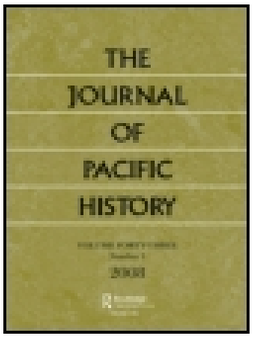

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Origins of Archaeology in the Pacific: The Emergence and Application of Archaeological Field Techniques

MICHELLE RICHARDS, HILARY HOWES AND ELENA GOVOR

ABSTRACT

When was archaeology first practised in the Pacific as a distinct discipline – that is, following a prescribed set of field methods to investigate human change over time, different from those used for other areas such as ethnology, geology, or linguistics? Did Pacific archaeology develop as the application of a metropolitan model, or did it evolve in situ, progressing in fits and starts and communicated only sporadically? We approach these questions by exploring the nature of early archaeological practice in the Pacific from the 1870s to the 1900s, as it was imagined in metropolitan manuals and instructions issued by German and British institutions, and comparing this with the development of actual practices in the field. We also discuss how early archaeological excavations and artefacts (prehistoric material culture) from the Pacific were interpreted, in prescription and in practice, and consider how these interpretations related to European perceptions of Pacific peoples.

Key words: Pacific archaeology, field methods, instructions for scientific travellers, Nikolai Miklouho-Maclay, British Association for the Advancement of Science (BAAS), Berlin Society for Anthropology, Ethnology, and Prehistory (BSAEP), Australasian Association for the Advancement of Science (AAAS), Polynesian Society

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Introduction

In 1961–2, three distinguished Antipodean archaeologists commended Robert Suggs for conducting the first technical excavations, following 'natural stratigraphic levels', on Nuku Hiva, Marquesas Islands.[1] All three saw Suggs's work as part of a disciplinary breakthrough. Jack Golson suggested 'archaeological excavation in the tropical Pacific' had only commenced after World War II.[2] Roger Green believed 'Polynesian archaeology generally [had] entered a phase in which techniques of excavation and interpretation have reached a standard comparable with that attained in other parts of the world' 'only in the last decade [1950s]'.[3] John Mulvaney went further, arguing that '[a]rchaeological techniques in the Pacific have lagged behind those adopted in most other regions of prehistoric research' and that Australian archaeology in particular had been 'retarded' by the widely accepted belief that 'the aborigines were "an unchanging people in an unchanging environment"' with 'superficial and unstratified' occupation sites.[4]

How accurate are these characterizations of pre-1950s Pacific archaeology? When was archaeology first practised in the Pacific as a distinct discipline – that is, following a prescribed set of field methods to investigate human change over time, different from those used for other areas such as ethnology, geology, or linguistics? Did Pacific archaeology develop as the application of a metropolitan model, or did it evolve in situ, progressing in fits and starts and communicated only sporadically? We approach these questions by exploring the nature of early archaeological practice in the Pacific from the 1870s to the 1900s, as it was imagined in metropolitan manuals and instructions issued by German and British institutions, and comparing this with the development of actual practices in the field. Our findings suggest that Golson's, Green's, and Mulvaney's characterizations of archaeology in the Pacific before the 1950s do not accurately describe the situation in the late 19th century; archaeological best practice, as it was then recognized, was applied in various parts of the Pacific at that time. Consequently, if any lag in archaeological techniques existed, it must have developed later.

During our comparative analysis, we also discuss how early archaeological excavations and artefacts (prehistoric material culture) from the Pacific were interpreted, in prescription and in practice, and consider how these interpretations related to European perceptions of Pacific peoples in emerging theories that sought to establish a chronology for human development and progression. The material culture of the Pacific was often compared to that of the European 'Stone Age' and it was frequently assumed that Pacific people were frozen in time at this stage of development. Emilie Dotte-Sarout

[1] D.J. Mulvaney, '[Review of] Suggs, R.C.: The Archaeology of Nuku Hiva, Marquesas Islands, French Polynesia', *Journal of the Polynesian Society* (hereinafter *JPS*) 71:3 (1962): 340.

[2] Jack Golson, 'Polynesian Culture History', *JPS* 70:4 (1961): 498.

[3] Roger C. Green, '[Review of] The Archaeology of Nuku Hiva, Marquesas Islands, French Polynesia', *American Journal of Archaeology* 67:4 (1962): 436.

