The Raw Materials of World History: Re-visiting the Great Exhibition’s Objects

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Part 1

Great Exhibitions represented the world. At the height of their significance, from the mid-nineteenth to the early twentieth century, they were great gatherings of things and people, vast collections of commodities attended by their producers and their consumers from all across the globe. They represented the world differently at different times: the world was revealed as a marketplace at the Great Exhibition of 1851 as it was at many subsequent exhibitions that developed its template; the world was illustrated as a vast industrial park in the Expositions in Paris in 1867 and exhibited through modern art in the same capital in 1900 and 1937; it was a fair and ethnographic museum at The Columbian Expo in Chicago in 1893.\(^1\) As incarnations of the world in various guises, the Great Exhibitions might seem to be easily obvious events through which to study world history. This is not quite the case. They are, as I want to argue here, sources for world history, but since Great Exhibitions were an international not global project they are not unproblematic.

From the large imperial spectacles in Europe to those held in European colonies, from the 1851 archetype in London to Bombay in 1904 and beyond, these large scale industrial displays celebrated nationhood; they endorsed it, measured it, adapted it to pursue economic and political independence.\(^2\) Nation was an organising category. ‘The Works of Industry of All Nations’ was the description of the Great Exhibition of 1851.\(^3\) At every exhibition that followed, commodities were collected through national committees of one kind or another and displayed in national pavilions or national stands. Each incarnation of the world was comprised of different nations and, furthermore, established a hierarchy of nations. The number of objects in each national display and their industrial, technological or artistic sophistication, that is, the sheer size and the apparent modernity of the show, was read as indicative of national development. Exhibits encapsulated the moment of a nation’s progress. The Great Exhibitions as a market place or a modern art gallery always elaborated a competitive world of nations; they represented the world as differentiated national economic entities not as a whole geography, an earth, a world connected, to borrow words from the title of this journal.

Thus, to write a world history of the Great Exhibitions necessitates re-visiting its objects and re-thinking their categorisation. Whilst objects were judged as indexes of national development by both the exhibition officials, who recommended and awarded medals for exhibits, and the exhibition visitors, who viewed them in their national frameworks, that is, through the physical and textual structures of the displays, it is possible to look again and search for material relationships that cut across this world of nations. Objects might be stationary within each national pavilion; they might have an entry in a catalogue that fixed their national location, but these were rare moments of stillness that characterises the act of exhibition: framing objects in one place for a period of time. The rest of the time, things constantly criss-crossed the globe; their forms, such as shiny ceramics or stylised patterns on printed textiles, owed existence to the movement of things from place to place, to the trafficking of world trade, which created countless hybrid designs.\(^4\)

For many objects, whatever their appearance, movement was their purpose. They were traffic; they were, as commodities, merely exchange values that moved through world markets. The amount of traded goods was a measurement of nationhood at the Great Exhibitions (as it is in international forums today), while the direction of traffic in goods...
across nations was oddly obscured. Free trade was promoted at the Great Exhibition of 1851, which projected unfettered exchange of industrial objects as international progress,\(^2\) an upward trajectory that left behind the circularity and repetitious inequality of the trafficking upon which it was based. The evidence of the unequal trading relationships across the world is only obscured in the rhetoric of international exhibitions; the evidence remains in their records. At the Great Exhibitions, or at least in the documentation that accumulated around them, are the multiple traces of the global relationships of world capitalism. These relationships can be pinpointed quite precisely: the catalogues that accompanied Great Exhibitions are listings of exactly who was exporting and importing what. Over the history of Great Exhibitions, thousands upon thousands of objects have been amassed, each with its own paper trail of catalogue entries, official reports, newspaper reviews and periodical articles. Many became the subject of visual documentation, reproduced as prints or photographs. The Great Exhibitions are an extensive archive for the study of commodity chains or flows.\(^6\) Compared to staple sources of company records or trade statistics that represent objects as figures, they hold details of the actual things (1).

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\(^1\) Grand Panorama of the Great Exhibition, North-East Portion of the Nave, The Illustrated London News, 6 December 1851, © Illustrated Papers Collection, Bridgeman Images (Figure 1).

