educational film. The Service's films ran the gamut from publicity features advertising the USDA's work in disease-carrying tick eradication to humorous if didactic films about the perils of letting scrub cattle breed with pedigreed livestock. For Grierson, while film could demonstrate the

⁴⁷ Grierson, 'Notes for English Producers: Part I. Cinema and the Public', Document EMB/C/2 (29.4.27), Colonial Office Records, CO 760/37, 19.

Minutes of the 6th meeting of the Film Committee, 7 May 1928, Colonial Office Records, CO 760/37. On the premiere of *Drifters* see Minutes of the 10th meeting of the Film Committee, 26 Oct. 1929, Colonial Office Records, CO 760/37.

Minutes of the 16th meeting of the Film Committee, 8 Jan. 1931, Colonial Office Records, CO 760/37. While the board was inspired by the success of *Drifters* to push for more commercially successful film productions, the committee was sceptical their efforts could be scaled up to that degree, at least any time soon.

This insight takes inspiration, in part, from Charles R. Acland and Haidee Wasson's notion of 'useful cinema' and their analysis of the way that films can move between multiple social worlds and serve multiple functions; see Acland and Wasson, *Useful Cinema* (Durham, NC: Duke University Press, 2011).

⁵¹ On the timing of One Family, see Minutes of the 10th meeting of the Film Committee, 26 Oct. 1929, Colonial Office Records, CO 760/37.

⁵² Ibid

⁵³ J. Emmett Winn, 'A Brief History of the US Motion Picture Service to 1943', Kinema (Spring 2013).

workings of machinery or human-machine interactions, his catalogue of such American 'interest films' suggests that it was particularly suited for demonstrating principles of biology, physiology and medicine, history, agriculture and animal husbandry. As the EMB began to build up an in-house film unit after 1930, it frequently purchased instructional film footage from outside the organisation to reprocess into shorter films. Thus when Grierson visited Canada in the spring of 1931, the film committee authorised him to spend up to £500 acquiring such footage from the Dominion Film Bureau and other organisations. Much footage that wound up in shorter EMB films appears to have been purchased from the Canadian Department of Agriculture. Indeed, by 1931, the film committee could lay out a fairly detailed taxonomy of the kinds of films the board was producing. This included a small number of truly large, three-reel films like *Drifters* and *Conquest* (1929); smaller one-reel feature films (like *Highways of Empire*, a survey of the empire's transportation infrastructure) that were intended more for exhibition in schools with accompanying curriculum; and finally, a large number of short, 300–600 ft 'interest films for educational purposes' that were mostly reprocessed from purchased stock, as well as scientific research films of similar length.

The main venues for viewing EMB productions seem to have been the Imperial Institute cinema in London (where EMB films were screened regularly), various regional fairs and civic organisations and elementary schools. At one point, the film committee discussed a proposal from a staffer to test the use of film in instructing the 'native audience' at Gordon College in Khartoum - film being in his view a natural medium for communicating with such students.⁵⁸ Similarly, at a film committee meeting in July of 1929, the members discussed a request from Oxford zoology professor Julian Huxley to borrow some films from the EMB to take with him on his impending tour of British East Africa on behalf of the Colonial Office, which had asked for his advice on strengthening the region's educational system. Huxley, according to the committee's minutes, wanted to explore the 'possibilities of the use of the film in native education and had suggested that the Board might supply him with three or four films suitable for this purpose'. Eventually, 'After much discussion it was agreed to supply Professor Huxley with the films "The Life of a Plant," "Fathoms Deep beneath the Sea," "Black Cotton" and a "Malaria" film owned by the Rockefeller Foundation.'59 As the foregoing suggests, the EMB does seem to have been less specifically focused on using film to communicate technical information to farmers than was, for example, the USDA film service, with its emphasis on the use of film in agricultural extension activities. True, some films - most notably, the documentary on grassland nutrients - were explicitly envisioned as targeting ranchers as well as the general public. And on occasion the board loaned its cinema projectors out for agricultural film demonstrations and related lectures.⁶⁰ But apparently, the production of a film specifically targeted at agricultural producers required a specific request emanating from an imperial conference. Thus, in early 1931, Tallents approached Julian Huxley about the possibility of collaborating with Grierson on an 'Agricultural Research film'. 'Such a film,' the committee noted, 'would be designed to meet the liability to prepare an experimental film intended for the education of producers imposed on the Board by the last Imperial conference.' It is unclear whether the film was actually made.⁶¹

⁵⁴ See e.g. Grierson, 'Further Notes on Cinema Production', Colonial Office Records, CO 760/37, 16–18; more details on the film titles involved can be found in Grierson's notes on the topic in the Grierson Archive, University of Stirling (hereafter 'Grierson Archive'), Box 2 Folders 4–8.