[4] Mulvaney, '[Review of] Suggs', 340; Mulvaney quotes R.H. Pulleine, 'The Tasmanians and Their Stone Culture', *Australasian Association for the Advancement of Science* 19 (1928): 294–314.

has recently explored similar questions in early French archaeology in the Pacific, identifying the conflict francophone archaeologists faced in recognizing 'primitive' Melanesian 'savages' as having a prehistory of their own, rather than simply being analogous representations of European prehistory.[5] We extend her research to early English-, German-, and Russian-speaking archaeologists.

In addition, we draw on significant contributions to the history of anthropological and archaeological theory and practice by Helen Gardner and Patrick McConvell, Ian J. McNiven and Lynette Russell, Tim Murray, George W. Stocking, Jr, Bruce G. Trigger, and James Urry.[6] We follow Murray in identifying two competing models for explaining similarities between cultures: universalism appealed to 'the doctrine of independent inventions and the psychic unity of mankind', whereas historicism sought '[e]xplanation for diversity and similarity […] in cultural historical factors', particularly human migrations and the diffusion of cultural elements from one population to another.[7] The instructions we examine were issued by the Berlin Society for Anthropology, Ethnography, and Prehistory (BSAEP) and the British Association for the Advancement of Science (BAAS). At that time, the BSAEP's most influential members were ethnologist Adolf Bastian and pathologist, craniologist, and prehistorian Rudolf Virchow. Both 'understood differences among people as merely variations on a central theme of a unitary humanity'; Bastian in particular was noted for his theories regarding universally shared *Elementargedanken* (elementary ideas).[8] In contrast, Murray has identified a forceful return to studies of human diversity in British anthropology from the 1880s onwards as a shift away from a universalist programme in favour of historicism – in some respects a more useful tool for imperialists and nationalists.[9] To gauge the impact of these differing

[5] Emilie Dotte-Sarout, 'How Dare Our "Prehistoric" Have a Prehistory of Their Own?! The Interplay of Historical and Biographical Contexts in Early French Archaeology of the Pacific', *Journal of Pacific Archaeology* (hereinafter *JPA*) 8:1 (2017): 23–34.

[6] Helen Gardner and Patrick McConvell, *Southern Anthropology: A History of Fison and Howitt's Kamilaroi and Kurnai* (Basingstoke: Palgrave Macmillan, 2015); Ian J. McNiven and Lynette Russell, *Appropriated Pasts: Indigenous Peoples and the Colonial Culture of Archaeology* (Lanham, MD: AltaMira Press, 2005); Tim Murray, 'Prehistoric Archaeology in the "Parliament of Science", 1845–1900', in *Archives, Ancestors, Practices: Archaeology in the Light of Its History*, ed. Nathan Schlanger and Jarl Nordbladh (New York: Berghahn, 2008), 59–74; George W. Stocking, Jr, *Victorian Anthropology* (New York: Free Press, 1987); George W. Stocking, Jr, 'What's in a Name? The Origins of the Royal Anthropological Institute (1837–71)', *Man* 6:3 (1971): 369–90; Bruce G. Trigger, *A History of Archaeological Thought*, 2nd ed. (Cambridge: Cambridge University Press, 2006); James Urry, '"Notes and Queries on Anthropology" and the Development of Field Methods in British Anthropology, 1870–1920', *Proceedings of the Royal Anthropological Institute of Great Britain and Ireland* (1972): 45–57.

[7] Murray, 'Prehistoric Archaeology', 70.

[8] H. Glenn Penny, 'Traditions in the German Language', in *A New History of Anthropology*, ed. Henrika Kuklick (Malden, MA: Blackwell, 2008), 79–95; Klaus-Peter Koepping, *Adolf Bastian and the Psychic Unity of Mankind: The Foundations of Anthropology in Nineteenth Century Germany* (St Lucia: University of Queensland Press, 1983).

[9] Murray, 'Prehistoric Archaeology', 59–74.

paradigms in the field, we compare the use of German-language instructions in Hawai'i and New Zealand by traveller-naturalist Otto Finsch and geologist Julius Haast with the application of British instructions in Australia and New Zealand by surveyors Percy Smith and Edward Tregear, politician and amateur naturalist Joshua Rutland, and others. We contrast these with the activities of Russian naturalist Nikolai Miklouho-Maclay, who drew on both German and British instructions to inform a complex, multi-focal study of Pacific ethnology, including elements of prehistory.