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At the moment of exhibition, in London in 1851 and 1862, for example, or in Dublin or New York in 1853, Paris in 1855, 1867 and so on, the flows of mobile objects are stilled: an exception in a world defined by mobility. These circulations of things around the globe is not some kind of orbit, a free movement propelled by natural laws (as political economists might like us to believe) but are instigated, accompanied and occur within relationships, systems and networks. Thus the Great Exhibitions could be, and probably should be, examined through ‘the new mobilities paradigm.’\(^7\) Mobilities research, detailed by Mimi Sheller, encompasses ‘the combined movement of people, objects and information in all their complex relational dynamics.’\(^8\) Movement is no longer regarded as moment of exception between the normality of stasis but as a condition of same significance.
To consider the passage of an exhibit before or after its exhibition rather than its halted position within it is to dislodge it from its taxonomies and hierarchies of temporary, stationary display. The question is quite simple. How did such a thing get to this place? If it did not materialise on the spot, trying to answer the question of from where it came involves some investigation of how it was created and carried, its relationships of production and distribution, the connections and dependencies between it and other objects or people, its part in a chain or a flow, a system, a series of relationships or a network. The condition of existence of the exhibit, or the Great Exhibitions themselves, is one of mobility. Any type of exhibit could be the subject of such investigations. Manufactures, the largest and most diverse class of objects at Great Exhibitions, are the obvious candidate: they are the standards of industrialisation, the modern objects, the typical commodity forms, the familiar domestic fetishes that are both numerous and multifarious: printed cottons, glazed earthenware, electroplated spoons, glued furniture and so much more. As the material culture of industrialisation, an investigation of their relationships, networks and mobilities could be compelling for a world history concerned to uncover connections. Of particular interest may be the networks of manufacturing beyond Europe or North America that spin around this class of objects and are available for examination through the international and national exhibitions in India or Brazil, New Zealand or Venezuela and many others.

Here, however, I want to reflect upon the material forms that precede manufactures in the Great Exhibitions, the raw materials, and I will try to do so through the documentation of 1851. This first international industrial exhibition, which provided the model for those that followed, is the most studied and academic attention, especially that which claims to offer a re-evaluation of national and Eurocentric histories, should perhaps be directed somewhere else. But reflecting on raw materials offers an alternative to many of the existing histories of Great Exhibition of 1851, including my own.

Within the Great Exhibition’s representation of the world as an array of national collections, raw materials belong to the most lowly category; they begin, and remain behind the event of industrialisation that is the focus of these exhibitions; they introduce the dynamism of industrial life and the drama of historical change then are attributed no other active part; they are a preface to the narrative of Great Exhibitions. Raw Materials, Machinery, Manufactures and Fine Art were the sections of the Great Exhibition of 1851 suggested by Prince Albert and amended by his advisor, Lyon Playfair, a chemist and ‘scientific leader of liberal philosophy’; it was a division of objects that was also a sequence of events: the earth’s simple substances transformed into sophisticated objects. The divided sequence of objects positioned their exhibitors as indicators of the stages of an industrial process, points in the history of industrial and, thus world, development. The Great Exhibition’s classification, an expression of mid-nineteenth century liberal industrial optimism, also created hierarchies of nations.

But, once raw materials become the focus of enquiry into these huge global gatherings of things, another history comes into view. A related series of omissions and exclusions begin to surface; marginalised matter, obscured connections and suppressed systems appear visible in exhibition documentation. Therefore, thinking about raw materials allows for a re-thinking of the categorisation of objects and categorisation of nations as represented through those objects. It is certainly worth asking if the Great Exhibition’s classification that separate industrial entities and string them out in sequence of development has been translated into the common sense of capitalist society. My point is more straightforward. Attention to raw materials is long overdue. By attention, I mean regard and recognition as materials in their own terms, not as preparations for industrial processes, as
fodder for manufactures. The historical disregard of substances such as coal or cocoa, iron and oil, granite and nitrate, all categorised as Raw Materials at the Great Exhibition of 1851, has caused some of the disjunctions and disconnections that are redressed by world history.

Also, there is a relationship, a little under the surface, between world history and those things defined as raw materials at the Great Exhibitions. It is, at least in part, the depletion of the substances of which the earth is comprised, the devastation and violence caused by the economic competition and political control over natural resources for industrial use that has encouraged scholarship that seeks to recover the earth upon which we reside as a world. The categories of objects through which national hierarchies were upheld in international forums, such as 1851, constitute representations of that world but their national divisions and object categories are not useful in writing its history. It is the substance of materials, especially those categorised as raw but now often called resources, that is a matter for world history, which may be uncovered at the Great Exhibitions.

