

PAPER

## Soldiering Archaeology: Pitt Rivers and 'Militarism'

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This paper initially explores the impact of the military on the development of British archaeology generally. It then focuses on the career of General Pitt Rivers, whose army background – especially his work in ordnance and when serving as legal prosecutor – fundamentally informed his archaeology, providing the basis for his concept of *proof* and the adjudication of evidence. Pitt Rivers was an active member of, and contributed to, the collections of the 'lost' museum of the Royal United Services Institute. His particular interest was in the study of *Primitive Warfare*, and he demonstrated its evolution through his 'typological' collections of weapons. Finally, given the breadth of military experience and the diverse participation of its members within the discipline, critique is made of Wheeler's singular formulation of an 'army-influenced archaeology'.

Most Pitt Rivers studies make little serious effort to integrate his archaeology and military background. Aside from acknowledging that it fostered the over-representation of weaponry within his museums, his service years are usually held to be a fairly inconsequential prelude to his fieldwork practice and collection activities. Arguably, this is attributable to the fact that today we are unaccustomed to the idea of a career soldier participating so fully in the mainstream intellectual life of their time. To this also, perhaps, could be added a reaction to having Mortimer Wheeler – Britain's archaeologist-cum-soldier *par excellence* – adopt Pitt Rivers as the prime ancestor for his idiosyncratic 'archaeology as discipline/regimentation' programme (1954: 2 & 3, pl. IV; cf. Carver 2011: 12–14), as well as now, the taint of any military participation within the subject generally as engendered by the Nazis (e.g. Arnold 1990).

The distancing of Pitt Rivers' early career does not just pertain to his archaeology but to the subject as a whole, and there has been little recognition of the degree to which 'militarism' influenced it.<sup>1</sup> This is true of the history of many of the social sciences, and particularly one such as archaeology that is so bound up with both topographic mapping and the large-scale deployment of labour. Accordingly, before exploring the impact of Pitt Rivers' background on his archaeology, in the second part of this paper, some facets of the role of army generally, as well as its broader influence on, and participation in, the documentation of the past (and lands), will first be outlined. Finally in third section of this paper, the extent to which Pitt Rivers' military exposure – particularly to the Royal United Services Institution Museum – influenced his collections, will be addressed.

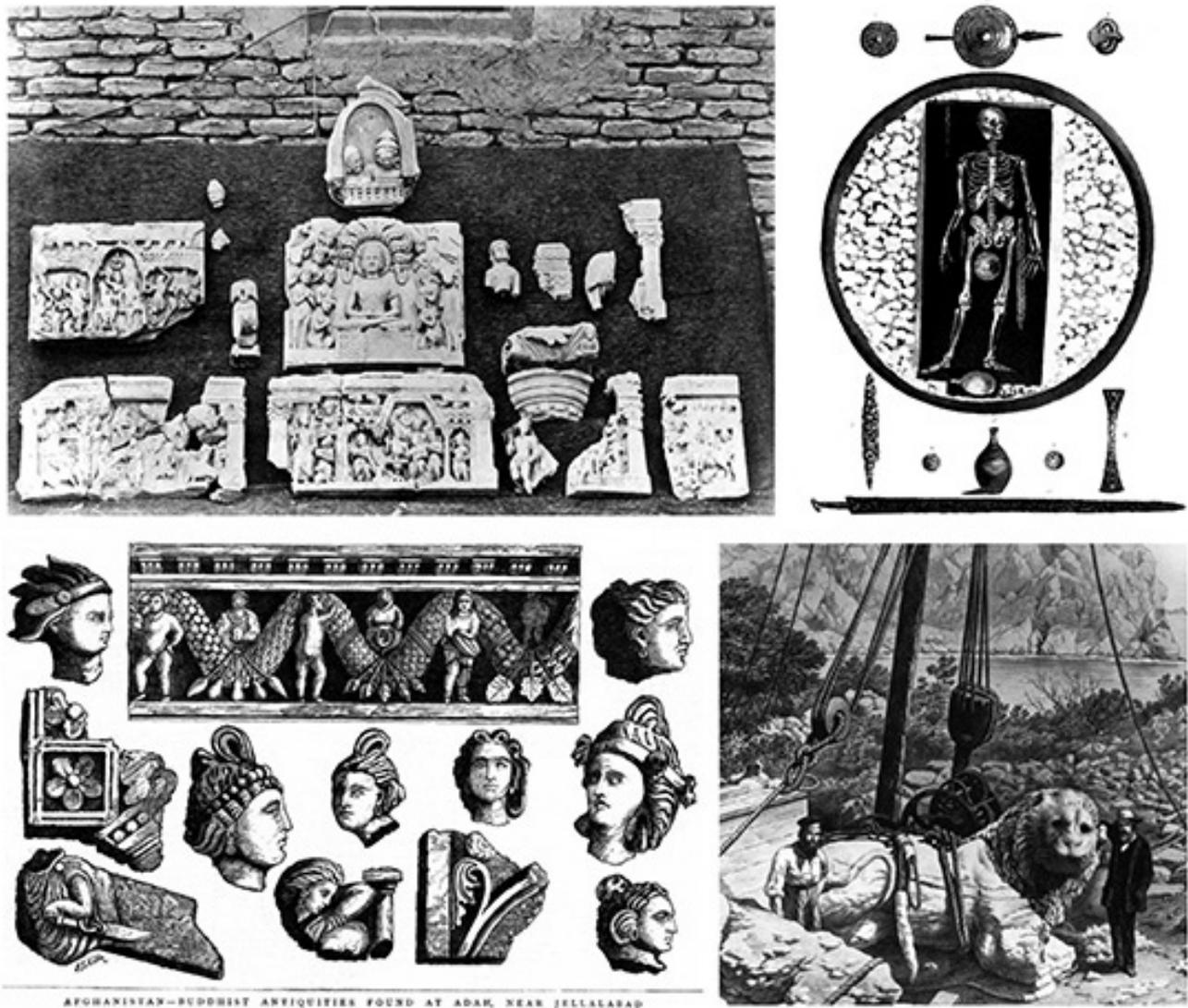
### Campaigning and Edification

Although the British army was never larger than some 125,000 troops (greatly bolstered, though, by the Indian native army; e.g. Strachan 1984: 182), its impact on Victorian Britain cannot be overestimated. 'Military culture', to a unique degree, forged the nation's self-image. With its ties constituting an all-pervading social/economic network, it had, for example, an enormous influence upon the sciences and their affiliated industries (e.g. instrument makers; e.g. McConnell 1994), and few families would have been left untouched by it. Following the Napoleonic Wars, far from being a matter of *Pax Britannica*, the expansion of the empire brought with it incessant 'policing actions' and colonial wars (e.g. Herson 2003). Indeed, throughout the nineteenth century there were only nine years when the nation was not campaigning in one way or another. Through this and various imperial postings, services' membership created unique opportunities for foreign travel, and the average soldier would have seen more of the world than many of the period's academics.

Colonial warfare brought direct encounters with 'warrior others'. From the 'stick' warfare of the Andaman Islanders (1867) and Abyssinia's Medieval knight-equivalents (1868) to the Zulu's highly organised tribal armies (1879) and even the European-trained forces of the Punjab (1848), this fighting across, as it were, the many branches of the evolutionary tree surely contributed to the era's comparative ethnography. It provides, moreover, immediacy to Pitt Rivers' 'primitive warfare' studies (1867a and 1868). Not only was it something more than just a matter of armchair or club-collection relevance, but also it informed the racist content of much of the day's social studies (e.g. the distinction of 'martial races'; e.g. Hodgson 1833 and Bonarjee 1899; see also Streets 2004).

As vast tracts of the globe's mapping turned 'red', through their respective campaigns, soldiers, sailors,

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**Fig. 1:** Military Investigations and Trophies: top left, Bengal Sappers & Miners' 1878/79 photograph of unearthed sculptural fragments, Jalalabad (Royal Engineers Museum Archive RE034) and, below, as engraving-rendered in *The Graphic* in 1880/1; top right, frontispiece for Douglas' *Nenia Britannica* (1793) and, below, assisted by a Sapper (left), C. T. Newton's removal of the Lion of Cnidus in 1857 for Royal Navy transportation back to the British Museum (from Cook 1998: fig. 32). Apparently engraved after a photograph by Corporal B. Spackman, the latter well testifies to the 'past as trophy' as Newton had obtained from the Foreign Secretary the services of four Royal Engineers (including two trained in photography), the use of HM *Gorgon* for six months (crew 150) and £2,000 to collect sculptures (Cook 1998: 141–152): 'this practice of collecting on a grand scale was wholly dependent on the co-operation of the Royal Navy' (Cook 1998: 150; see Hoock 2010: 230–231 on the Navy's role in the collection of the Elgin Marbles).

explorers and archaeologists vied for pride of place in the pages of the *Illustrated London News*, and brought trophies home to both regimental and national museums (the 'archaeology of empires' being, after all, itself a prerogative of latter-day empires; see **Figure 1** and e.g. Diaz-Andreu 2007). Although difficult to quantify, the members of the British military who, one way or another, participated in antiquarian/archaeological pursuits are clearly legion. The sons of officers having privileged access to boarding schools, and upper class families, were expected to supply intellectually well-rounded commanders. Officers were actively encouraged to pursue their own scientific interests (Harries-Jenkins 1977: 162). They were afforded enormous lengths of what was, in effect, study

and/or travel leave, with some branches of the services promoting contributions to relevant journals, as well as encouraging collection for their museums.<sup>2</sup>

As a military engineer and later founder of the Ordnance Survey (and eventually a Major-General), it is only appropriate that Roy's *Military Antiquities of the Romans in North Britain* (1793) is first highlighted, as it directly arose from his Military Survey of Scotland map-making of 1747–55 (see e.g. Hewitt 2010: 20–42; Bowden and McOmish 2012). Overseas, ruins/'old' fortifications and other finds were regularly documented by the Regiment of Engineers/Sappers (see **Figure 1**),<sup>3</sup> Captain Charles Warren would count among these, as would later, Kitchener's reconnaissance/surveys in Palestine (Warren *et al.* 1871; Conder

and Kitchener 1881–85), plus Captain Robert Murdock Smith's Mediterranean fieldwork (later Major-General; see e.g. Crownover 1963), as could also Cunningham's – similarly having an army engineer-training – tenure as the first Director of the Indian Archaeology Survey (1861–85; Chakrabarti 1988). Otherwise, the examples could be cited of Fawcett's discovery of Anuradhapura while serving with the Royal Artillery in Ceylon (Grann 2010), or Rawlinson's work at Behistun (eventually leading to the decipherment of cuneiform) when an officer in the British East India Company Army (e.g. Rawlinson 1851; Adkins 2003). So, too, could Captain Smyth's surveying of the bath complex on Lipari (he donating a model of the same to the Society of Antiquaries of London and eventually became one of its directors; 1830, see also e.g. 1846). Smyth served in the Royal Navy, whose officers in particular partook of site/monument recording during their coastal surveys and, in 'home waters', Lt. Thomas' Orkney studies while commanding HM Surveying Vessel *Woodlark* could here be enlisted (1851; see also **Figure 1** and Cook 1998 on the Navy's role in transporting classical antiquities).<sup>4</sup>

The role of archaeologist as spy, variously preceding/informing the military operations, also needs to be acknowledged. Its ranks would include Charles Masson's (alias James Lewis) activities in early-mid nineteenth century Afghanistan, excavating Buddhist monuments and the city of Begram (Whittridge 1986), and, most famously, T. E. Lawrence. Lawrence, who worked with E. T. Leeds at Oxford's Ashmolean Museum and, then, on various Middle Eastern excavations prior to World War I, was co-opted in early, pre-war 1914 by the British Army to undertake a survey of Negev Desert under the guise of archaeological researches (Woolley and Lawrence 1914).