Archaeological Field Methods in Instructions for Scientific Travellers

Instructions and questionnaires as methods of obtaining information about the world date back to the mid-16th century, and include references to oral traditions and material remnants of the human past from at least the mid-17th century.[10] As European powers increasingly turned their attention to the Pacific, aspects of this scholarly interest were incorporated into the instructions issued to exploratory expeditions. A case in point is Russia, by the 18th century both a European and a Pacific power, with colonies established on the northern Pacific and northwest American coasts. Members of the first Russian round-the-world expedition, which sailed to the Pacific in 1803, were instructed to gather information on 'the probable order in which these [lands] were populated', encouraged to investigate 'what changes various tribes of people and species of animals have undergone, and whether it is true that some of them have become extinct', and told to enquire after the presence of nephrite on 'the islands of the South Sea […] how it is used and processed by savage people'.[11] Instructions issued in 1857 to scientists aboard the Austrian frigate *Novara* included a section on 'Linguistics, History and Archaeology' specifying 'photographs of curious buildings' as a desirable contribution to the 'archaeology and history of architecture', and requesting coins and other objects used as currency for the Royal and Imperial Collection of Coins and Antiques.[12]

German instructions

In contrast to these early instructions, the guidelines compiled in 1872 by the BSAEP's board for the newly established German Imperial Navy demonstrated a more focused and methodical approach, prioritizing 'Ethnography', 'Prehistoric Investigations', and

[10] Simona Boscani Leoni, 'Queries and Questionnaires. Collecting Local and Popular Knowledge in 17th and 18th Century Europe', in *Wissenschaftsgeschichte und Geschichte des Wissens im Dialog – Connecting Science and Knowledge*, ed. Kaspar von Greyerz, Silvia Flubacher and Philipp Senn (Göttingen: V&R Unipress, 2013), 187–95.

[11] V.M. Severgin, 'Instruktsiia dlia puteshestviia okolo sveta po chasti mineralogii i v otnoshenii k teorii zemli', *Severny vestnik* 2 (1804): 182; 3 (1804): 340.

[12] Kaiserliche Akademie der Wissenschaften, *Bemerkungen und Anweisungen für die Naturforscher* […] (Vienna: kaiserl. königl. Hof- und Staatsdruckerei, 1857), 117–18, 125.

'Anthropology in the Narrower Sense' (physical anthropology).[13] Recognizably distinct archaeological field methods were discussed under 'Prehistoric Investigations'. The authors explained that 'traces of man from prehistoric times' could be found in ancient cave dwellings, kitchen-middens, settlements, fortifications, sacrificial sites, and graves. Such sites should be described in detail, sketched, or photographed. Investigators should collect anything that might 'shed light on the time of construction or origin, the way of life of the population in question and their race': 'samples of soil or rock, animal and human bones, ceramic utensils (even if only sherds), metal (even unremarkable pieces), hammered or worked stones'. Time permitting, excavations should be undertaken to 'establish the depth and character of the cultural layers' and determine 'exactly at what depth, in which layers of soil and in what order discoveries [were] made'. The 'external form' and 'interior structure' of 'ancient graves' should be recorded, including the position of human bones and grave goods. Investigators should also acquire existing collections of antiquities from 'merchants or private persons' and 'ancient stone tools' still 'in the possession of the natives'.[14]

The 'Ethnography' section specified research priorities for particular regions, including 'Oceania'. 'Collections or drawings' of 'antiquities observed on Tinian, Mangareva, Pitcairn Island, Wahu [Oahu] and various other islands' and 'fortifications and road constructions on Samoa attributed to the Friendly Islanders [Tongans]' were identified as desirable.[15] Some of these suggestions likely came from Bastian, who as a ship's surgeon in 1851–9 had visited Australia and New Zealand, then crossed the Pacific to Peru.[16]

In 1876 a Russian translation of the BSAEP's instructions appeared in the *Naval Surgeons' Journal*.[17] Russian interest in the Pacific remained active throughout the 19th century, and naval surgeons aboard ships of Russia's Pacific naval detachment conducted observations of a broadly naturalist nature. Russian–German networks in the natural sciences at this time were also exceptionally strong; they depended heavily on Baltic Germans, the social, commercial, political, and cultural elite in Russia's Baltic territories, with German their official language of education and government.

In 1875 a second German-language manual was published, *Anleitung zu wissenschaftlichen Beobachtungen auf Reisen* (Instructions for Scientific Observations while Travelling), edited by Georg von Neumayer, hydrographer to the Imperial

[13] [Rudolf] Virchow, [Adolf] Bastian, [Alexander] Braun, [Robert] Hartmann, [Maximilian] Kuhn, [Gustav Theodor] Fritsch, and [Hermann] Deegen 'Rathschläge für anthropologische Untersuchungen auf Expedition der Marine', *Zeitschrift für Ethnologie* 4 (1872): 325–56.