Part 2

The argument made in the first part of this article is, I hope, fairly clear. World history can be written with the Great Exhibitions’ sources but without their categorisations of objects and nations. The commodity chains and flows that encompass the globe, the systems, networks, relationships and connections across the world can be discovered by overlooking or, more accurately perhaps, looking under the classifications of exhibits. A focus upon the least noticed exhibited objects, the neglected raw materials, may enable a writing of a world history that re-evaluates the significance of the substances of which the earth itself is comprised and the consequences of their movement across its surface. A world history of Great Exhibitions would be nothing less than an account of the human-material relationships of global capitalism. Compared to these rather bold assertions, the rest of this article is suggestive; it is just a start of work that can be done: re-thinking the category of raw materials through just one of the many historical records of the Great Exhibition of 1851, its Official Catalogue (Figures 2 and 3).

Figure 2: Official Descriptive and Illustrated Catalogue of the Great Exhibition 1851, (London: William Clowes and Spicer Brothers, 1851).
The first things that visitors encountered at the Great Exhibition of 1851 were raw materials: blocks of limestone, pillars of coal, slabs of slate (Figure 4).

The intention in the collection of the objects in the four classes of the first section—Raw Materials and Mineral Products—has been to give a practical illustration of those substances in the mineral, animal, and vegetable kingdoms, which human industry is constantly occupied in converting into the varied forms of manufactured articles, or which are themselves, as in the case of fuel, the indispensable sources of manufacturing power. If, therefore, it is desired to
obtain a philosophical view of this Exhibition and its multifarious contents, it will be found to be useful to commence the study by the examination of those materials, which, in other departments, have been caused to assume forms so diversified. From the raw material it is thus possible to proceed through various stages of its manufacture, until it is finally seen embodying the conceptions of the mechanic, the architect, or the artist. Many of the objects comprehended under these four Classes have little of no external beauty, and present, consequently no appreciable value to the uninstructed. But if it be considered that, in preparation of these materials for use, and in their application to the purposes of life, consist the daily toil of multitudes of the human family, then the Classes of raw materials appear to take on and new and interesting aspect.¹⁴

The substance of mined matter is much less significant than its place in the process of production; it is of interest only because of what it will become: fuel for manufactures or manufactures themselves. Lesser significance does not quite capture the disregard for the existence these material forms in their own right, however. The value of mined and mineral substances, such as iron, coal or copper, exist only in relation to their suitability for conversion into industrial formations, their incorporation into operations of human life in nineteenth century Europe, their capacity to be worked upon by machinery and people.

The introduction to ‘Mining and Mineral Products’ was written by the Official Catalogue’s editor, Robert Ellis. He wrote all introductions to each of the Great Exhibition’s classes of objects and, with a group of ‘scientific annotators,’ added explanatory notes to the exhibitor’s catalogue entries. The Official Catalogue is part of the Great Exhibition’s documentation, an item in its paper trail of commodities and their chains, a text about objects through which their networks may be reconvened, a book of things that can be read as an

Figure 4: The Exterior, Dickinson's Comprehensive Pictures of the Great Exhibition of 1851, 1854, ©The Stapleton Collection, Bridgeman Images.
index of their relationships. Written details of every object displayed in 1851 are included in one of its four volumes. Exhibits are numbered; exhibitors named. A location is listed after their name with an abbreviated description of their industrial identity: producer, proprietor, manufacturer, importer. Then follows is the title and description of the exhibit. Three examples from the ‘Mining and Mineral Products’ Class illustrate the Official Catalogue’s pattern of information:

5 and 138 LENTAIGNE, JOHN, Tallaght House, Dublin – Proprietor.
A specimen of limestone inclosing granite.
Specimens of iron pyrites, from great sulphur lode, Ballyghan mine, Wicklow; exported to Liverpool, & c. Sulphuret of copper from the same place. Sulphuret of lead or galena; white carbonate of lead; sulphate of barytes, with crystals of phosphate of lead; all from the Glenmolure mine, county Wicklow.

412 THE EBBW VALE COMPANY, near Abergavenny and 83 Upper Thames Street – Producer.
Samples of coal and iron-stone, with foils, from the Ebbw Vale iron-works in Wales, and the Coalbrookdale iron-works in Shropshire.