In the wake of the army and/or stationed with them abroad, military chaplains and doctors also undertook investigations. On the one hand, there would be Edward Bawtree, who, when posted as Staff Assistant-Surgeon to the Military Establishments at Penetanguishene, Ontario, dug a series of Indian burial sites. The resultant publication, 'The Brief Description of Some Sepulchral Pits of Indian Origin', appeared in the *Edinburgh New Philosophical Journal* of 1848 and was one of the first studies of Canadian archaeology. On returning to England, Bawtree apparently donated material, including four skulls, to the Museum of the Army Medical Department, Chatham (see Williamson 1857 and Sutton 2010).<sup>5</sup> On the other hand, there is the Rev. Charles Swinnerton – Chaplain to the Khyber forces – who 'excavated' at Adah, near Jellalabad (see **Figure 1**; Anon. 1880/81).

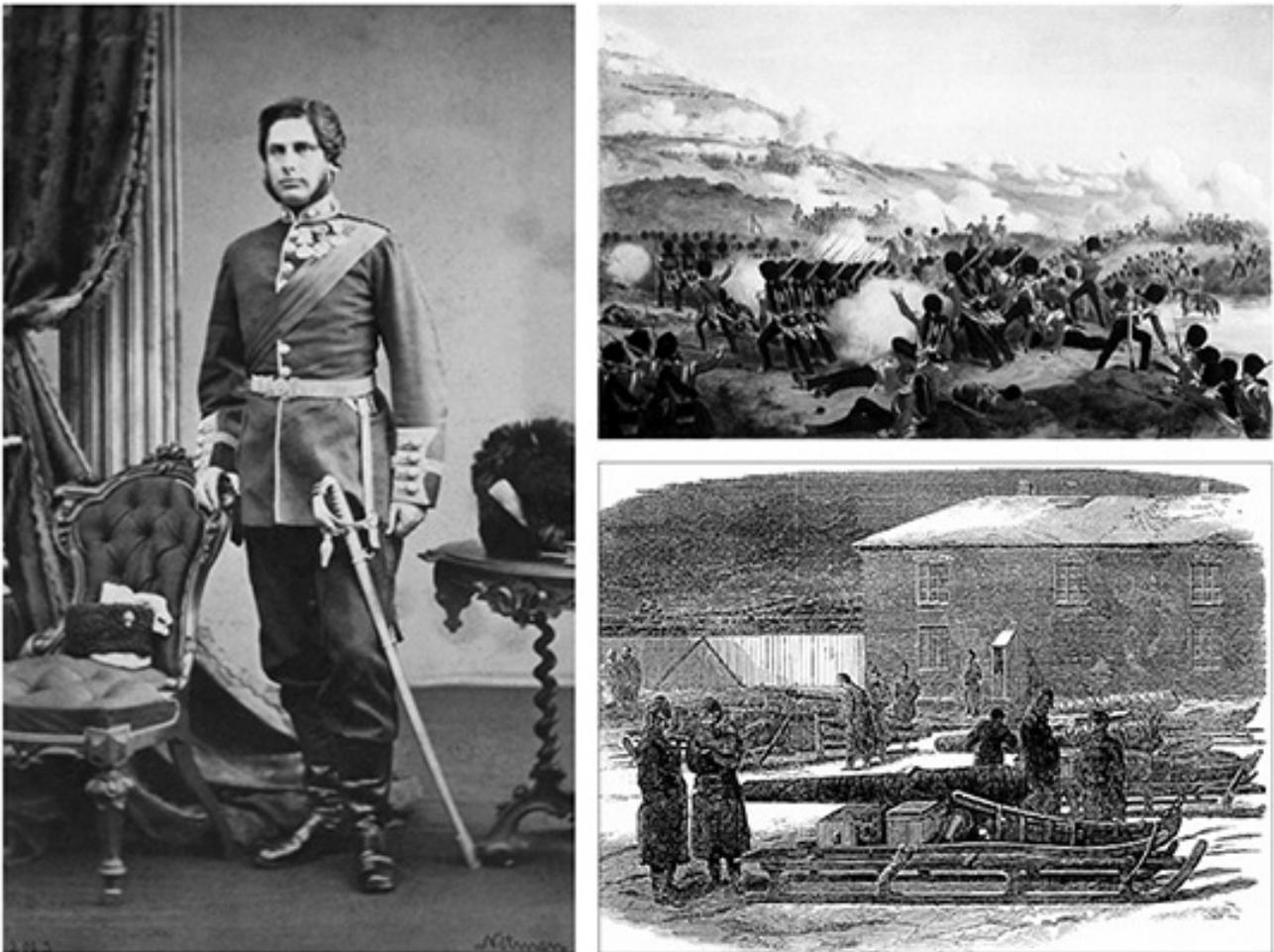
The clergy was another calling affording ample time for personal research pursuits, and in this regard James Douglas performs a bridging role. It was while serving as an Assistant Engineer during works on the Chatham Lines' fortifications in Kent in the later eighteenth century that, as a young captain, Douglas was able to excavate some 90 Anglo-Saxon barrows and a Roman building/sepulchre' (see **Figure 1**). He was duly elected to the Society of Antiquaries in 1783 and in the same year left the army, took up 'the cloth' and, thereafter, published his findings

in *Nenia Britannica* (1793; see also Fergusson 1872: 120 on other Chatham sapper excavations).

One could go on in this vein, citing for instance, in Britain, General Lefroy's digging of a tumulus at Greenmount, County Louth (Fergusson 1872: 231), Lt-Colonel Hawley at Silchester and Stonehenge (Hudson 1981: 37–38) and Lysons' excavation of the Woodchester villa, where (through Sir Joseph Banks' patronage) the army eventually provided the necessary manpower and equipment (Lysons 1797; Sweet 2004: 104). Aside from complimenting a generic edification ethos, available time, ready labour and survey skills are essentially what promoted military archaeological investigations. Surveying, of course, was widely taught and practiced throughout the forces.<sup>6</sup> This is further reflected in that, during the nineteenth century, the journal of the Royal Geographical Society saw so many contributions from the services (and who at times made up more than half of its council). Yes, through various expeditions, they mapped/surveyed and 'captured' extraordinary swathes of the world. Yet, it remains fundamentally difficult for us today to comprehend an intellectual-institutional milieu where, for example, the liberally-minded membership of the Ethnological Society of London (originating from the Aboriginal Protection Society; Stocking 1987: 240–257) attracted such a high proportion of officers; its 1869 list of fellows having 15, including five Generals and four Lt-Colonels (see Hingley 2000 on 'officers and gentlemen' and imperial discourse, and e.g. MacLeod 1980 and Secord 1982 imperial science).<sup>7</sup>

### Exactitudes and Proof

As Pitt Rivers' military career has already been thoroughly summarised (Thompson 1977: 14–30; Bowden 1991: 14–22), only its bald highlights need be rehearsed here. Following family regimental tradition (his father having served in Wellington's Peninsular campaigns), after studying at Sandhurst Royal Military Academy in 1845 he was commissioned in the Grenadier Guards. In the course of his thirty-two years long military career (albeit much leave-interrupted; see **Table 1**) he only once saw a major front-line action, at Alma in 1854 (see **Figure 2**).<sup>8</sup> Then decorated and promoted to major (when he eventually fully retired in 1882 he was accorded the honorary rank of Lt-General), Pitt Rivers was held evidently to be an efficient and able staff officer. Indeed, Sir James Lindsay, commanding officer of the Guards, wrote that 'he has considerable abilities [and] has taken great pains in *self instruction*' (emphasis added). The latter comment refers to Pitt Rivers' role in the development of, and instruction in, musketry, which was to be the mainstay of his military career.<sup>9</sup> Probably, beginning in 1851, he became a member of the committee to experiment and report upon the respective merits of the army's smoothbore muskets, as opposed to more accurate rifled designs. He was thereafter appointed to Woolwich to instruct in the use of the new Minié rifle and in 1852 travelled to the Continent to study current methods of its training. Subsequently, he was largely responsible for the founding of the Hythe



**Fig. 2:** The Man at War: left, a uniformed Pitt Rivers as photographed in Notman's Montreal studio, 1862 (McCord Museum); top right, *The Grand Charge of the Guards on the Heights of Alma* (National Army Museum, London; Keller 2001: pl. VI) and, below, the Trent Affair of 1861–1862, 'Armstrong Guns packed on sleighs in the Ordnance Yard, St. John, New Brunswick' (Campbell 1999: fig. 3).

School of Musketry in Kent and became its principal instructor, revising its *Instruction of Musketry* manual (1855; see **Figure 3**, and Edwards' 1860 account of the school). When not otherwise serving as a quartermaster, the remainder of his service career revolved around musketry instruction and when in 1858 he published his first paper, 'On the improvement of the rifle as a weapon for general use', it was in the *Journal of the Royal United Services Institution (JRUSI)*; it being followed by his 'On a model illustrating the parabolic theory of projection ...' in the same journal four years later (1861a) and wherein he also published his papers (1867a and 1868) on 'Primitive Warfare ...'.<sup>10</sup>

The scientific branches of the artillery and engineers saw a high proportion of middling class candidates. It was a path of more ability-based advancement, as opposed to the commission/class-derived promotion of those of gentry-cum-nobility entitlement. Accordingly, given Pitt Rivers' younger-son-of-a-younger-son inheritance prospects, to choose a career in ordnance was appropriate. Here, the degree to which that field generally was then a leading scientific endeavour should be emphasised. To cast state-of-the-art-standard cannon or rifle a barrel effectively amounted to a test of nationhood, demonstrating

a high command of both chemistry and physics. Akin to the last century's space race, it was truly a matter of cutting-edge technology, requiring the exact computation of projectiles, the adjudication of precisions and, in the case of army procurement (i.e. one gun-type over another), potentially involving vast expenditures (see Pitt Rivers, 1861b on 'the national weapon'). Nor can the specific impact of the development of the rifle and musketry training be overestimated; it being posited that between the Peninsular and Crimean Wars that the chance of a bullet having effect rose from one in 459 to one in 16 (Strachan 1984: 158).