⁵⁵ Minutes of the 16th meeting of the Film Committee, 8 Jan. 1931, Colonial Office Records, CO 760/37.

Minutes of the 12th meeting of the Film Committee, 30 Apr. 1930, Colonial Office Records, CO 760/37 mentions that the EMB film Canadian Apples had been re-edited from this material; see also 11th meeting of the Film Committee, 20 Jan. 1930, Colonial Office Records, CO 760/37, on the 'purchase of Canadian lumbering films'.

⁵⁷ Minutes of the 16th meeting of the Film Committee, 8 Jan. 1931, Colonial Office Records, CO 760/37.

⁵⁸ Minutes of the 7th meeting of the Film Committee, 13 Nov. 1928, Colonial Office Records, CO 760/37.

Minutes of the 9th meeting of the Film Committee, 23 July 1929, Colonial Office Records, CO 760/37. On Huxley's visit to Africa, which would prove significant in his postwar career in international conservation, see Huxley, Africa View (London: Chatto and Windus, 1932).

Minutes of the 7th Meeting of the Film Committee, 13 Nov. 1928, Colonial Office Records, CO 760/37.

⁶¹ Minutes of the 17th meeting of the Film Committee, 12 May 1931, Colonial Office Records, CO 760/37.

Throughout Grierson's work for the EMB, one can glimpse his interest in the ways that film could 'bring the Empire alive'. On the face of it, this assertion may seem odd, given the apparent technophila of many of Grierson's films. Consider the narrative arc of Grierson's Night Mail (1935), produced for the General Post Office shortly after it had acquired the EMB film unit. The film follows a day in the operations of a Royal Mail sorting train as it travels between St. Pancras station in London and the cities of Scotland. We see the postal employees clocking in, confirming deliveries, revising train schedules, sorting mail; but the film's climactic moment comes as the employees prepare to make a mail transfer without stopping the train, via a complicated mechanical device that uses the momentum of the train to pull one mail bag on board while simultaneously ejecting another from the train. Even Drifters, with its ostensible focus on fisheries, is packed with shots of the ships themselves: reciprocating steam engines bobbing up and down, seemingly by their own power, and ships disappearing in clouds of smoke and steam. As the initial text of the movie notes, 'The herring fishing has changed. Its story was once an idyll of brown sails and village harbours - its story is now an epic of steam and steel.' But of course, there is a parallel story alongside these images of machines and industry: that of the teeming schools of herring - caught on film up close, under water, using waterproof cameras. At night, as the herring are netted and as the fishermen doze in their berths, predatory dogfish and conger assail the trapped catch, flashing across the screen in sequences worthy of Jaws. Above the surface, during the daytime, there are endlessly wheeling and diving gulls, and rolling swells. Finally, there are humans doing things with machines: tending engines, peering through binoculars, playing out line and nets. Likewise, the real focus of Night Mail - at least in Grierson's oft-expressed view - was on the sequences that highlighted the human use of technology, rather than the technology itself.

All of these dimensions of activity reflected Grierson's sensibility that film was a medium uniquely capable of capturing phenomena of life and movement. This insight was certainly not unique to Grierson: as much scholarship has shown, biologists of the early twentieth century were similarly enthusiastic about the ability of film to make visible the processes of life, from the development of embryos to the mechanics of cellular division. Grierson's phrase 'bringing empire alive', or even just 'bringing alive', that he would come back to again and again throughout his life had several distinct meanings. As he would say in an interview later in life, reflecting on the work of the EMB film unit, we were very concerned in the late 20s, how to find a way of "bringing alive," and that was the phrase we used and it has been the key phrase over all these years'. This meant not only 'bringing alive the new relationship between the Dominions and England' and 'the communications service which related the different dominions with England, the different parts of the Commonwealth together', but also 'bringing alive the work of the working people . . . within the different countries' and 'the scientific frontiers which they had in common'. The 'bringing alive process' was thus 'a whole program of work' that would preoccupy the film unit.

As an example, we can glimpse several distinct senses of 'bringing alive' in Arthur Elton's 1931 short, An Experiment on the Welsh Hills (also released as Shadow on the Mountains). ⁶⁴ The film was intended to publicise the work of George Stapledon, director of the Welsh Plant Breeding Station in Aberystwyth and developer of a number of new grass and clover strains capable of supporting English livestock as they were exported across the globe, in part with financial support from the EMB. ⁶⁵ The first images of the film set the scene: hills, clouds, grass, and finally, sheep. Humans first appear in this landscape indirectly, via shots of a large dam, sluice and water wheel; this is not a purely pastoral scene, but one plainly touched by modernity. And finally, we see humans leaving home, saddling their horses, and (together with their dogs) driving the scattered sheep together, over the

 $^{^{\}rm 62}\,$ See especially Landecker, 'Microcinematography and the History of Science and Film'.