470 WELBORNE, J.W., St. Austell, and 38 Albmable Street – Producer.
Slab of rosin copper tin core, from the Par Consols Mine, near St Austell, Cornwall. Stone of magnetic oxide of iron, from Roche Rock iron mine. Sulpheret of copper, or yellow copper ore, from the Bodmin Wheal Mary Consols, near Bodmin.

The thousands of entries in the Official Catalogue, the hundreds of pages of dense typescript accompanied by hundreds of illustrations (Figure 5), means it is an important document for empirical inquiry: an essential starting point of for any history since it contains all exhibits; it is a statement of the Great Exhibition of 1851, of what was there. But, as the most complete account of the classification of exhibition it is also an inscription of the divisions of objects: the raw materials that lie behind manufactures that exist to be worked upon by machinery. Separated according to their stage of industrialisation, exhibits were allocated a place in an industrial hierarchy. The empirical details express an idea of material value in a world that is cast as an industrial domain; the Official Catalogue is a text of industrial capitalism that assigns value to material forms according to their potential for appropriation into industry, to be capitalised and, eventually, commodified. Its system of values, its classification, in other words, is premised upon the assumption that the earth’s substances, unworked or raw, are dormant until acted upon by a mechanical or manual, industrial and human force.
Thus, the Official Catalogue entries may be the facts of the Great Exhibition but all require critical re-reading for their formation of ideas of value and of agency. The category of ‘Raw Materials and Produce’, which includes vegetables and animals as well as minerals and chemicals, is attributed with the characteristic of malleability; these things are not definite objects, not yet fully realised; they are pre-forms that await the human and mechanical intervention of industry, their manufacture (Figure 6). Robert Ellis’ editorial explanations relate a hierarchy of material value in slightly varying ways. He closes the ‘Raw Materials and Produce’ section with these words:

The four classes comprised within this section deserve and demand attentive study. The objects comprised by them form the materials out of which all that is beautiful and useful in this great collection has been created, and indicating in their various states the preliminary application of human industry to their preparation for further usefulness. The study of them is a valuable introduction to that of the other Classes, in which constructive industry is illustrated in contrast to the preparative series of operations exhibited by the objects included within the first section. The consideration of results is more generally interesting than that of the processes leading to them; but the latter is unquestionably the most instructive. To the philosophic inquirer into the objects of this Exhibition, this section will probably appear the most interesting of all, as the development of raw material in all the varied forms assumed in those sections is observed in Machinery, Manufactures and Fine Arts.
Ellis encourages Great Exhibition visitors, or at least readers of its record, to look for future industrial forms in raw materials; he insists upon their study only in relation to their subsequent industrial use; they are exhibits without inherent properties or purpose. The Great Exhibition’s *Official Catalogue* is a document of their devaluation.

This brief examination of how value has been unevenly and unequally allocated to the matter of the world is a small attempt to expose the structures of difference of industrial capitalism operated in Great Exhibitions; it is only to begin re-thinking and re-evaluation of raw materials. An essential task is to look again at the apparently empirical, that is, to review the entries of the *Official Catalogue*, to read them again, re-visitng their meaning.

I can take up this task with entries I have already cited. Listed as 5 and 138 of ‘Mining and Mineral Products’, the granite, iron, copper and lead were extracted from the Wicklow mountains, Ireland; the coal numbered 412 was dug out from the valleys of South Wales; beneath Cornwall lay the tin, iron and copper that comprised entry 470. These details provide an outline of another geography of international expos. Great Exhibitions that were held in the large cities of Europe and North America are understood as imperial spectacles of capital, as modern displays of colonial dominance from the metropole, and quite rightly so, but their impressive arrangements of industrial productivity were dependent upon their own rural peripheries.

That the historical geography of European industrialisation was an uneven and combined development is no new finding, of course. It has, however, been omitted from accounts of Great Exhibitions. The moment of collection of objects at Great Exhibitions, wherein assembled goods appear in a global market place just before the point of their consumption, is notoriously seductive, pleasurably suppressing the other geographies of industrialisation. The stasis of the exhibited object belies its mobility just as it obscures its
labour: the work of extraction of materials from the margins of a country and the accumulation of their value in its centre. This movement of things is visible in the *Official Catalogue*, locations are listed in each entry; it is us, the readers, who must learn to look again.