As evinced in a letter to Tylor concerned with his forthcoming election to the Royal Society, and setting straight the record of his achievements, as late as 1875 Pitt Rivers thought that his main contribution was to musketry rather than anthropological science:

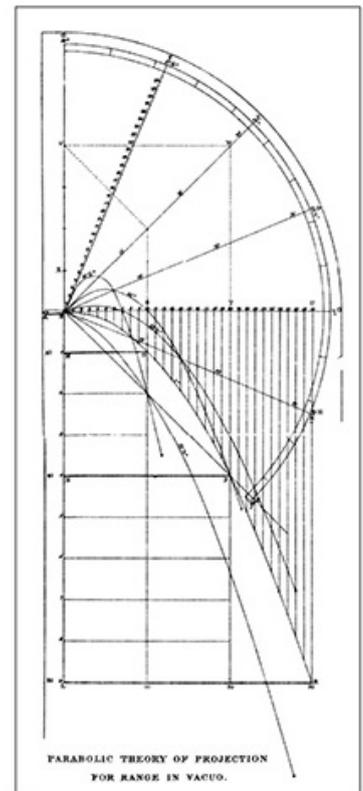
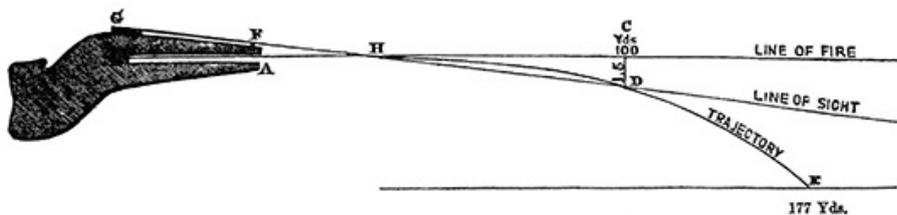
I forgot to mention when you asked me the other day about my literary or scientific performances such as they are that, not being either a literary or scientific man and the greater part of my life having been dedicated to my profession it might be perhaps as well if you think anything that I have

done worth mention to quote you from the Royal Commission on the Subject of Military Education the passage which the Commissioners allude to my services in originating the School of Musketry at Hythe. As the school of Musketry has been of very wide special benefit to the army it is no doubt a matter which the Royal Society might fairly recognise ... *I mention this as you ... think as I do that my Anthropological contributions to Science alone do not afford my very weighty claim to recognition.* Even tho you were kind enough to suggest to me to become a candidate for the Society. My School of Musketry work however was the result of many years hard work including experiments in connection with the small arms commission at Woolwich & Hythe and the translation of some of the official codes of foreign countries. (British Library: Add. 50254 ff. 84 Envelope f. 88; emphasis added)

The basis of his admission to the society in the following year was a compromise, he being 'Distinguished for his original researches into the development of Implements and Weapons and the origins of arts throughout the world, and eminent as a general Ethnologist and Archaeologist' (in Thompson 1977: 41); whereas his earlier election to the Society of Antiquaries was solely on the basis of his ancient weapon researches.

There are other, more generic aspects of Pitt Rivers' military background that also shaped his archaeology. These range from his quartermaster duties (i.e. logistical organisation) to an appreciation of terrain mapping and survey. Of the latter, it was surely not accidental that commanding pride of place upon his renowned quasi-heraldic medallion-symbol was an engineer's level (see **Figure 4**; Barrett *et al.* 1983 and Evans 2006). He was certainly well versed in field survey techniques and in his late-in-life proposals for the establishment of a roving centralised excavation team – 'a permanent *Corps* of efficient workmen' (1892: 24; emphasis added) – he mentioned the usefulness for members with drawing and surveying skills.<sup>11</sup> To this army-influence listing could also be added an appreciation of modeling-forms of topographic depiction, a technique he went on to use to render his major sites and which had a long military pedigree (see **Figure 4**; Evans 2004 and 2008; see also Pollard and Hicks 2013: 255–257).<sup>12</sup> Indeed, his fine-grained appreciation of landscape and its possibilities would surely have been informed by a 'gunner's countryside eye' (see Secord 1982: 419–421), and generally he stressed the value of seeing/recording with clarity and precision:

Every detail should, therefore, be recorded in the manner most conducive to the facility of reference, and it ought at all times to be the chief object of an



**Fig. 3:** Savage Weapons: top left, instructors at the Hythe School of Musketry, 1860; below, 'Lines of Fire and Sight' from *Instruction of Musketry* 1855; right, illustration of Pitt Rivers 1861a 'Parabolic Theory' model. The 1862 *RUSI* journal indicates that Pitt Rivers had bequeathed his actual model to the Institution's museum (listed, absurdly, beside a stuffed 'Bob the Dog', belonging to the Scots Fusiliers and who apparently had been run over by a cart in Crimea). Not appearing in the 1914 catalogue, it can only be presumed that, like so much of their collections, his model was also somehow disposed of beforehand and its whereabouts are unknown.



the fabrication of 'ancient' flints for collectors and, most famously, the Piltown Man forgery, but also the wayward interpretation of site sequences. The latter was a logical outcome of a paucity of established site-type precedents (i.e. what does a 'normal' Iron Age settlement look like?), as well as a lack of fieldwork publication norms (nor any absolute basis of chronological arbitration; e.g. C-14 dating). There was, in short, still insufficient cumulative disciplinary 'weight' to readily dispatch fanciful extremes and little consensus as to what actually constituted site-based evidence as such.

In this context there is a certain irony that, influenced by recent papers on the theme, he mistakenly interpreted his London Wall findings as the remains of an Iron Age lake village. More telling is the controversy surrounding his work at Cissbury Hillfort. In the initial 1867–68 seasons he failed to understand the interrelationship of the site's earlier flint mines and its later 'entrenchment' (nor establish the latter's Iron Age date), seeing both as relating to a 'Stone Age camp' (Pitt Rivers 1869). In fairness, Pitt Rivers was then primarily concerned with artefact typology and, accordingly, the report only includes flint illustrations and is without any feature-specific plans or sections. Reflecting, moreover, his ideas concerning the long continuity of primitive forms, all of its flintwork was conflated into one assemblage encompassing both 'early' and 'late' types (i.e. both Palaeolithic and Neolithic).

In the years that followed, it became apparent that Pitt Rivers was wrong. The specific morphology of Neolithic flint mines was established by Greenwell's Grimes Graves investigations, as well as others subsequently digging at Cissbury itself (Pitt Rivers having failed to bottom its mine shafts and recognise their side galleries). Seven years later Pitt Rivers duly returned to re-excavate Cissbury and, after much perseverance, demonstrated that its flint mines were indeed Neolithic and stratigraphically predated the earthwork's circuits (Pitt Rivers 1875a).<sup>14</sup> This is important as it tells of self-correction and advancement within the subject, with the ensuing report setting a high standard of documentation and including a fine 'perspective section'. As if so many jurors, the veracity of the latter and the sequence-interpretations was accredited by naming eight eminent colleagues who viewed the site (both Godwin Austin and Prestwich also appended letters of verification).<sup>15</sup>

These two aspects of Pitt Rivers' military background – ordnance appraisal and legal proceedings – shared an adjudication of evidence and demonstrable proof; in other words, both amounted to *inquest/trial procedures*. Of course, the kind of group-endorsement practiced at Cissbury was essentially akin to the *conversazione*-like manner that such bodies as the Society of Antiquaries of London were themselves organised (meeting display-table showings of artefacts, etc.; Evans 2007). Equally, the case of Evans and Prestwich's official visitation to Abbeville to evaluate de Perthes flint-tools-in-gravels claims could also be cited (Gamble and Kruszynski 2009). Such exercises effectively amounted to determination by 'collective viewing', and that more than one set of eyes saw the same

thing and were convinced by a site's interpretation; but then, of course, the authority of some viewings was far greater than others. It is an appropriate methodology for archaeological excavations given their supposed unrepeatable experiment status, with 'many eyes-viewings' fulfilling a comparable role to repeated public demonstrations of otherwise (metropolitan) laboratory-based procedures. That said, such audience outings also had scientific precedents; for example, in 1774 many esteemed guests journeyed north to Maskelyne's hillside camp in Schiehallion, Scotland to view his renowned zenith-sector trials (Reeves 2009; see also Vetter 2011 on 'audience epistemology').

Given his background in military test procedures and the scientific circles he moved in, it does seem remarkable that Pitt Rivers did not develop a more explicit concept of 'excavation as experiment'. There are, though, facets of his work that would have to count as such, including his three-dimensional plotting of finds (and then their *en masse* projection into one 'average section' from his South Lodge site; **Figure 4**). Similarly, there would also be his re-examination of the Wor Barrow's ditches three years after their excavation in order to grasp the dynamics behind their original infilling; so, too, would be his flint knapping, attempts at digging with bone/antler tools and comparisons of modern animal bone measurements with excavated specimens (Thompson 1977: 106; Bowden 1991: 4). Yet, in hindsight, it does seem surprising that he did not, for example, explore the potential for the scaled-down demonstration of the effects of extended weathering in any of his site models; thereby, making them 'work' and turning them into atmosphere chamber-like apparatus. Such devices certainly had a wide currency in the public demonstrations of scientific phenomena and were hugely popular (e.g. Morus 2007 and Lightman 2007).

Another noticeable omission in Pitt Rivers' work is any serious application of photography as a formal basis of proof. Its military uses had been appreciated early (e.g. see **Figure 1** and Donnelly 1862), with Fenton's Crimea War pictures providing the first 'iconic' photographs of any wartime campaign (see **Figure 5**). Similarly, for Evans and Prestwich's Abbeville findings' adjudication, the display of its 'labourer-pointing' deep gravel-face photograph – along with the flints themselves – was what helped sway academic audiences (**Figure 5**). There is not the scope here to expound upon the more theoretic dimensions concerning 'photography as proof', which particularly arose in the last decades of the nineteenth century and when, for the first time, advances in printing processes allowed for their direct reproduction (see e.g. Daston and Galison 1992; Chaloner 1997: 368–371).<sup>16</sup> By the time Pitt Rivers published his Cranborne Chase volumes photographs themselves could be and were included, being employed to both illustrate artefacts and for scene-setting purposes. Indeed, more than anything else it is the latter that has come to dominate our perspective upon his fieldwork: the railway cutting-like progress through the bulk of the Wor Barrow's mound (Thompson 1977: fig. 17) or those of his labourers arranged around its ditch circuit (Bowden 1991: fig. 43). Add to this the formally posed 'team' shots



**Fig. 5:** Staged Photography/Iconic Imagery: left, Evans and Prestwich's Abbeville flint-in-gravels 'adjudication' shot (Gamble and Kruszynski 2009: fig. 2); top right, Fenton's Crimean War, 'Valley of the Shadow Death' image (1855); lower right, Wor Barrow excavations, with Pitt Rivers' assistant, Herbert Toms, right, and prominently beside him the level (note that the poised shovel-in-hand labourers have no spoil to remove, the ditch-top being cleaned already and the entire scene is clearly arranged; Bowden 1991: fig. 42).

(Bowden 1991: fig. 44), they well-convey the mass-scale of the enterprise. Yet, it seems telling that photographs were not used to illustrate sections, which had, after all, been the main point of proof-related consternation earlier.<sup>17</sup>

Crucial to this is the degree to which Pitt Rivers' archaeology changed after coming into his inheritance in 1880. Amounting to a near rural retirement (he was then aged 53) and, thereafter, that degree less approachable, he was distanced from London learned society hubbub and the same need to explicitly prove his results (Evans 2006). Equally, through 'estate-life' he could fulfil his quasi-utopian 'archaeology-and-the-public-good' agenda (Bradley 1983) and focus upon his abiding material/cultural evolution concerns. With fieldwork a component of his edifying pleasure-ground entertainments and museum programme, his site models were primarily intended for public display and not 'hard' scientific demonstration.

In this capacity there certainly is a need to detail the chronology of the General's excavations. This not only pertains to changes in his fieldwork practices, but – demonstrative of the laxity of non-wartime military duties – as shown here (see **Table 1**), it also attests to just how much archaeology he undertook while in service. Moreover, leaving aside that he used the opportunity of commanding Guildford's West Surrey Brigade Depot to take bodily/skeletal measurements of its militia for his own research purposes (e.g. 1877), his Caesar's Camp excavations, for

example, commenced using the labour of sappers (Pitt Rivers 1883: 436).

### Trophies and Savage Weapons

There are more than 130 army museums in Britain. Various displaying weaponry, uniforms, colours and 'trophies' (and, some, models), their prime purpose was/is to promote *esprit de corps* through the documentation of their respective regimental/corps' history (Jones 1996: 152–153). They have received little serious academic study and their collections deserve major review, especially as many of their overseas 'captures' would now have to be classed as historical ethnographic objects (see **Figure 6** for 'arranged' weaponry hangings).