⁶³ 'Speech - at CRTC Hearing on 20 Mar. 1969', Grierson Archive, GA 10.1, 185.

⁶⁴ This film, as well as the others referenced below, can be found in the archives of the British Film Institute, London; some, though far from all, have been digitised. *Drifters* and *Night Mail*, referenced above, are more widely available.

The EMB annual report for 1929 states that the board gave the Welsh Plant Breeding Research Station a capital grant of £4,350 and annual support for five years starting at £4,500 and rising to £4,850 in the final year – not a small amount of money – for the 'prosecution and co-ordination of research in grasses and clovers'. See Tallents Papers, ICS 79/14/1, 24.

mountains and down into the lowlands beyond. The drovers' working practices may belong to an earlier age but they are complex, and it is impressive to watch as they signal to the flocks and their dogs, working together as a remarkable multi-species team. The subsequent scenes, however, show scientific modernity at work transforming the grasslands and raising their productivity. We cut to shots of well-ordered farm fields; the water wheel again alerts us to the presence of science and technology. Inside a greenhouse, grass in pots ripples in the breeze; numbered experimental plantings of clover stand waiting to be selectively pollinated by honeybees that are first dunked in water to prevent unwanted pollen from clinging to them. The experimentalist gathers additional pollen in paper sacks attached to the flowering ends of the grass varieties and uses tweezers to remove grass seeds from particular plants with great care. Finally, we head back to the fields: the native soil is churned up by a tractor-drawn disc harrow; the freshly tilled earth is sown with new grass seeds; and finally, the new grass ripples in the wind as sheep (seemingly fatter ones!) pour into a changed landscape, resting on the hillsides and chewing contentedly. Thus, the narrative line simultaneously 'brings alive' the landscape, the life on it, human labour and interactions, as well as an overarching narrative of scientific progress and technological development.

Crucially, as Tallents' and Grierson's favourite turn of phrase suggested, documentary film did not just transparently capture an existing living world in all its dynamism: it conjured one into being via the artful employment of film technology. One can see this most clearly in the ways that the EMB's films could transform some of the classic imperial forms of knowledge mentioned earlier, especially numerical data and maps. Both appear in one of the EMB's earliest short pictures, *The House that John Built* (1928), which introduced the viewer to the economics of agricultural production in the UK. Maps appear on the screen regularly, but political boundaries quickly fade and are overshadowed by clusters of apples, cows, sheep, or pigs in the regions that produce them. Numerical data about the value of the agricultural goods produced, rather than being communicated in tabular format or via narration, is instead conveyed by animations: apples falling from trees into baskets, lines of cattle or sheaves of wheat morphing into digits and back again.

The use of maps in such films is particularly striking and speaks to a broader transformation unfolding in the Anglo-American cartographic imagination during this period. As Gregg Mitman has noted in his study of the 1926 Harvard African Expedition to Liberia, the expedition brought along film and a cameraman at great expense and trouble, yet never made a map of the territory in the Liberian interior that they were studying in service of Harvey Firestone's rubber-planting ambitions in the region. A synoptic view of space, so useful for military officials and government administrators of the nineteenth-century European empires, was apparently less important for Firestone's agenda, which focused on the cultivation of plants in a complex tropical environment and the recruitment and management of an indigenous workforce. Such an insight is broadly congruent, for example, with the geographer Neil Smith's observation that the form American imperial expansion took during the twentieth century, emphasising international trade and exchange, bequeathed to Americans a certain amount of geographical ignorance and a more abstract and relational conception of space. ⁶⁶

Static maps do appear from time to time in EMB films. For example, the 1934 film *The Villages of Lanka* (initially commissioned by the EMB but produced by Grierson for the Empire Tea Marketing Board after the EMB's demise) begins with a montage of images taken from Ceylon's past: ancient temples overgrown by vegetation; statues of the Buddha; and finally, a map of the island that is clearly not the product of modern cartography. Yet the principal focus of the film is decidedly not on this static past, represented by still images of timeless jungle and stone, but on the dynamic world of the present: men making pots or polishing gemstones on wheels, carpenters shaping musical instruments, villagers gossiping in a local shop. The bulk of the film follows the production process of copra,

⁶⁶ Gregg Mitman, 'A Journey without Maps: Film, Expeditionary Science, and the Growth of Development', in Gregg Mitman and Kelley Wilder, eds., *Documenting the World: Film, Photography, and the Scientific Record* (Chicago: University of Chicago Press, 2016), 124–49; and Neil Smith, *American Empire: Roosevelt's Geographer and the Prelude to Globalization* (Berkeley: University of California Press, 2004).

starting with the care of the coconut trees and examining in detail harvesting techniques (largely performed by males), the processing of the husks and fibre (the province of the village women), and finally, delivery of the product to international markets. The film ultimately goes far beyond mere advertising or public relations fare: it is also a work of ethnography and a useful piece of market intelligence for would-be businessmen interested in trade with far-off corners of the empire.