Looking for locations listed in the ‘Raw Materials and Produce’ entries reveals a significant number of exhibitors from London and the areas around the city. In the class of objects that at followed ‘Mining and Mineral Products’, that is ‘Class II’, ‘Chemical and Pharmaceutical Products’, an entry read:

14 MAY & BAKER, Battersea, Surrey – Manufacturers.

Robert Ellis added a note to this entry under the title ‘Nitric Acid’:

The *aquafortis* of commerce consists of impure nitric acid. It is obtained from the distillation of concentrated sulphuric acid mixed with nitrate of potash or soda. The commercial substance called Chilian, or Peruvian salpetre, is nitrate of soda, and has largely been used lately in the preparation of this acid. This acid is of immense importance in the arts, chemistry, and medicine.21

Thus, as Ellis brings to our attention, a substance used by May and Baker to manufacture nitric acid, nitrate of soda known as ‘Chilian, or Peruvian salpetre’, was not from Battersea, the listed location of the exhibit. His note is an early indication of British trade in Chilean nitrate that was to develop the financial, agricultural, chemical and military economy of northern Europe: British merchant houses established nitrate mining companies; they speculated in nitrate on London stock market, fed the fertiliser business of intensive European farming and fuelled the production of explosives during the First World War.22 The nitrate trade under-developed Chile, Peru and Bolivia: British companies mined only for export, accumulating a surplus not only from the nitrate shipped in sailing vessels from the Pacific ports that bordered the Atacama Desert but from shares in their companies that extracted it.23 The site of extraction, the location of mine, the point of origin of nitrate and other substances categorised as a Raw Materials at the Great Exhibition is of little importance in its order of objects. May and Baker’s specimens of nitric acid are within the British section. They are exhibited here as imports rather as products in Chilean national stand in Foreign States section. From where a British manufacturer’s exhibits derived is an incidental matter that does not effect their national categorisation. Place of origin is not entirely absent, but it appears as a detail of the character of the object rather than a declaration of its dislocation or the distance over which it has travelled.

In the next classes, ‘Substances used as Food’ and ‘Vegetable and Animal Substances used in Manufactures’, Class III and Class IV, the site of extraction of substances are, again, partially visible. Of the many examples, here are four:

38 BENHAM, W.A., *Cross Street, Queen’s Square, Bloomsbury* – Producer.
Samples of Trinidad cocoa in its separate stages; the cocoa-nut (cacao), in its raw state, as imported from Trinidad; the nut as roasted; nibbed and divested of its outer bark or shell; and finally in its manufactured state.  

40 LAMBERT & BUTLER, 141 and 142 Drury Lane – Manufacturers.  
Tobacco imported from America, Havana, Holland, & c; and specimens of the articles manufactured from it.  

29 MILLER, TAVERNER JOHN, Dorset Wharf, Westminster – Importer and Manufacturer.  
Spermaceti oil in its original state, as importer from the South Seas.  
Rough spermaceti, when separated by filtration and pressure from the oil.  
Filtered spermaceti used for illuminating purpose and for lubricating machinery.  
Block of refined spermaceti, the inside being hollow to exhibit its natural crystallization.  

59 HEAL & SON, Tottenham Court Road - Importer and Dressers.  
Specimens of bed feathers; Irish, English, Russian, Hudson’s Bay, and Dantzic, in the raw state, and steamed, and dressed.  
Specimens of Russian down, in the raw state, and steamed and dressed.  
Specimens of Greenland eider-down dressed.  

Thus, within the Official Catalogue and inside Crystal Palace, raw materials appear as already appropriated objects. Colonial geographies of industrialisation through which the cocoa, tobacco, oil and feathers have moved in order to arrive at Queen’s Square, Drury Lane, Dorset Wharf and Tottenham Court Road and before their installation at the Great Exhibition are not documented. These things have been picked, pulled, plucked, shovelled, packed, hauled, transported, hauled again and unpacked. Their existence as exhibited objects in 1851 is dependent upon relationships of extraction and networks of export that lie outside the Exhibition’s focus. Exhibits must be pristine; they are new arrivals that reveal the acumen of the importer or ingenuity of the manufacturer rather their past life of extraction and exchange.  

Accruing raw materials to the London importers and British manufacturers leaves the place of origin with almost nothing to show. Just three objects, of which one must be considered a curiosity, albeit weighty, was catalogued under ‘Chili.’ Even here, in the ‘Foreign States’ section, a London-based company was the exhibitor:  

1 Schneider & Co, Broad Street Mews.  
A lump of solid gold ore, weighing 3 cwt. Brought on the back of a miner from a depth of 45 yards below the surface.  
Two samples of copper ores, containing 62 per cent of pure copper.  