For immediate purposes, the collections of the Royal United Service Institution will have to suffice, Pitt Rivers having joined the Institute in 1850s and served on its council early in the following decade. Along with its library, their museum was established in 1831 in Whitehall (from 1895 housed in the Banqueting House of the former palace there), and was disbanded in the 1970s with much of its materials dispersed to other military museums (the British Museum evidently acquiring much of the antiquities and ethnographic pieces, with the National Army and Maritime Museums receiving much of the remainder). Its 1914 catalogue ran to 6546 entries (Leatham 1914), though many involve multiple un-numerated

	ARMY CAREER	ANTHROPOLOGY/ARCHAEOLOGY
1855	Malta 1855-57  Lt-Colonel 1857 <i>Improvement of the Rifle</i> (1858)	Joins Royal Geographical Soc. 1859
1860	<i>Parabolic Theory of Projection</i> (1861) Canada 1861-62 Ireland 1862-65  Colonel 1867 (Jan.)	Joins Ethnological Soc. of London 1861  Elected Soc. of Antiquaries and Archaeological Institute 1864 Survey Irish Raths 1864-65; joins Anthropological Soc. 1865 Digs London Wall 1866 Digs with Greenwell in Wolds 1867 (April)
	<b>PRIMITIVE WARFARE</b> (1867, June)	
	Half-pay Leave 1867 (July)	Digs Sussex Hillforts & Cissbury 1867 (Sept.) Digs Cissbury, Nr. Oxford & Thanet; joins Brit. Ass for Advancement of Sci. and Inter. Cong. of Pre. Archaeology 1868 Digs London Gravels & Barrow-digging North Wales 1869
1870		<i>Note on the use of the New Zealand Mere</i> (1870) Joins Royal Institution 1871 Digs Black Berg tumulus 1872
	Guildford Depot 1873-77  Measures Militia 1876 Major-General 1877	Bethnal Green Museum and delivers 'Principles of Classification' 1874 Digs Cissbury & delivers 'Evolution of Culture' 1875 Elected Royal Soc. 1876 Digging in Guildford, Somerset and at Mount Cadburn 1877 Digs at Mount Cadburn & Caesar's Camp, Folkestone; travels to Brittany 1878 Digs Flamborough Head; travels to Brittany and Scandinavia 1879
1880	<b>INHERITS CRANBORNE CHASE AND TITLE</b>	
	Honorary Lt-General 1882	Barrow-digging at Rushmore 1880 Travels Egypt and joins Athenaeum Club 1881 Digs Winklebury 1881-82 Inspector Ancient Monument 1883

**Table 1:** Pitt Rivers – A Selective Career Chronology: grey-tone indicating respective army service- and personal pursuit-phases, the crucial point being just how much archaeology he undertook while in the army.

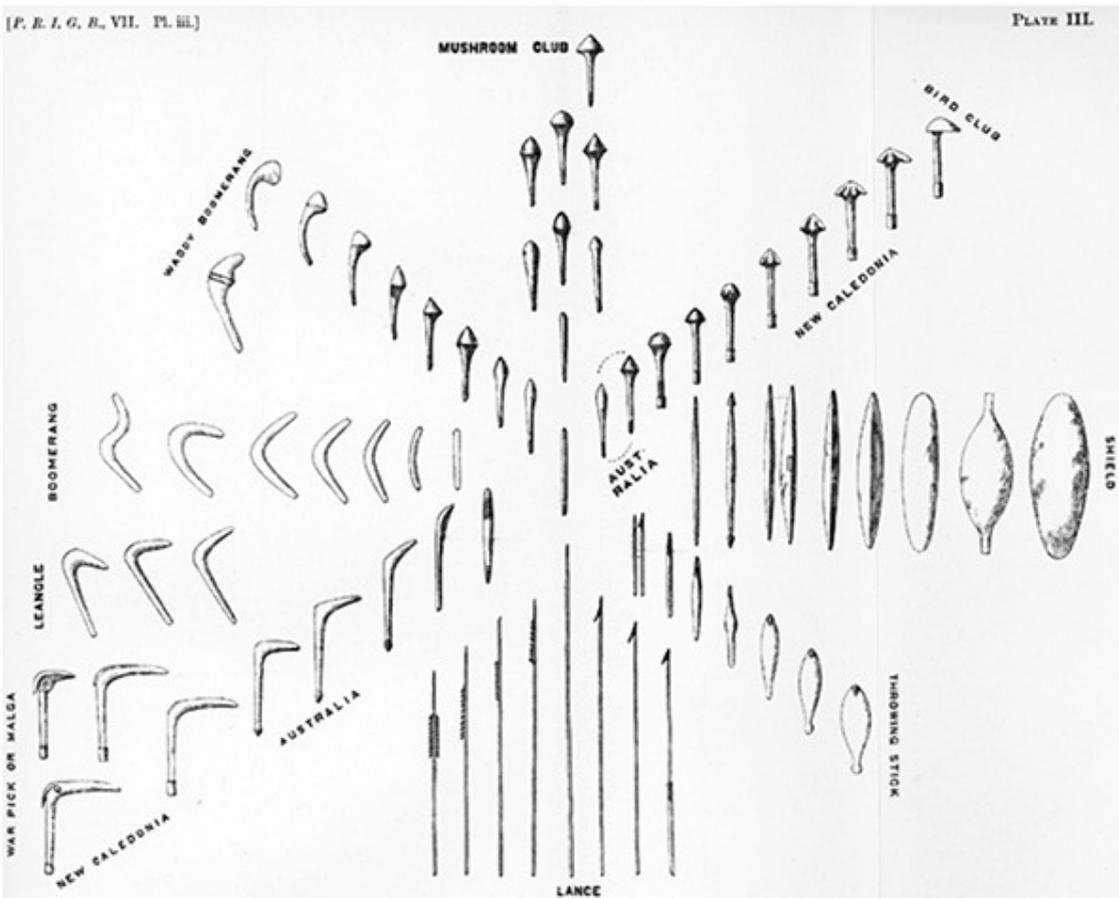
entries (there are also gaps in the numbering sequence), and clearly, along with the East India Company Museum (Desmond 1982), it has to rank amongst the great 'lost' museums of nineteenth century London. As evinced within Pitt Rivers' conclusion to his second Royal United Services Institution's 'Primitive Warfare ...' lecture, it was a display-venue that surely influenced his own collection:

... I have only a few words to say upon the defects of our ethnographical collections generally. It will be seen that in order to exhibit the continuity and progression of form, I have been obliged to collect and put together examples from many different museums; and, as it is, it will have been noticed that many links of connexion are evidently wanting ... I am not so presumptuous as to suppose that the particular arrangement, which I have adopted, may not require frequent modification as our evidence accumulates; but I trust that I shall at least have made it apparent to those who have followed the course of my arguments, that without connecting links which unite one form with another, *an ethnographical collection can be regarded in no other light than a mere toy-shop of curiosities, and is totally unworthy of science. Owing to the wide distribution of our Army and Navy, the members of which professions are dispersed over every quarter of the*

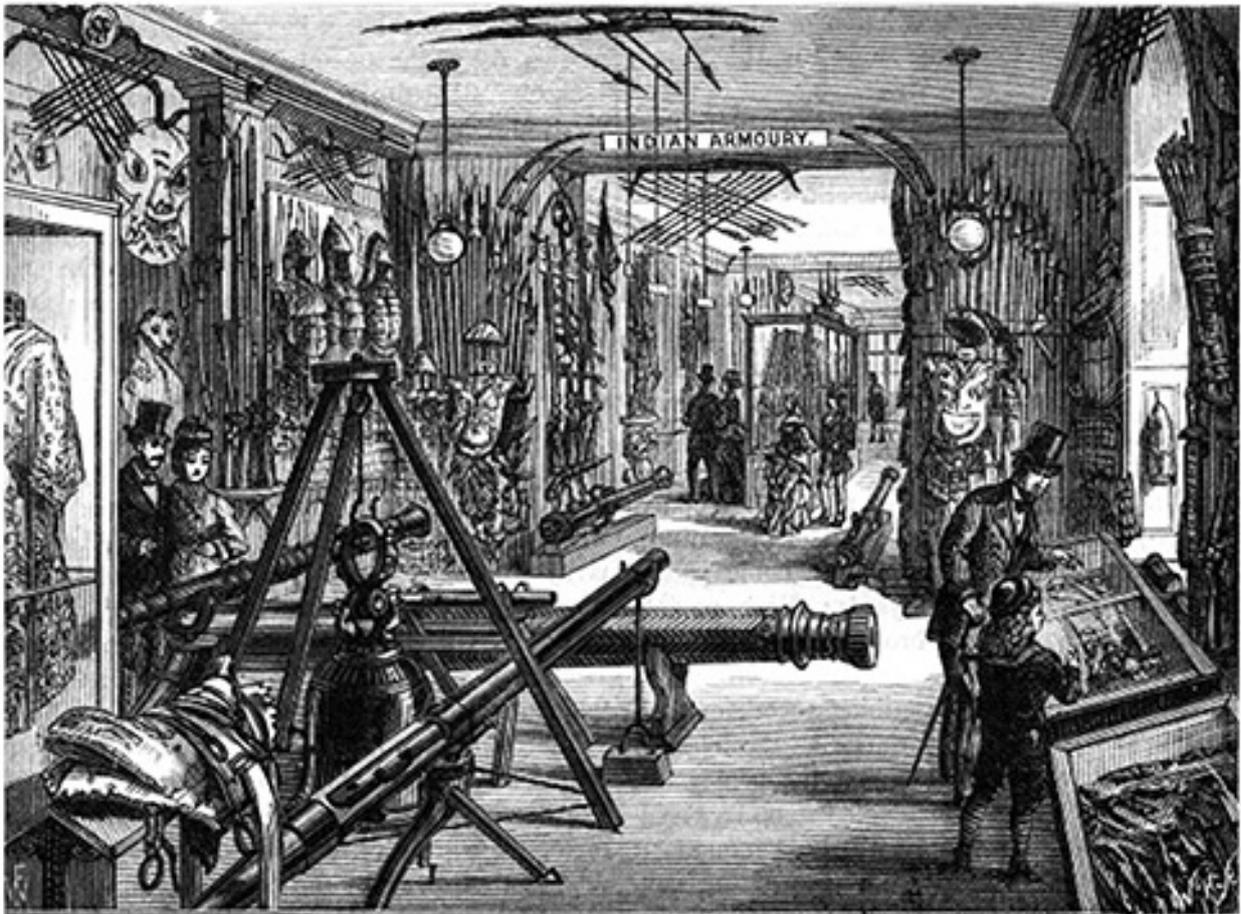
*globe and have ample leisure for the pursuit of these interesting studies, this Institution possesses facilities for forming a really systematic collection of savage weapons, not perhaps within the power of any other Institution in the world. The time is fast approaching when this class of prehistoric evidence will no longer be forthcoming. The collection is already what, for this country, must be regarded as a good one, and if I may venture to hope that the remarks I have now the honour of making will be of service in collecting the materials for the improvement of it, I trust it may be thought that my labours and your patience will not have been thrown away.* (Pitt Rivers 1868; emphasis added)<sup>18</sup>

The contents of the Institution's museum provide a yardstick for the General's own, especially concerning what constituted 'systematic' collection (see e.g. Petch 1998: 78 and 2006: 264–265). The United Services' was evidently anything but. Essentially a hodgepodge of haphazard donations, it was described in Charles Dickens Jr.'s *Dickens's Dictionary of London* of 1879 (see **Figure 7**):

Upon entering, the visitor finds himself in a room devoted to African arms. There are spears and assegais of all shapes and sizes, belonging to the tribes of Abyssinia, Ashanti, Central and Southern Africa.