[14] Ibid., 337–8.

[15] Ibid., 336.

[16] Franz Bornmüller, *Biographisches Schriftsteller-Lexikon der Gegenwart* (Leipzig: Verlag des Bibliographischen Instituts, 1882), 48–9.

[17] Firkhov [Rudolf Virchow], [Adolf] Bastian, Aleks. Braun [Alexander Braun] et al., 'Programma antropologicheskikh issledovanii v morskikh kompaniiakh', *Meditsinskie pribavleniia k Morskomu sborniku* 16 (1876): 1–40.

Admiralty.[18] It was broader in scope than the BSAEP's instructions and prioritized the natural sciences. Virchow authored the section on 'Anthropology and Prehistoric Investigations'.[19]

Virchow identified a familiar series of suitable locations for investigation, and suggested that travellers unable to visit these locations in person might acquire 'ancient stone tools […] in the possession of the natives'.[20] Importantly, he used a Pacific example to illustrate the shortcomings of the Three Age model, a relative material culture chronology created around 1818 by Danish antiquarian Christian Jürgenson Thomsen, popularized by his compatriot Jens Jacob Asmussen Worsaae, and formalized by English naturalist John Lubbock in his influential monograph *Pre-historic Times* (1865):[21]

> Prehistoric archaeology is currently divided into three major periods: the Stone Age, the Bronze Age and the Iron Age […] the Stone Age is divided into an older (Palaeolithic) and a younger (Neolithic) [period], according to whether the stone tools were merely hammered […] or were polished. But the example of those Polynesians who even today possess no ceramic artefacts, but do use polished stone tools, teaches us that these divisions are of limited value for understanding the overall level of development of a people.[22]

Virchow did not believe that assigning Polynesians to 'the Stone Age' was sufficient to understand their cultural development. He explicitly acknowledged their dynamic past, noting that 'the migrations of the Polynesians' were 'largely prehistoric', and suggested that a multidisciplinary approach was needed to advance anthropological understanding beyond 'the written history of Oceania'. He also advised travellers 'not to limit [themselves] to individual features' such as stone tools, but to collect 'all kinds of bones, tools, and shells […] from ancient dwelling – and resting-places'.[23] As the next section reveals, this contrasts with the determined emphasis on stone tools in contemporaneous British instructions.

British instructions

In 1874 a BAAS joint committee published the first edition of *Notes and Queries on Anthropology* (*N&Q*). Stocking and Urry have documented the development of earlier

[18] G. Neumayer, ed., *Anleitung zu wissenschaftlichen Beobachtungen auf Reisen* (Berlin: Robert Oppenheim, 1875). On the evolution of Neumayer's *Anleitung* through its three editions (1875–1906), see Peter Monteath, 'German Anthropology, Nationalism and Imperialism: Georg von Neumayer's Anleitung zu wissenschaftlichen Beobachtungen auf Reisen', *History and Anthropology* (2018): DOI: 10.1080/02757206.2018.1524758.

[19] R. Virchow, 'Anthropologie und prähistorische Forschungen', in Neumayer, *Anleitung*, 571–90.

[20] Ibid., 581.

[21] Trigger, *Archaeological Thought*, 121–3, 147–8; John Lubbock, *Pre-historic Times, as Illustrated by Ancient Remains* […] (London: Williams & Norgate, 1865).

[22] Virchow, 'Anthropologie', 574.

[23] Ibid., 571, 574.

BAAS questionnaires, beginning with James Cowles Prichard's 1839 paper 'On the Extinction of Human Races' and the subsequent publication of 'Queries Respecting the Human Race' (1842).[24] However, only two of 89 queries related explicitly to prehistory, and these offered only brief instructions: travellers should record the 'character, materials, and construction' of 'monuments […] raised by the present inhabitants or their predecessors', 'have them examined by excavation or otherwise', and preserve any 'skeletons of man or other animals' found.[25] A new edition in 1851 reissued these minimal instructions unchanged.[26]

In contrast, *N&Q* included an entire section on 'ARCHÆOLOGY' – 'Inquiries into the monuments and other relics of a past age, with the ideas of the people concerning them'.[27] Its author, archaeologist Augustus Henry Lane Fox (later Pitt-Rivers), who also headed the committee overseeing *N&Q*'s publication, commenced by discussing the Pacific:

> Much information is wanted respecting the archaeology of savage and barbarous countries. Most of the stone implements received from Australia and the Pacific Islands are of recent manufacture, and no evidence has yet come to hand to throw light on the origin and duration of the stone period of culture in those regions. In New Zealand, however, something has been effected in this direction by discoveries in ancient deposits.[28]