In EMB films where geography is more central to the storyline, the maps rarely stay still. We can see this, for example, in Grierson's scenarios and shot-lists for a lengthy film, Grasslands of the Empire, that he worked on throughout 1929 and into 1930 in close collaboration with J.B. Orr of The Rowett Institute, a nutrition and food research centre located at the University of Aberdeen. While this film was apparently never completed,⁶⁷ the cinematographic techniques that Grierson used in it would appear in other films, most notably EMB's next major hit, Conquest (1930). To some extent, Grasslands was intended to bring documentary attention to workers and scientists interacting with other organisms and landscapes. However, its opening focus was on the empire as a whole. It begins with title slides: 'All over the world are the empire's grasslands, all over the grasslands are the empire's flocks.' Then maps appear on the screen - but only to suggest locations, and Grierson hoped to quickly superimpose shots of landscapes and people moving through them. From the grasslands all over the world, the cargoes come', the next title slide intones. The map of the world flashes on again, only to have countries with significant grasslands light up in green, with red lines flowing back to Great Britain to indicate flows of trade. These then morph from running red lines into flows of butter barrels. Next, Canada turns green, with red lines running back to Britain, and then Australia, with the red lines morphing into lines of sheep carcasses and bales of wool. At no time could the map remain static - or as Grierson would put it in his shot notes: 'In the following sequence a further attempt must be made to avoid still maps. From the beginning to the end the movement must be continuous and the tempo as strong as diagrammatic circulation will permit.' The red lines linking the empire to the dominions via trade 'should be constructed to convey an impression as of blood circulating. The flowing quality is maintained throughout the sequence.'68 The medium of film, with its ability to move beyond schematic representations of nature and empire frozen in time, thus was the perfect instrument for 'bringing the Empire alive'.

Growth, Cultivation, and Development Between Economics and Ecology

So far, we have mostly looked backwards in time from 1944. But what of the future? How, exactly, did Tallents imagine that his reflections on the EMB were relevant to the emerging postwar order? He never quite answered that question in his draft memoir. It is possible he did not fully know, or that he was simply overtaken by events. England's imperial collapse following the war, especially in India, was startling in its rapidity. He had to have known that much of the bureaucratic machinery brought together inside the EMB nevertheless outlived that organisation, and indeed survived into the empire's twilight years. A range of successor organisations spun off from the Board, mostly dealing with commonwealth trade or agricultural policy, generated paper trails that one can follow well into the 1960s. Yet none of these organisations exhibited the kind of clear vision that Tallents articulated in his memoir.

Nor did the EMB's cultivationist and organicist strand of development thinking survive in pure form on the international scene in the postwar era. Certainly, as a number of recent works have argued, the interwar period provided institutional and intellectual precursors for the postwar

⁶⁷ Grierson appears to have cleared the scenario with Orr in advance of shooting; see Grierson to J.B. Orr, 11 Sept. 1929, Grierson Archive, G2 Folder 2. The film was proposed by Grierson to the EMB's Film Committee at their meeting of 23 July 1929; it was approved, and further endorsed at the following meeting on 26 Oct. 1929. However, work was stopped on 30 Jan. 1930 because the soil remediation techniques involved 'had not yet been demonstrated on a commercial scale' (all minutes can be found in Colonial Office Records, CO 760/37). The film was never mentioned thereafter, nor does it obviously appear in any official catalogue of the board's products.

international order, with imperial development agencies increasingly coordinating their activities with international organisations like the League of Nations, and later, the United Nations. We can glimpse these continuities with the EMB on the level of specific careers. A number of individuals with ties to the interwar EMB and the League played crucial roles in establishing the United Nations Food and Agriculture Organization, whose topical area of authority perhaps corresponded most closely to that of the EMB. Thus J.B. Orr, the eminent nutrition researcher who collaborated with Grierson on a film for the EMB, would emerge as the FAO's first director-general. Julian Huxley, whom we last saw asking the EMB Film Committee to lend him some of their films for his upcoming tour of Africa, would become the first director-general of the United Nations Educational, Scientific and Cultural Organization (UNESCO). And in 1946, the director of the Crown Film Unit, a direct successor organisation to the EMB's film unit, would advise the United Nations on the creation of a 'UN Documentary Film Unit' charged with making films designed for 'teaching the citizens of all countries about their fellow-members of the United Nations and so to break down the barriers of nationalism'. 'We are the world' followed 'we are the Empire'.