**Fig. 6:** Arranged Weaponry: Within a number of military museums (here, top, the Royal Museum of the Army and of Military History, Brussels), as well as in historical private-house collections, the manner in which weaponry is decoratively displayed upon their walls are oddly evocative of Pitt Rivers' weapons' evolution illustrations, as in his 'Primitive Warfare ...' stick-to-boomerang figure below.



**Fig. 7:** The Royal United Service Institution's Museum: top, interior 1878 (from *Old and New London* III: 344) and, below, Lemere's 1896 photograph of its then new Whitehall Banqueting House displays (note many of the museum's much-evident ship models were later acquired by the National Maritime Museum, Greenwich).

Upon the floor stands a great variety of war-drums of various forms ... The next room is devoted to modern arms ... The next room is devoted to Asiatic arms. There are some curious Chinese and Indian cannon and jingais, some suits of Indian chain-armor, together with primitive weapons from Borneo and the Polynesian islands. Beyond the Asiatic room is that devoted to the marine branch of the United Service. There are a great variety of fine models of ships of all shapes ... In this room are some Gatling guns and mitrailleuses of various patterns, and also some torpedoes, fixed and movable. At one end are models of small craft of all kinds, from the Cingalese outrigger and the Venetian gondola to the Chinese junk. In the next room is a model upon a large scale of the Battle of Trafalgar ... Returning back to the first room, the visitor will find to his left two rooms filled with models of all the different descriptions of ordnance in use in the British army and navy, together with the shot and shell fitted for them. Upstairs there are several rooms with noteworthy military trophies ...

Aside from many prints and paintings, obviously regimental colours, medals, uniforms, weaponry and ordnance featured highly, with the latter two (of European/American origin) respectively having some 320 and 610 entries within the 1914 catalogue. There were also an enormous number of models (142) and, as is apparent in in **Figure 7**'s photograph, of these the vast majority were of ships, with those of artillery otherwise prominent. By far the most eccentric entries are those that can be broadly classed as 'relics' (with this entitlement on occasion actually used for such pieces). Aside from items recovered from shipwrecks (e.g. the *Mary Rose*) and, for example, arising from the *Bounty* affair, these related to fallen heroes (e.g. Cook, Nelson, Wolfe and Franklin) and 'greats'; among the latter was the umbrella used by Wellington at Waterloo or the skeleton of the horse that Napoleon rode on the day, *Marengo*.

Their collection also encompassed antiquities, including a Buddhist terracotta unearthed in 1878 during strengthening of a Khyber Pass fortress (likely among the material shown in **Figure 1**), as well as nine items of Bronze Age and Saxon-attributed weaponry variously from Ireland and dredged from the Thames River (spearheads, swords and a dagger; a great deal of later Medieval arms are included within the Euro/American weaponry). One of the largest categories, and that of greatest relevance for Pitt Rivers' researches, was its ethnographic material and this he duly acknowledged in the lectures' introduction:

... Yet the fact of your possessing in the three large apartments that are devoted to your armoury, one of the best assortments of semi-civilized and savage weapons that are to be found in this country, or, perhaps, in any part of the world, is sufficient prove that it is not foreign to the objects of the Institution that the science of war should be ethno-

graphically and archaeologically, as well as practically, treated. (1867a: 612; emphasis added)

Running to c. 1300 catalogue entries (1914) and nearly all warfare-related, the Institution's would have then been one of the larger ethnographic collections in Britain.<sup>19</sup> That said there are distinct ambiguities in the assignation of this material. While the same is also true of many of the catalogue's entries generally – is, for example, Nelson's sword to be classed as a weapon or relic? – to determine its ethnography this becomes acute. How are 'native' rifles that recycled European components to be counted? Also, how should suspected mass-manufactured, native India Army regimental weaponry be listed? Unfortunately, the latter issue cannot be resolved without much more in-depth researches and, accordingly, the appraisal here can only be considered rudimentary at best.

Except that it omits many Australian- and New Zealand-sourced items (including boomerangs and war clubs; one of the latter, known as a mere, in jade (Pitt Rivers 1870) was apparently presented by Lord Byron), Dickens' description above generally reflects the range of the museum's ethnographic holdings. Based on the published catalogue alone there is no ready means of establishing what material was present within the Institution's collections when Pitt Rivers was compiling his 'Primitive Warfare ...'. That said, the donations to, and purchases by, the museum listed in its annual journal provides some basis. Between 1859 and 1868 it acquired roughly 1024 items, with their category-proportions varying from those in the 1914 catalogue. Reflective of the scale of its subsequent disposal policy in the approximately 50 years that followed,<sup>20</sup> in that decade alone it received 172 models (i.e. 30 more than listed in 1914). By far the largest category was ethnographic material (424/41.4%), with European weaponry/ordnance representing only approximately half that amount (c. 234/22.8%). In part, this weighting of foreign-source material appears attributable to the aftermath of the Indian Mutiny (i.e. 'trophy spoils'); although it also included, for example, articles collected during Speke and Burton's Central African expedition, donated by the Royal Geographical Society.

A more direct measure of the museum's impact can be gleaned by what sources Pitt Rivers (1867a; 1868) drew upon for illustrations accompanying his 1867 and 1868 lectures to the Institution: 31 of the pieces derived from their collections, as opposed to 28 from his own (plus six from the British Museum). This is only apt, as what is usually dropped from the papers' references is the here-emphasised sub-title of the lectures: 'Primitive Warfare: Illustrated by Specimens from the Museum of the Institution'. Significantly, the Institution evidently did not heed Pitt Rivers' advice. As is evident in Dickens' 1879 description, they continued to display their overseas weaponry collections geographically and not in any kind of systematic typological manner.

Rooted in the animal kingdom, Pitt Rivers clearly held that combativeness and warfare were a basic human condition; although at some 2880 objects weapons formed

only the third-highest class within his founding collection (organised according to the principles of Spencer; Pitt Rivers 1874), they actually came to characterise it (a 'Museum of Weapons'; Tylor 1881: 458; see also Petch 1996). All told, his first collection included 246 firearms and related equipment. A category absent from Lubbock and Evans' personal collections (e.g. Owen 2008), that Pitt Rivers' work on musketry provided the original impetus for his own museum was apparent in his 1891 'Typological Museums' address:

My attention was first drawn to this subject forty years ago, when, in the year 1852, I was engaged as a subaltern officer on the sub-committee of small arms at Woolwich in the experiments which led to the introduction of the rifle-musket into the army. A large number of inventions were submitted to the committee for trial; and I was then led to take notice of very slight changes of system that were embodied in the different inventions ... it occurred to me what an interesting thing it would be to have a museum in which all of these successive stages of improvement might be placed in the order of the occurrence. *I made a collection of arms at that time, which was the foundation of the present museum.* Although this collection of arms was not a very good one, as my means of collecting were small, it led to *a museum of savage weapons ...* (1891: 118–119, emphasis added; he also discussed his musketry-testing experience in his comments to Balfour's 1890 'Composite Bow' paper: 248–249)

Equally telling is that upon delivering the 1891 paper the General exhibited diagrams of his collection, the first ones 'showing the evolution of the modern rifle and bullet through all its stages'.

These references, as well as what weight he gave to his ordnance work (vs. archaeological/anthropological researches) in the afore-cited 1875 Tylor letter, indicate just how centrally Pitt Rivers considered the development of the musket/rifle and his involvement with it. This was not just a matter of early-career background but also something he evidently held to be of fundamental world-changing importance and, almost forty years on, still an abiding concern. This amounts to his staking a personal/professional perch in the tree of (technological) evolution change and, given its consequences, this would not have been an exaggerated assessment.

Ranging from the battles of Dybbøl and Sedan (1864 and 1870) to Magdala, Ulundi and Omdurman (1868, 1879 and 1898), during the latter half of the nineteenth century the devastating results of unequal military fire-power – 'old worlds' colliding with new regimes – were tragically obvious. Fully believing in the nation's empire (Bowden 1991: 42) and having such a deep-rooted awareness of cultural and material change ('progress is like a game of dominoes ... the fundamental rule of the game is *sequence*'; Pitt Rivers 1875b: 520), Pitt Rivers surely would have seen this as inevitable and, victims of specific

atrocities aside, ultimately a force for social good (Bradley 1983). Yet, it was the unforgiving pace of contemporary change that also propelled what he saw to be the pressing need to salvage, through study and collection, the world's fast disappearing 'native arts'. In fact, as someone so clearly appreciative of material culture diversity (perhaps even in a manner similar to the 'wonderous forms' of Darwin's renowned *On the Origin of Species* concluding hedgerow passage; see Evans 2009 on Darwin's 'archaeology'), references to both 'fury' and 'the scourge' within 'Primitive Warfare ...' can only suggest a degree of resignation and regret in the face of their loss:

... There can be little doubt that in a few years all the most barbarous tribes will have disappeared from the earth, or will have ceased to preserve their native arts. *The law which consigns to destruction all savage races when brought into contact with a civilization much higher than their own, is now operating with unrelenting fury in every part of the world ... Whenever the generous influences of Christianity have set foot, there they have been accompanied by the scourge.* (Pitt Rivers 1867a: 618–619; emphasis added)

As early as 1839 Pritchard had pronounced 'On the Extinction of Native Races', and within the above passage Pitt Rivers cited the demise of the Tasmanian peoples and highlighted the threat posed to Maoris, Australian Aborigines, as well as the native peoples of Polynesia and the Americas (see Gruber 1959 on anthropology's conceptualisation of the ever-'vanishing savage').

In much the same way as the British military's contribution to the recording of the past has generally been overlooked, so too has the impact of Pitt Rivers' army career upon his archaeology been neglected. Here, just how singularly Wheeler construed archaeology's military legacy needs acknowledgement (see also e.g. Boast 2002). In *Archaeology from the Earth* (1954), alongside the General ('the master'), he championed Colonel Stoffel's contribution to French practice and Captain Meadow Taylor's excavations in India (1954: 8–10; see also Bowden 2009: 97), and heralded military organisation, precision and accuracy as a model for fieldwork:

Meanwhile, it is scarcely necessary to observe that the director cannot be an expert in every branch of his work, any more than a general is an expert in every tank or gun under his command. But, just as a general must be exactly familiar with the performance – the range, fire-power, mobility, and so forth – of every arm available to him or his enemy, so must the director of an archaeological excavation be acquainted with the exact potentiality of the various techniques appropriate to his craft and the nature of the problems which are likely to oppose him. (Bowden 2009: 131; see also Hudson 1981: 7 on 'archaeologist-generals')

With little subtlety, while all this obviously presupposes Wheeler's own place in the pantheon of 'greats', it overlooks the many pedestrian, if not entirely sub-standard, investigations done by other serving officers. It homogenises, moreover, the military; it was far from monolithic and the experience/approaches acquired varied widely according to which branch of the forces service was in.

Pitt Rivers' military experience, nonetheless, certainly provided the basic skill-sets by which he approached field-work (and adjudicated evidence), and it was his ordnance work that propelled his concern with systematic typological collection. Yet, it was not just a matter of his first being a soldier and then a career-archaeologist (Levine 1986). Reflective of the era's polymath personalities and the opportunity for study pursuits then afforded to officers (e.g. half-pay leave), between 1864–77 effectively *he became an archaeologist while still in service*. Indeed, even thereafter he evidently strongly identified with his role in the development of rifle-musketry and, acutely aware of time/change, held it to be something that uniquely marked his contribution to it.