Rather astutely, Robert Ellis pre-empted any undue attention to such a large lump of gold by asserting the greater significance copper: it was ‘a metal generally far more productive to the mine-owner.’ Copper was, and is, a very valuable industrial material. Ellis’ admission of a colonial mining process also reveals his own utilitarianism. But, it was the small size of the Chilean collection that is most noteworthy. The editor adds, in case the point was missed, that Schneider and Co. was ‘the only contributor.’ A paucity of objects was equated with the absence of industrial process; a small number of exhibits evidence of an empty state before industrialisation. Of course, export economies had already distributed objects to European companies that then occupied the larger share of Great Exhibition floor space, yet lack of
exhibits were understood simply as lack of industrial substance. The creation of industrial abundance through colonial expansion and extraction was thus obscured in the organisation of Great Exhibition’s national displays.

Formal colonies fared a little better. This part of the Great Exhibition was populated with more objects. ‘British Possessions in Africa’, as all other sections, was introduced by Ellis:

The distinguishing feature of all the contributions to the Exhibition sent from the dependencies of Great Britain is the predominance of raw material and produce over manufactures and fine arts. There is much that is suggestive in this fact. The early development and prosperity of a new country or colony is always necessarily dependent on its natural products, and their application, than on the industrial arts. There is much to interest both the naturalist and the merchant in the objects exhibited.31

Those places that exhibited a large proportion of raw materials come to be defined by them, or rather by the assumptions about their raw condition. Location and exhibit, place and object, are unworked; they are of use to industry, available to be adapted; they only and always appear just at the point of entry into industrial process and thus prior to proper development. Ellis’ invitation to the naturalist and merchant to study the ‘British Possessions in Africa’ foreshadows the colonial economies based on the export of their resources. ‘Proprietor’, Charles Dickson Archibald F.R.S., of 15 Portland Place is much more blunt. His entry under Nova Scotia in ‘British Possessions in America’ is a declaration of the direction of export economy. ‘Iron ores’ were exhibited alongside ‘seal-skins’ and those of ‘wild cats’ with ‘native manufactures’ and ‘Indian dress’. It was mineral ‘specimens’, Charles Dickson Archibald proudly announced in the Official Catalogue, ‘illustrate the proposition’:

“That the province of Nova Scotia is capable of supplying the whole British empire with steel and charcoal iron, equal to the best foreign articles, and at greatly reduced prices.”32

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To Re-visit Not to Conclude

It is quite conventional, of course, to conclude this kind of article by suggesting further study. I am not merely following form. There is much more work to be done. Rejecting the Great Exhibitions categorisations of objects opens up a series of questions about not only the very things that were exhibited, such as cocoa and copper, feathers and nitrate, but also of human-material relationships more generally. How have Ellis’ instructions to see the value of iron in its conversion for industrial life or Charles Dickson Archibald’s assertion that it is a supply for empire positioned humans against materials and shaped our understanding of a world that is there to be taken? Why and when did earthly and animal substances become possessions attributed to names and exhibited by nations? Re-thinking the category of raw materials can begin a re-writing of national and international histories as a world history through reinstating the mobility of materials and the work of their extraction from peripheries or satellites of metropolitan centres in which the Great Exhibitions were held. Re-visiting the Great Exhibitions without adopting the established viewpoint from objects appear inevitably as national possessions offers possibility of seeing another longer and larger history of the exploitation of land and labour by looking at the point of extraction.
of materials then across to their exchange over distances that spanned the globe before their arrest in an international show.

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**Notes**

13. Paul Young, *Globalization and the Great Exhibition* *Official Catalogue*, 118
14. *Official Catalogue*, 120
15. *Official Catalogue*, 149
16. *Official Catalogue*, 166
17. *Official Catalogue*, 194
19. *Official Catalogue*, 189
20. *Official Catalogue*, 189

24 *Official Catalogue*, 203
25 *Official Catalogue*, 203
26 *Official Catalogue*, 197
27 *Official Catalogue*, 199
28 *Official Catalogue*, 1429
29 *Official Catalogue*, 1429
30 The twentieth century term for the condition of pre-industrialisation is, of course, under-developed and is as problematic as any of Ellis’s assumptions.
31 *Official Catalogue*, 949
32 *Official Catalogue*, 970