Archaeology, Pitt-Rivers observed, was still in its infancy: 'the palaeolithic implements of Europe have only attracted the attention of archaeologists during the last fifteen years, [so] it is not surprising that in uncultivated countries so little should be known of the relics that are hidden beneath the soil'. These words are significant: although Pitt-Rivers recommended similar locations for archaeological investigations to those identified by the BSAEP, he considered excavations the primary field technique. He also concentrated on stone tools, describing and depicting 'the principal types of neolithic implements found in [Britain]', and insisting that '[t]he traveller before starting should make himself thoroughly acquainted with these forms'.[29] Although '*N&Q* was developed before archaeology was highly specialised', and its intended audience, like that of the BSAEP's instructions, 'included untrained

[24] British Association for the Advancement of Science (hereinafter BAAS), 'Varieties of Human Race […]', *Report of the Eleventh Meeting of the British Association for the Advancement of Science* (London: John Murray, 1842), 332–9; Stocking, 'What's in a Name?', 371; Urry, 'Notes and Queries', 45–6.

[25] BAAS, 'Varieties of Human Race', 337.

[26] BAAS, 'A Manual of Ethnological Enquiry', *Journal of the Ethnological Society of London* 3 (1854 [1851]): 203.

[27] BAAS, *Notes and Queries on Anthropology* (London: Edward Standford, 1874), 28; see also Michelle Richards, 'Notes and Queries on Anthropology: Its Influence on Pacific Prehistoric Archaeology at the Turn of the 20th Century', *JPA* 8:1 (2017): 12–22.

[28] BAAS, *Notes and Queries*, 28.

[29] Ibid., 32–5.

travellers and scientific amateurs', Pitt-Rivers' instructions to aspiring archaeologists indicate that prior engagement with the topic was expected.[30] His uncritical use of terms such as 'palaeolithic' and 'neolithic' also reveal his adherence to the Three Age system critiqued by Virchow – an important point of difference between early archaeological practice as imagined in British and German metropolitan manuals.

Further differences are evident. English-language instructions imagined a narrow focus for archaeological field methods, emphasizing excavations as the primary technique and stone tools as the artefacts of greatest interest. German-language instructions took a broader approach, envisaging a range of techniques – excavations, site surveys, collections of antiquities – and a variety of objects of study. But were these differences also apparent in the field? The following sections address this question through a range of case studies over the period 1870–1900.

A Universalist: Nikolai Miklouho-Maclay[31]

In 1870, aged 23, Nikolai Miklouho-Maclay presented a programme of study to the Russian Geographical Society (RGS) in 1870, preceding the BSAEP's instructions, *N&Q*, and Neumayer's *Instructions*. Best known for his long-term fieldwork on the Maclay (now Rai) Coast of New Guinea and his humanitarian anti-colonial stance in defence of Pacific peoples, Maclay studied medicine and zoology at German universities before proposing to the RGS the then outlandish idea of providing material support for an expedition to New Guinea. He then re-trained himself in less than a year from a broad-spectrum naturalist into an anthropologist. He read widely and sent questionnaires to selected European savants, including Bastian, Virchow, German geographer Georg Gerland, German zoologist Ernst Haeckel, and British biologist Thomas Huxley. These questionnaires, the basis of Maclay's studies in the Pacific, reveal the wide-ranging priorities and interests of scholars then studying humankind.[32]

Although the term 'archaeology' did not appear in Maclay's programme, the concept was present. Bastian's questionnaire responses emphasized the importance of excavating stone constructions located on island summits, particularly Rapa (Austral Islands) and Eidea (probably Eimeo, now Mo'orea, French Polynesia), and collecting data about their builders, as well as those of monuments on Rapa Nui/Easter Island, Tinian, and others. Bastian proposed excavation as the main method for studying existing or supposed megalithic constructions, but also encouraged Maclay to 'determine the source of nephrite and follow the distribution of objects made from it', and study 'the local currents which connect groups of islands and with which it would be

[30] Richards, 'Notes and Queries', 13.

[31] This spelling, or just 'Maclay', was the most common spelling used by Miklouho-Maclay while in English-speaking countries. In citing his publications, we have retained the original spelling of his name in each instance.