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### Notes

<sup>1</sup> This interrelationship remained strong throughout the first half of the last century. It was Crawford's World War I experience that exposed him to both technically proficient surveying and high-altitude aerial photography; he, of course, thereafter introduced the latter to British archaeology and was appointed as the Ordnance Survey's first Archaeological Officer (Crawford 1955). Similarly, Cyril Fox, whose ground breaking *The Archaeology of the Cambridge Region* of 1923 was essentially based on the interpretation of mapped findings, appears to have learnt his 'close' appreciation of topography from his pre-war enlistment within the Essex Imperial Yeomanry (see Scott-Fox, 2002: 14–24). Indeed, his first published paper, 'Ancient Military Earthworks in the Cambridge District' (1918), was clearly informed by military field principles. Of the other leading archaeologist participants, the most renowned was T. E. Lawrence, whose activities are outlined in the main text. Lawrence had excavated with

Leonard Woolley, who himself served as intelligence office in World War I (the Acting Director of Britain's Cairo Arab Bureau being the Oxford archaeologist, D. G. Hogarth, and peacetime Keeper of the Ashmolean Museum). Later, as a Lt-Colonel in World War II, Woolley was part of the Allies Monuments, Fine Arts and Archives Commission; otherwise, most British archaeologists then were assigned to aerial photographic interpretation (see Price 2008: 55–59 on British anthropologists' war-participation and Evans 1989 and 1995 on the context of World War II archaeology generally). The exception was Mortimer Wheeler. Serving with the Royal Artillery and fighting on the Western Front in World War I, in World War II, after serving in North Africa, he was promoted to Brigadier and, commanding an anti-aircraft battery, participated in the Italian campaign.

<sup>2</sup> No single British Army enterprise would rival that of Napoleon's Egyptian campaign and the scale of its scientific mission, which resulted in the 20-volume *Description de L'Egypte series* (1809–28) and included a vast amount of monument recording.

<sup>3</sup> This regimental title being granted to the Corps of Royal Sappers and Miners in 1854; in 1827 the latter was augmented by the Topographic Squadron, with the Royal School of Military Survey established at Woolwich in 1833 (e.g. Napier 2005; see also e.g. Jackson 1853 on standard military survey techniques).

<sup>4</sup> In 1849 the Admiralty issued its *A Manual of Scientific Enquiry: Prepared for use of Her Majesty's Navy and adapted for travellers in general*. There, amid sections on Astronomy and Hydrography, and following Darwin and Hooker's respective contributions on Geology and Botany, Pritchard provided its Ethnology:

Questions which have regard to men in their social state, or as members of tribes or communities, takes a much wider scope than the personal history of individuals. The ordinary habits of life and the modes of obtaining subsistence are the first topics that present themselves when we proceed to this branch of the subject. *The rudest or most simple stage of human society is not without its appropriate arts. ... The art of war, as practised by various nations, affords a wide field of observations.* (Pritchard 1849: 425 & 433; emphasis added)

In 1851 a sub-committee of the British Association for the Advancement of Science similarly issued its first *Manual for Ethnological Inquiry* (see e.g. Owen 2006 on naval expedition collection).

<sup>5</sup> The notorious Robert Knox served as an assistant-surgeon with the army, first in the aftermath of Waterloo in Brussels and then in southern Africa (1817); while stationed at the latter he undertook wide-ranging researches, including ethnology (see Magubane 2003; Murray 1999). Apparently by coincidence and through no connection with Pitt Rivers, in 1860 Knox recorded the skulls among the vast collection of human bones stacked within Hythe's church crypt (Knox 1861).

- <sup>6</sup> Amongst the exercises given to Sandhurst students was surveying Roman roads and the topography along their lengths, with the resulting study, 'Roman Roads in Great Britain', published in three parts between 1836 and 1839 in *The United Services Journal* (see also Kempe 1836 and Narrien's survey of a Roman encampment near East Hempstead 1821).
- <sup>7</sup> In 1868 just under a quarter of the membership (98 in total) of the Asiatic Society of Bengal were army officers (see also Secord 1982: 418, note 9 on the military connections of the Geological Society and Hudson 1981: 18–21 on their national and local society participation within Britain). Similarly, the various researches, excavations and/or surveys of 14 British officers were cited in Fergusson's *Rude Stone Monuments in All Countries* of 1872, and Darwin's correspondence indicates that he also had a wide services' contact-network, numbering more than 20 (including five Colonels and the same number of Admirals). It would have been for such services' personnel, as well as private individuals and colonial servants, that the 'Notes for Travellers in Foreign Lands' section then appeared in the *Reports of the British Association for the Advancement of Science*, with Pitt Rivers being its sometime editor (Thompson 1977: 33).
- <sup>8</sup> See Thompson 1977: Appendix One for Pitt Rivers' account of the battle.
- <sup>9</sup> In the course of researching this paper Pitt Rivers' 'Arms' notebooks were consulted in the National Army Museum archives in London (Ref: 6803/343). Arguably their entitlement is misleading and has obviously inhibited their use by researchers. They apparently date to the 1860s and, running to 10 volumes (and over a thousand pages), they have little direct relevance for this paper as they contain nothing concerning his contemporary ordnance-related work. Nevertheless, they certainly must now be counted as a crucial resource for his intellectual development, as they essentially represent his amassed 'Primitive Warfare ...' background researches on world ethnography and European prehistory. (Extensively illustrated with pasted-in traced pictures, they also include newspaper clippings relevant to his career.)
- <sup>10</sup> Perusing the contents of *JRUSI* during span of Pitt Rivers' publications within the journal indicates that more than a dozen papers appeared by other officers variously concerned with developments in musketry and the rifle. The content of first volumes then are somewhat more eclectic (their demise thereafter being due to the Institution's increased emphasis upon modern military science in the mid century; Strachan 1984: 131–132), with a piece by Rawlinson on 'Persia and Persians' and others concerned with historical themes (e.g. 'The Genius and Campaigns of Hannibal' or 'The History of the Fortress of Malta', etc.) However, nothing whatsoever is comparable to 'Primitive Warfare ...', this being both true of its heavily-noted academic style and theoretical content. That said, there were obviously then many quasi-developmental studies of the history of weaponry, including Wilkinson's *Engines of War: or, Historical and Experimental Observations on Ancient and Modern Warlike Machines and Implements* of 1841, and with whom Pitt Rivers worked after his appointment to the Hythe School (Chapman 1985: 16).
- <sup>11</sup> 'Surveying I was able to teach them myself [site assistants], having always been fond of field sketching as a soldier' (Pitt Rivers 1887: xiii; Bowden 1991: 104). Without any military background (and little formal education whatsoever), Flinders Petrie came to archaeology through his surveying abilities, to which he was introduced by his father, a civil engineer. On presenting the results of his metrology researches to the Royal Anthropological Institute, Petrie recorded in his journal: 'Had a chat with Col. Lane Fox afterwards, he was the only person there I suspect who really knew anything much on the subject, or knew anything of surveying, & he did not know the box sextant, but had only used prismatic compass' (01/06/1877 in Stevenson 2012: Fig. 4).
- <sup>12</sup> Aside from the hundreds of models housed in the Royal Engineers Museum in Gillingham, Kent (est. 1812 and essentially starting as a model-display room; Jones 1996: 152), early-series volumes of the *JRUSI* include, for example, a note concerning relief models of the siege of Sevastopol and its environs (1857: 55–57; see also Fig. 4); we also read there of models exhibiting means of lowering boats at sea (1858: 223) and that, in one year alone, their Museum acquired more than 25 fortification/engineering and variously naval models (1862: xxvii). Indeed, in the *John Bull* magazine of 1850 (02/03: 144) it was reported that Pitt Rivers himself had donated a model of a bridge at Alcantara (*Rethinking Pitt Rivers* website, 'Clubs and Societies'). This presumably was the Roman bridge that had been destroyed by the Wellington's Army in the Peninsular Wars; a model of the rope-bridge temporarily erected across its destroyed arches exists within the Spanish Army Museum collections in Madrid.
- <sup>13</sup> Prior to this time Pitt Rivers' appreciation of the subject appears to have been limited. As Thompson duly notes (1977: 45), though stationed in Malta for two years (1855–56), at no point did he mention its temples; this is despite that Captain Smyth (see above) had already published a letter in *Archaeologia* concerning those nearby on Goza (Smyth 1829).
- <sup>14</sup> As if in demonstration of this lesson, Pitt Rivers' model of the site laterally hinges upon its chronological-divide; it being the only one of his models to so emphasise phasing (see Bowden 1991: Fig. 20 and Evans 2008: pl. 4).
- <sup>15</sup> In support of his work at Crayford, Kent, Spurrell (1880) also drew upon expert witness accreditation, including Pitt Rivers' (Stevenson 2012: 7).
- <sup>16</sup> Previously, photographs could only serve as a source for other format-published imagery; one requiring the intercession of an engraver or lithographic artist,

whose hand could 'taint' evidence as it were (cf. **Figure 1**). As was the case with the two versions of Fenton's renowned Crimean War image, 'Valley of the Shadow Death' (i.e.  $\pm$ cannonballs; Figure 5), given the exposure-length of Victorian photography, 'staging' was always an issue. As discussed by Brothers (1997) and others (e.g. Taylor 1999: 159; Keller 2001), photography has no inherent 'truth currency-value', this rather resides with whomever guarantees their authenticity. Certainly this is true of the Abbeville axe-in-gravels image (**Figure 5**); the whole thing could have been contrived and, in 'truth', it was/is only validated through Evans and Prestwich's endorsement and their recognised authority (see Schlanger 2010: note 22).

<sup>17</sup> Pitt Rivers did, though, photograph site sections (see **Figure 5**), just not include them in the final publication. Although the General clearly dug his sites at a fast pace, their organisation would not seem to have been distinctly militaristic (Bradley 1973; Bowden 1991: 104–107); in this capacity, it is worth remembering that he was not a field-troop commander. Moreover, in Pitt Rivers' *Our Ancient Monuments* album of the 1880s photography was used to provide evidence of graffiti upon, and the general state of, Stonehenge and Avebury, etc.

<sup>18</sup> Influenced by Christy (himself prompted by the Great Exhibition's displays of 1851), Pitt Rivers had certainly started collecting ethnographic weapons and locks by 1851/52 (as 'reliquary-tokens' of a town's capture, locks also featured highly in the RUSI's collections). What we cannot be certain of is how much earlier he had first started to acquire worked-related firearms (see Thompson 1977: 20–21, Chapman 1985 and Bowden 1991: 47–49).

As outlined in Petch's 2006 paper, although only two of the donors to Pitt Rivers' first collection are known to have had RUSI affiliation (see though Note 20 below), coming only second to antiquarians/archaeologists (33.6%) were, nonetheless, members of the armed services whom contributed almost a fifth of the material (17.4%), with colonial authorities provided a further 8.5% (Petch 2006: 262–263). Intriguingly, among those donating more than 100 items to the founding collection was the explorer/anthropologist/soldier – polymath – Richard Francis Burton (Petch 2006: 259). Burton seems only to have developed his archaeological interests upon leaving the East India Company Army (thereafter publishing a number of anthropological and antiquity-related studies in the *Reports of the British Association for the Advancement of Science*; see Evans 2007: note 92). Extraordinarily enough, amongst his many books (e.g. *Personal Narrative of a Pilgrimage to Al-Madinah Meccah* and translating *The Book of a One Thousand Nights and a Night*) was *A Complete System of Bayonet Practice* (1853), *A New System of Sword Exercise for Infantry* (1876) and 1884's *The Book of the Sword*.