Yet it is hard to identify any one reincarnation of the EMB on the postwar world stage. Given this institutional reshuffling on both the national and international scales in the wake of the depression and world war, it is perhaps predictable that the historiography of postwar development policy looks rather different from Tallents' retrospective account of the EMB. Certainly, postwar development schemes financed by the World Bank, undertaken by the American government under Truman's 'Point Four Program', and so forth, shared with the EMB an emphasis on technical assistance and the stimulation of economic growth. But the EMB's programmes produced nothing like the dams, irrigation systems, hydroelectric power plants and nitrates factories of the Tennessee Valley Authority, which served as a model for postwar American-led development efforts the world over. Nor even does the story of the EMB look much like the historiography of the 'Green Revolution', which saw the widespread adoption of high-yield cereal crops, synthetic fertilisers and pesticides, thereby dramatically increasing world food output, albeit at tremendous environmental cost. And in the realm of ideas, iconic and influential works of postwar development economics like Walt Rostow's *Stages of Economic Growth* (1962) look past agriculture to an urban and industrial developmental *telos*. Growing nature gets left behind.

This essay, by contrast, has sought to understand Tallents' suggestion that the interwar period saw the emergence of a new conception of empire – one that viewed its operations less in terms of 'machinery and organisation' and more in terms of 'growth and nurture'. In particular, it has focused on grounding this observation in the diverse activities undertaken by Tallents' Empire Marketing Board, noting the way that this organisation brought together economic analysis of markets with agricultural and ecological research and public relations efforts employing the relatively new medium of film. Tallents' comments can be seen as reflecting the perspective of a distinctive kind of organisation for funding research, one that organised and directed research and outreach activities toward the cultivation of growth in global markets for foodstuffs and natural resources. Tallents' understanding of

⁶⁹ Way, A New Idea Each Morning.

Yee especially Thackeray, Forging a British World of Trade; more broadly, on the intellectual continuities between the late imperial context and the era of globalisation, see Quinn Slobodian, Globalists: The End of Empire and the Birth of Neoliberalism (Cambridge, MA: Harvard University Press, 2018).

The literature on postwar development projects is by now vast; see e.g. Sara Lorenzini, Global Development: A Cold War History (Princeton: Princeton University Press, 2019); David C. Engerman, The Price of Aid: the Economic Cold War in India (Cambridge, MA: Harvard University Press, 2018); and Nick Cullather, The Hungry World: America's Cold War Battle Against Poverty in Asia (Cambridge, MA: Harvard University Press, 2013) for entry points. A well-established tradition of scholarship on twentieth century development programmes emphasises the negative environmental consequences of such efforts, tying these outcomes to ecological blind spots in the worldview of development planners; see especially James C. Scott, Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed (New Haven: Yale University Press, 1999); Arturo Escobar, Encountering Development: The Making and Unmaking of the Third World (Princeton: Princeton University Press, 1995); and Michael Goldman, Imperial Nature: The World Bank and the Struggles for Social Justice in the Age of Globalization (New Haven: Yale University Press, 2005).

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development and growth thus was deeply rooted in the life sciences, ecology and agricultural research. Correspondingly, 'growth' was something cultivated rather than a phenomenon observed, or a result engineered; something 'brought to life' by a coordinated effort bringing together scientists, marketers, filmmakers, and beyond all those, life itself. This view of development hints at a much more sweeping history of growth than we have previously imagined – as a concept spanning the economies of nature and nations, from Xenophon, the cameralists, and the emergence of agricultural economics, down to postwar development programmes, sustainable development, and the politics of the 'limits to growth' in more recent times.

Acknowledgements. The author would like to thank Andrius Galisanka and the members of Wake Forest University's Social Science Research Seminar; the participants in the workshop 'The Ecology of Economic Thought' (January 2021); and two anonymous reviewers for their thoughtful feedback on earlier versions of this paper. The author also wishes to acknowledge the generous research support of the Wesleyan University College of the Environment.

Cite this article: Erickson P (2022). An Empire of 'Growth and Nurture': Agriculture, Documentary Film, and Development in Britain's Empire Marketing Board, 1926–1933. Contemporary European History 31, 509–524. https://doi.org/10.1017/S0960777322000674