[32] N.N. Miklukho-Maklai, 'Programma predpolagaemykh issledovanii vo vremia puteshstviia na ostrova i pribrezh'ia Tikhogo okeana', in *Sobranie sochinenii v shesti tomakh*, 6 vols (Moscow: Nauka, 1990–9), vol. 3, 296–308.

possible to explain the migration of races'.[33] Gerland encouraged Maclay to inquire about 'monuments in New Guinea', and highlighted the importance of studying Australian Aboriginal images on rocks, tree carvings, and so forth, and establishing if they had an 'ancient appearance'.[34]

These responses to Maclay's questionnaires reveal a broad spectrum of approaches, questions, and techniques associated with the emerging discipline of archaeology. Excavations were important, but other techniques were also suggested, including documenting monuments, carvings, and artefacts, investigating continuities and changes in artistic and cultural traditions, and studying ocean currents. Methodologically, these recommendations did not provide a conceptual framework for studying humankind as a whole, because each savant had his own set of focused empirical questions. Initial amassing of data, followed by systematization and construction of theories on the basis of extensive knowledge, was characteristic of the German school at that time. However, Maclay was not tempted by simple data collection. In 1870, en route to New Guinea, he drafted a paper, 'Why I chose New Guinea as the field of my studies', identifying his overarching task as 'ethnology'. He 'gave [himself] two problems […] of great general scientific interest': 'first, to clarify the anthropological relation of the Papuans to other races in general' and, 'second, […] to establish the distribution of this race in relation to the other tribes of the Pacific'.[35]

Maclay's focus on race contrasts with the long Russian tradition of interpreting his approach as evolving from physical anthropology through ethnography to human rights. Raciology was associated with racism in the Soviet Union; it was thus unthinkable to suggest that Maclay went to the Pacific to study race issues. However, on close examination his archival materials reveal that his concept of 'ethnology', as a theoretical science encompassing everything relating to humankind, had as its overarching task a quest for the ethnogenesis of Pacific peoples.[36] When he departed for New Guinea, he was already planning a long-term, multidisciplinary, comparative study of Pacific peoples. He derived data from two major sources of fieldwork, physical anthropology and ethnography, and drew upon various auxiliary fields.

In addition to the above questionnaires, Maclay used *N&Q* as his field guide during his travels in the Pacific and Island Southeast Asia in 1875–83. His copy of *N&Q*, covered with his notes, was discovered and studied by Tatiana Shaskolskaya, Director of the Library of St Petersburg's Museum of Anthropology and Ethnography.[37] Maclay also used Virchow's programme of anthropological and prehistoric

[33] Ibid., 299.

[34] Ibid., 301.

[35] N.N. Miklukho-Maklai, 'Pochemu ia vybral Novuiu Gvineiu polem moikh issledovanii', in *Sobranie*, vol. 3, 8.

[36] N.N. Miklukho-Maklai, 'Ethnologie' notebook, 1869–70, Russian Geographical Society Archives (hereinafter RGSA), St Petersburg, f. 6, op. 1, no. 12.

[37] T.I. Shaskolskaya, 'Neizvestnye risunki N.N. Miklukho-Maklaia, avtografy i darstvennye nadpisi, v Maklaevskoi kollektsii biblioteki MAE RAN', in *Staroe i novoe v izuchenii etnograficheskogo naslediia N.N. Miklukho-Maklaia*, ed. P.L. Belkov (St Petersburg: Kunstkamera, 2014), 112–4.

studies in Neumayer's *Instructions*.[38] These guides gave Maclay insights into the emerging fields of archaeology and prehistory.

Maclay undertook palaeontological excavations in Glen Innes, Australia, but did not excavate in the Pacific.[39] However, aspects of his fieldwork were closely linked to archaeology in its broader sense. His introduction to Pacific archaeology started even before his arrival there; the Russian naval corvette taking him to New Guinea visited Chile, where Maclay encountered archaeological artefacts from Rapa Nui in the Santiago Ethnological Museum and private collections. He did not land at Rapa Nui himself, but met Rapa Nui people and missionaries in Mangareva and Tahiti, and recorded information about 'antiquities of the island'.[40] His account and conclusions help us pinpoint the moment when the concept of Pacific archaeology was coming into being:

> Many seafarers visited the island of Rapa Nui […] but all their descriptions and depictions are more than insufficient, if one wishes to get an understanding of these monuments, and is not content with the report that on Rapa Nui there are big stone idols. It is very likely that, in addition to the colossal stone figures, there are also not so huge, but equally interesting antiquities on the island.[41]