<sup>19</sup> It is estimated that when Franks came to the British Museum in the mid 19th century it had some 3,700

ethnographic items and, upon his retirement in 1896, this had grown to 38,000; part of this enhancement was enabled by the receipt in 1878 of Meyrick's collection of 'savag arms and armour' (King 1997: 136–137, 149–150).

<sup>20</sup> A Report on the State of the Museum from 1858 indicates that at the time it was already severely overcrowded and it was seriously considered whether its then substantial Natural History collection could be maintained ('large stuffed animals be not accepted unless they have taken part in, or been killed in connection with, some professional operation', *JRUSI* I: 306). At that time, ethnological items constituted a separate category; subsequently they were subsumed under 'Military' or 'Miscellaneous'.

As detailed in a *Rethinking Pitt Rivers* website-entry ('Sotheby's sale of RUSI items to Lane Fox'), as a consequence of reorganisation the museum auctioned a number of its antiquities and ethnographic items in 1861 (24/07; a copy of the sales catalogue being in the British Library). Among those that Pitt Rivers acquired was a large model of an African hut, as well as other models of a Swiss cottage, a bullock cart and the means of Thugs' torture and execution. Altogether Pitt Rivers' founding collection included 122 objects acquired from the Institution's auction-sales, in his second collection just 14 items derived from it.

## References

- Adkins, L** 2003 *Empires of the Plain: Henry Rawlinson and the Lost Languages of Babylon*. London: Harper Collins Publishers.
- Anon.** 1880/81 Buddhist Sculptures Found Near Jellalabad. *The Graphic* 21: 293.
- Arnold, B** 1990 The Past as Propaganda: Totalitarian Archaeology in Nazi Germany. *Antiquity* 64: 464–478.
- Balfour, H** 1890 On the Structure and Affinities of the Composite Bow. *The Journal of the Anthropological Institute of Great Britain and Ireland* 19: 225–250. DOI: <http://dx.doi.org/10.2307/2842074>.
- Barrett, J, Bradley, R, Bowden, M and Mead, B** 1983 South Lodge after Pitt Rivers. *Antiquity* 57: 193–204.
- Bawtree, E W** 1848 The Brief Description of Some Sepulchral Pits of Indian Origin Lately Discovered Near Penetanguishene. *Edinburgh New Philosophical Journal* 45: 86–101.
- Boast, R** 2002 Mortimer Wheeler's Science of Order: The Tradition of Accuracy at Arikamedu. *Antiquity* 76: 165–170.
- Bonarjee, P D** 1899 *A Handbook of Fighting Races of India*. Calcutta: Thacker, Spink & Co.
- Bowden, M** 1991 *Pitt Rivers: The Life and Archaeological Work of Lieutenant-General Augustus Henry Lane Fox Pitt Rivers, DCL, FRS, FSA*. Cambridge: Cambridge University Press.
- Bowden, M** 2009 From Antiquarianism to Archaeology – Pitt Rivers and His Contemporaries. In H. Sebire (ed.) *Pursuits and Joys: Great Victorian Antiquarians and Intellectuals*, pp. 95–103. Newcastle upon Tyne: Cambridge Scholars Publishing.

- Bowden, M** and **McOmish, D** 2012 A British Tradition? Mapping the Archaeological Landscape. *Landscapes* 12 (2): 22–40.
- Bradley, R** 1973 Two Notebooks of General Pitt Rivers. *Antiquity* 47: 47–50.
- Bradley, R** 1983 Archaeology, Evolution and the Public Good: The Intellectual Development of General Pitt Rivers. *Archaeological Journal* 140: 1–9.
- Brothers, C** 1997 *War and Photography: A Cultural History*. London: Routledge.
- Campbell, W E Major** 1999 The Trent Affair of 1861. *The Army Doctrine and Training Bulletin* 2: 56–65.
- Carver, M** 2011 *Making Archaeology Happen: Design Versus Dogma*. Walnut Creek, Ca.: Left Coast Press.
- Chakrabarti, D K** 1988 *A History of Indian Archaeology from the Beginning to 1947*. Delhi: Munshiram Manoharlal Publishers Pty Ltd.
- Chaloner, C** 1997 The Most Wonderful Experiment in the World: A History of the Cloud Chamber. *The British Journal of the History of Science* 30: 357–374. DOI: <http://dx.doi.org/10.1017/S0007087497003130>.
- Chapman, W R** 1985 Arranging Ethnology: A. H. L. F. Pitt Rivers and the Typological Tradition. In G. Stocking (ed.) *Objects and Others: Essays on Museums and Material Culture* (History of Anthropology Vol. III), pp. 15–48. Madison: University of Wisconsin Press.
- Conder, C R** and **Kitchener, H H** 1881–1885 *Survey of Western Palestine: Memoirs of Topography, Orography, Hydrography and Archaeology* (3 vols; E. H. Palmer and W. Besant (eds.)). London: Palestine Exploration Fund.
- Cook, B F** 1998 British Archaeologists in the Aegean. In V. Brand (ed.) *The Study of the Past in the Victorian Age*, pp. 139–154. Oxford: Oxbow Monograph 73.
- Crawford, O G S** 1955 *Said and Done*. London: Phoenix House.
- Crownover, D** 1963 Discoveries at Cyrene. *Expedition* (Spring): 28–31.
- Daston, L** and **Galison, P** 1992 The Image of Objectivity. *Representations* 40: 81–128. DOI: <http://dx.doi.org/10.1525/rep.1992.40.1.99p0137h>.
- Desmond, R** 1982 *The India Museum 1801–1879*. London: HMSO.
- Diaz-Andreu, M** 2007 *A World History of Nineteenth-Century Archaeology: Nationalism, Colonialism and the Past*. Oxford: Oxford University Press.
- Dickens, C Jnr** 1879 *Dickens Dictionary of London: An Unconventional Handbook*. London: Charles Dickens and Evans.
- Donnelly, Cap. R E** 1862 Photography, and Its Application to Military Purposes. *Journal of Royal United Services Institution* 5: 1–8.
- Douglas, J** 1793 *Nenia Britannica: Or, a Sepulchral History of Great Britain ...* London: John Nichols.
- Edwards, H** 1860 *A Volunteer's Narrative of the Hythe Course of Instruction in Musketry*. London: Simpkin, Marshall & Co.
- Evans, C** 1989 Archaeology and Modern Times: Bersu's Woodbury 1938/39. *Antiquity* 63: 436–450.
- Evans, C** 1995 Archaeology Against the State: Roots of Internationalism. In P. Ucko (ed.) *Theory in Archaeology: A World Perspective*, pp. 305–320. London: Routledge.
- Evans, C** 2004 Modelling Monuments and Excavations. In S. de Chadarevian and N. Hopwood (eds.) *Models: The Third Dimension of Science*, pp. 109–137. Stanford, CA: Stanford University Press (Writing Science Series).
- Evans, C** 2006 Engineering the Past: Pitt Rivers, Nemo and the Needle. *Antiquity* 80: 960–969.
- Evans, C** 2007 'Delineating Objects' – Nineteenth Century Antiquarian Culture and the Project of Archaeology. In S. Pearce (ed.) *Visions of Antiquity: A Tri-centenary Celebration of the Society of Antiquaries of London*, pp. 266–305. London: Society of Antiquaries.
- Evans, C** 2008 Model Excavations: 'Performance' and the Three-Dimensional Display of Knowledge. In S. Schlanger and J. Nordbladh (eds.) *Archives, Ancestors, Practices: Archaeology in the Light of Its History*, pp. 147–161. Oxford: Berghahn Books.
- Evans, C** 2009 Small Agencies and Great Consequences: Darwin's Archaeology. *Antiquity* 83: 475–488.
- Fergusson, J** 1872 *Rude Stone Monuments in All Countries; Their Age and Uses*. London: John Murray.
- Fox, C** 1918 Ancient Military Earthworks in the Cambridge District. *Buzz!* ("B" Company No. 2 Officer Cadet Battalion). Cambridge: University of Cambridge Library holding.
- Fox, C** 1923 *The Archaeology of the Cambridge Region*. Cambridge: Cambridge University Press.
- Gamble, C** and **Kruszynski, R** 2009 John Evans, Joseph Prestwich and the Stone that Shattered the Time Barrier. *Antiquity* 83: 461–475.
- Grann, D** 2010 *The Lost City of Z*. New York: Vintage Books.
- Gruber, J W** 1959 Ethnographic Salvage and the Shaping of Anthropology. *American Anthropologist* 61: 379–389.
- Harries-Jenkins, G** 1977 *The Army in Victorian Society*. London: Routledge and Kegan Paul.
- Hernon, I** 2003 *Britain's Forgotten Wars: Colonial Campaigns of the 19th Century*. Stroud, Gloucs.: Sutton.
- Hewitt, R** 2010 *Map of a Nation: A Biography of the Ordnance Survey*. London: Granta.
- Hingley, R** 2000 *Roman Officers and English Gentlemen: The Imperial Origins of Roman Archaeology*. London: Routledge.
- Hodgson, B H** 1833 Origin and Classification of the Military Tribes of Nepal. *Journal of Asiatic Society of Bengal* 2: 217–224.
- Hoock, H** 2010 *Empires of the Imagination: Politics, War, and the Arts in the British World, 1750–1850*. London: Profile Books.
- Hudson, K** 1981 *The Social History of Archaeology: The British Experience*. London: MacMillan Press.
- Jackson, B** 1853 *A Treatise on Military Survey* (4th edn). London: W. H. Allen & Co.
- Jones, S** 1996 Making Histories of Wars. In G. Kavanagh (ed.) *Making Histories in Museums*, pp. 152–162. London: Leicester University Press.