We translate as 'antiquities' the Russian word *drevnosti*, meaning material artefacts of bygone times. Maclay applied this word to all Rapa Nui artefacts, thereby transferring the well-known, romanticized 'highlights' of Rapa Nui culture, its huge monuments and *kohau rongorongo* tablets, from the domain of disparate curios into a conceptual continuity of ancient cultural history. He made this discovery by exploring stylistic similarities in the art forms of Rapa Nui, from 'the big centuries-old [stone] idols' via bas-reliefs to 'later artistic works made of wood'.[42]

Maclay's conclusions strongly suggest that he considered Rapa Nui's current inhabitants to be direct descendants of the idol builders, their craft skills still preserved in more recent wooden carvings. He referred to Rapa Nui artistic continuity in a Russian-language paper in 1872, and expressed similar sentiments in the late 1870s in publications describing 'traces of art' on New Guinea's Rai Coast.[43] He conceded that the material (for example, bamboo) partially determined the patterns (for example, straight lines), but noted the uniformity of some designs applied to

[38] N.N. Miklukho-Maklai, 'Vtoroe prebyvanie na Beregu Maklaia v Novoi Gvinee […]', in *Sobranie*, vol. 2, 201.

[39] Paul M.A. Willis, Susie M. Davies, and R.A.L. Osborne, 'Important Vertebrate Fossils from the Palaeontological Collections of the Department of Geology […]', *Journal and Proceedings, Royal Society of New South Wales* 125 (1992): 113–18.

[40] N.N. Miklukho-Maklai, 'Ostrova Rapa-Nui, Pitkairn i Mangareva', in *Sobranie*, vol. 1, 402 note 41.

[41] Ibid., 60–1.

[42] Ibid., 63.

[43] Miklukho-Maklai, 'Ostrova Rapa-Nui', 58–74; N. de Miklucho-Maclay, 'Vestiges de l'art chez les Papouas de la Côte-Maclay en Nouvelle Guinée', *Bulletins de la Société d'Anthropologie de Paris* (Sér. 3) 1 (1878): 524–31.

bamboo, wood, and pottery, and suggested that studying carvings and sculptures might thus 'provide some indications about relations between Melanesian tribes'.[44]

While visiting the Admiralty Islands in 1879, Maclay zealously collected patterns of pottery and tattoo from the same location, commenting on the tattoo sketches, 'There is a very similar pattern marked on the pots made of two straight lines.'[45] His remarks at a BSAEP meeting in 1882 indicate that he was constantly seeking ancient pottery, particularly data on its introduction and disappearance on different islands, as well as similarities between pottery and tattoo patterns.[46] His interest in these topics is visible in his copy of *N&Q*; the 'POTTERY' section is highlighted, as is query no. 48 in the 'TATTOO' section: 'Are the idols or statues of a country ornamented with patterns of the same or a similar character [as tattoo]?'[47] Tattoo and pottery decoration are living arts, but, after years spent among Pacific peoples, Maclay did not doubt the continuity of artistic and cultural traditions. As he travelled, his horizons broadened, and he increasingly saw such patterns as part of the potential heritage of ancient migrations in the Pacific.

During his travels, Maclay made many precise drawings of caves, stone structures, and burial places, including Feles Cave on Lelepa Island in Vanuatu, Marai Mahiatea on Tahiti, and the Inigit rock formation, an ancient burial place on Lifou Island in the Loyalty Islands of New Caledonia. Stone tools were also an ongoing interest. Rather than simply acquiring them as finished artefacts, he sketched the precise technology of their production and usage, and collected samples of unfinished implements and raw materials (Figure 1).[48]

All this makes Maclay one of the first academically oriented explorers who, while attempting to conduct a complex, multifocal study of Pacific ethnology, stood at the birth of Pacific archaeology. His correspondence and publications suggest that he was influenced by both German and British schools of thought, but also that he was a precocious individual who took others' suggestions in unconventional, often surprisingly modern directions. Unfortunately, Maclay died early and many of his materials were lost, but his remaining notebooks and drawings provide insights into his conceptual approach to Pacific prehistory. A universalist at heart, he recognized that Pacific people had their own prehistories.

Early Applications of the German-Language Tradition: Otto Finsch and Julius Haast

An examination of the general index for the BSAEP's two main publications from 1869 to 1888 – its annual journal, *Zeitschrift für Ethnologie* (Journal of Ethnology),

[44] N.N. Miklukho-Maklai, 'Etnologicheskie zametki o papuasakh Berega Maklaia na Novoi Gvinee', in *Sobranie*, vol. 3, 72.

[45] N.N. Miklukho-Maklai, field notebook, 1871–80, RGSA, f. 6, op. 1, no. 24, p. 88.