- Keller, U** 2001 *The Ultimate Spectacle: A Visual History of the Crimean War*. Amsterdam: Gordon and Breach Publishers.
- Kempe, A J** 1836 Observations on the Map of the Roman Road, Exhibited February 2nd, by Sir Henry Ellis. *Archaeologia* 27: 414–419.
- King, J C H** 1997 Franks and Ethnography. In M. Caygill and J. Cherry (eds.) *A. W. Franks*, pp. 136–159. London: British Museum Publications.
- Knox, R** 1861 Some Observations on a Collection of Human Crania and Other Bones at Present Preserved in the Crypt of a Church at Hythe in Kent. *Transactions of the Ethnological Society of London* 1: 238–245. DOI: <http://dx.doi.org/10.2307/3014197>.
- Leatham, A** 1914 *Official Catalogue of the Royal United Service Museum, Whitehall, S. W.* London: The Royal United Service Institution.
- Levine, P** 1986 *The Amateur and the Professional: Antiquarians, Historians and Archaeologists in Victorian England, 1838–1886*. Cambridge: Cambridge University Press.
- Lightman, B** 2007 *Victorian Popularizers of Science: Designing Nature for New Audiences*. London: University of Chicago Press. DOI: <http://dx.doi.org/10.7208/chicago/9780226481173.001.0001>.
- Lysons, S** 1797 *An Account of Roman Antiquities Discovered at Woodchester*. London: Cadell and Davies.
- MacLeod, R** 1980 On Visiting the 'Moving Metropolis': Reflections on the Architecture of Imperial Science. *Historical Records of Australian Science* 5: 1–16. DOI: <http://dx.doi.org/10.1071/HR9820530001>.
- Magubane, Z** 2003 Simians, Savages, Skulls and Sex: Science and Colonial Militarism in Nineteenth-century South Africa. In D. S. Moore, J. Kosek and A. Pandian (eds.) *Race, Nature and the Politics of Difference*, pp. 99–121. Durham, NC: Duke University Press.
- McConnell, A** 1994 From Craft Workshop to Big Business: The London Scientific Instrument Trade's Response to Increasing Demand, 1750–1820. *The London Journal* 19: 36–53. DOI: <http://dx.doi.org/10.1179/030580394792974226>.
- Morus, I R** 2007 'More the Aspect of Magic than Anything Natural': The Philosophy of Demonstration. In A. Fyfe and B. Lightman (eds.) *Science in the Marketplace: Nineteenth-Century Sites and Experiences*, pp. 336–370. London: University of Chicago Press.
- Murray, T** 1999 Excavating the Cultural Traditions of Nineteenth Century English Archaeology: The Case of Robert Knox. In A. Gustafsson and H. Karlsson (eds.) *Glyfer och arkeologiske rum – en vänbok til Jarl Nordbladh*, pp. 501–515. Göteborg: University of Göteborg.
- Napier, G** 2005 *Follow the Sapper: An Illustrated History of the Corps of Royal Engineers*. Kent: Institution of Royal Engineers.
- Narrien, J** 1821 Observations on a Roman Encampment Near East Hempstead, in Berkshire. *Archaeologia* 10: 96–98.
- Owen, J** 2006 Collecting Artefacts, Acquiring Empire: Exploring the Relationship Between Enlightenment and Darwinist Collecting and Late-nineteenth-century British Imperialism. *Journal of the History of Collections* 189: 9–25. DOI: <http://dx.doi.org/10.1093/jhc/fhi042>.
- Owen, J** 2008 A Significant Friendship: Evans, Lubbock and a Darwinian World Order. In A. Macgregor (ed.) *Sir John Evans 1823–1908: Antiquity, Commerce and Natural Science in the Age of Darwin*, pp. 206–229. Oxford: Ashmolean Museum.
- Petch, A** 1996 Weapons and 'The Museum of Museums'. *Journal of Museum Ethnography* 8: 11–22.
- Petch, A** 1998 'Man as He Was and Man as He Is': General Pitt Rivers' Collection. *Journal of the History of Collections* 10: 75–85. DOI: <http://dx.doi.org/10.1093/jhc/10.1.75>.
- Petch, A** 2006 Chance and Certitude: Pitt Rivers and His First Collection. *Journal of the History of Collections* 18: 257–266. DOI: <http://dx.doi.org/10.1093/jhc/fhl028>.
- Pitt Rivers, Lt-Gen. A H L F** 1858 On the Improvement of the Rifle as a Weapon for General Use. *Journal of the Royal United Services Institution* 2: 453–488.
- Pitt Rivers, Lt-Gen. A H L F** 1861a On a Model Illustrating the Parabolic Theory of Projection for Ranges in Vacuo. *Journal of the Royal United Services Institution* 5: 497–501.
- Pitt Rivers, Lt-Gen. A H L F** 1861b Musketry. *The Morning Post* July 01: 2.
- Pitt Rivers, Lt-Gen. A H L F** 1867a Primitive Warfare: Illustrated by Specimens from the Museum of the Institution (Part I). *Journal of the United Services Institution* 11: 612–645.
- Pitt Rivers, Lt-Gen. A H L F** 1867b A Description of Certain Piles Found Near London Wall and Southwark, Possibly the Remains of Pile Buildings. *Anthropological Review* 5: lxxi–lxxxiii.
- Pitt Rivers, Lt-Gen. A H L F** 1868 Primitive Warfare: Illustrated by Specimens from the Museum of the Institution (Part II). *Journal of the United Services Institution* 12: 399–439.
- Pitt Rivers, Lt-Gen. A H L F** 1869 Further Remarks on the Hill Forts of Sussex: Being an Account of Excavations in the Forts of Cissbury and Highdown. *Archaeologia* 42: 53–76.
- Pitt Rivers, Lt-Gen. A H L F** 1870 Note on the Use of the New Zealand Mere. *Journal of the Ethnological Society of London* 2: 106–109.
- Pitt Rivers, Lt-Gen. A H L F** 1874 *Catalogue of the Anthropological Collection Lent by Colonel Lane Fox for Exhibition in the Bethnal Green Branch of the South Kensington Museum, June 1874*. London: South Kensington Museum.
- Pitt Rivers, Lt-Gen. A H L F** 1875a Excavations of Cissbury Camp, Sussex. *Journal of the Anthropological Institute* 5: 357–390.

- Pitt Rivers, Lt-Gen. A H L F** 1875b On the Evolution of Culture. *Proceedings of the Royal Institution* 7: 496–520.
- Pitt Rivers, Lt-Gen. A H L F** 1877 On Measurements Taken of the Officers and Men of the 2nd Royal Surrey Militia According to the General Instructions Drawn up by the Anthropometric Committee of the British Association. *Journal of the Anthropological Institute* 6: 443–457.
- Pitt Rivers, Lt-Gen. A H L F** 1883 Excavations at Caesar's Camp, Near Folkestone, Conducted in 1878. *Archaeologia* 47: 429–465.
- Pitt Rivers, Lt-Gen. A H L F** 1884 *Opening of Dorset County Museum, Inaugural Address*. Dorchester: J. Foster.
- Pitt Rivers, Lt-Gen. A H L F** 1887 *Excavations in Cranborne Chase* (I). Privately Printed.
- Pitt Rivers, A H L F** 1891 Typological Museums, as Exemplified by the Pitt Rivers Museum in Oxford and His Provincial Museum in Farnham, Dorset. *Journal of the Society of Arts* 40: 115–122.
- Pitt Rivers, Lt-Gen. A H L F** 1892 *Excavations in Cranborne Chase* (III). Privately Printed.
- Pitt Rivers, Lt-Gen. A H L F** 1898 *Excavations in Cranborne Chase* (IV). Privately Printed.
- Pollard, J** and **Hicks, D** 2013 Later Prehistoric and Roman Europe. In D. Hicks and A. Stevenson (eds.) *World Archaeology at the Pitt Rivers Museum: A Characterization*, pp. 241–261. Oxford: Archaeopress.
- Price, D H** 2008 *Anthropological Intelligence: The Deployment and Neglect of American Anthropology in the Second World War*. London: Duke University Press.
- Pritchard, J C** 1849 Ethnology. In J. F. W. Herschel (ed.) *A Manual of Scientific Enquiry: Prepared for Use of Her Majesty's Navy and Adapted for Travellers in General*, pp. 423–444. London: John Murray.
- Rawlinson Lt-Col. H** 1851 Notes on Some Paper Casts of Cuneiform Inscriptions upon the Sculptured Rock at Behistun. *Archaeologia* 34: 73–76. DOI: <http://dx.doi.org/10.1017/S0261340900000254>.
- Reeves, N** 2009 'To Demonstrate the Exactness of the Instrument': Mountainside Trials of Precision in Scotland 1774. *Science In Context* 22: 323–340. DOI: <http://dx.doi.org/10.1017/S0269889709990032>.
- Roy, W** 1793 *Military Antiquities of the Romans in North Britain*. London: Society of Antiquaries of London.
- Schaffer, S** 1988 Astronomers Mark Time: Discipline and the Personal Equation. *Science in Context* 2: 115–145. DOI: <http://dx.doi.org/10.1017/S026988970000051X>.
- Schlanger, N** 2010 Series in Progress: Antiquities of Nature, Numismatics and Stone Implements in the Emergence of Prehistoric Archaeology. *History of Science* 48: 344–369.
- Scott-Fox, C** 2002 *Cyril Fox: Archaeologist Extraordinary*. Oxford: Oxbow Books.
- Secord, J** 1982 King of Siluria: Roderick Murchison and the Imperial Theme in Nineteenth-Century British Geology. *Victorian Studies* 25: 413–442.
- Smyth, W H** 1829 Notice of Some Remains at Goza, Near Malta. *Archaeologia* 22: 294–296. DOI: <http://dx.doi.org/10.1017/S026134090002498X>.
- Smyth, W H** 1830 Account of an Ancient Bath in the Island of Lipari. *Archaeologia* 23: 98–102. DOI: <http://dx.doi.org/10.1017/S0261340900017392>.
- Smyth, W H** 1846 On Some Roman Vestigia Recently Found at Kirby Thore, in Westmoreland. *Archaeologia* 31: 279–288. DOI: <http://dx.doi.org/10.1017/S0261340900012406>.
- Spurrell, F C J** 1880 On the Discovery of the Place Where Palaeolithic Implements were Made at Crayford. *Quarterly Journal of the Geological Society* 36: 544. DOI: <http://dx.doi.org/10.1144/GSL.JGS.1880.036.01-04.41>.
- Stevenson, A** 2012 'We Seem to be Working in the Same line': A. H. L. F. Pitt Rivers and W. M. F. Petrie. *Bulletin of the History of Archaeology* 22 (1): 4–13. DOI: <http://dx.doi.org/10.5334/bha.22112>.
- Stocking, G W Jr** 1987 *Victorian Anthropology*. London: Collier Macmillan Pub.
- Strachan H** 1984 *Wellington's Legacy: The Reform of the British Army, 1830–54*. Manchester: Manchester University Press.
- Streets, H** 2004 *Martial Races: The Military, Race and Masculinity in British Imperial Culture, 1857–1914*. Manchester: Manchester University Press.
- Sutton, C** 2010 'Dr. Bawtree's Collection: Images and Objects from Indian Sepulchral Pits'. Paper presented at the European Association of Archaeologists Conference, The Hague.
- Sweet, R** 2004 *Antiquaries: The Discovery of the Past in Eighteenth-Century Britain*. London: Hambledon & London.
- Taylor, J** 1999 War, Photography and Evidence. *Oxford Art Journal* 22: 158–165. DOI: <http://dx.doi.org/10.1093/oxartj/22.1.158>.
- Thomas, F W L** 1851 Account of Some Celtic Antiquities of Orkney. *Archaeologia* 34: 88–136. DOI: <http://dx.doi.org/10.1017/S026134090000028X>.
- Thompson, M W** 1977 *General Pitt Rivers: Evolution and Archaeology in the Nineteenth Century*. Bradford-on-Avon: Moonraker Press.
- Tylor, E B** 1881 Presidential Address to the Anthropological Institute. *Journal of the Anthropological Institute of Great Britain and Ireland* 10: 440–458.
- Vetter, J** 2011 Lay Participation in the History of Scientific Observation. *Science In Context* 24: 127–141. DOI: <http://dx.doi.org/10.1017/S0269889711000032>.
- Warren, C, Wilson, C W** and **Stanley, A P** 1871 *The Recovery of Jerusalem: A Narrative of Exploration and Discovery in the City and the Holy Land* (Morrison, W ed.). New York: D. Appleton.
- Wheeler, R E M** 1954 *Archaeology from the Earth*. Harmondsworth: Penguin.
- Whittridge, G** 1986 *Charles Masson of Afghanistan: Explorer, Archaeologist, Numismatist and Intelligence Agent*. Warminster: Aris & Phillips.

**Williamson, G** 1857 *Observations on the Human Crania Contained in the Museum of the Army Medical Department, Fort Pitt, Chatham*. London: McGlasham & Gill.

**Wilkinson, H** 1841 *Engines of War: Or, Historical and Experimental Observations on Ancient and Modern*

*Warlike Machines and Implements*. London: Longman, Orme, Brown, Green and Longmans.

**Woolley, C L** and **Lawrence, T E** 1914 *The Wilderness of Zin* (Palestine Exploration Fund Archaeological Report). London: Harrison and Sons.

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