[46] N. von Miklucho-Maclay, 'Untitled [response to O. Finsch, "Töpferei in Neu-Guinea"]', *Verhandlungen der Berliner Gesellschaft für Anthropologie, Ethnologie und Urgeschichte* (hereinafter *VBGAEU*) 14 (1882): 576–7.

[47] BAAS, *Notes and Queries*, xiii, 99 (copy held in the Library of the Museum of Anthropology and Ethnography, St Petersburg).

[48] N.N. Miklukho-Maklai, 'Ostrova Admiralteistva', in *Sobranie*, vol. 3, 118–19.

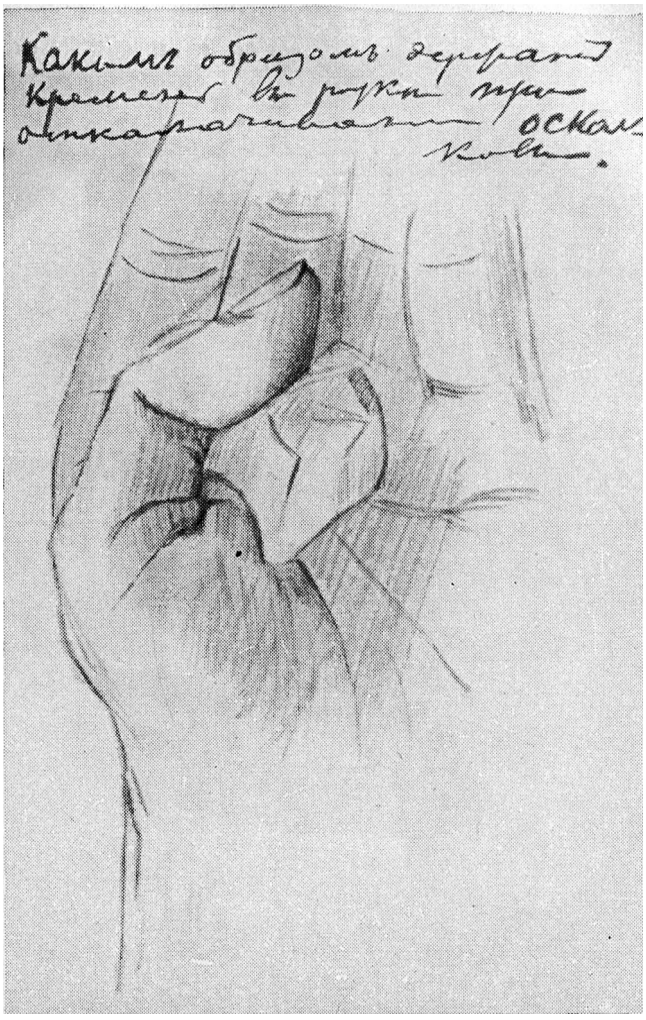


FIGURE 1: 'How flint stone is held in the hand when splinters are being chipped off it'. Sketch by N. Miklouho-Maclay, Maclay Coast, New Guinea, 1870s. Published in N.N. Miklukho-Maklai, *Sobranie sochinenii v piati tomakh* (Moscow-Leningrad: Izd-vo AN SSSR, 1954), vol. 5, 55.

and the proceedings of its monthly meetings – reveals that, besides Maclay, at least two other researchers in the Pacific were also applying principles and practices for archaeological investigation consistent with those outlined in German-language metropolitan manuals. However, articles referring to archaeology in the Pacific comprise a miniscule proportion of the total material published; most listings under geographical references to the Pacific relate to ethnography, physical anthropology, or linguistics. Articles assigned to the category headings 'archaeology/archaeological', 'excavations', or 'prehistory' (*Prähistorie*, *Vorgeschichte*, *Urgeschichte*) indicate that the nascent discipline of archaeology and its terminology and practices were associated in the German-language tradition at that time primarily with Europe, as well as the

Near East, Egypt, and the Americas. Finsch's description of excavations on Oahu in 1879 was listed under 'Hawaii' and 'graves, prehistoric', whereas Haast's 1872 excavations on New Zealand's South Island appeared under the headings 'New Zealand' and 'Polynesia'.[49]

These two articles document early excavations following recognizably distinct field methods. 'The Moa Bone Point Cave in New Zealand' (1875) is a German-language summary of an English-language report sent by Haast to the BSAEP.[50] Although we have no direct evidence that Haast consulted the BSAEP's instructions, his connection to the BSAEP predated their publication – he was named a corresponding member in December 1871 – and his excavation techniques conformed closely to those they prescribed.[51] However, Haast's interpretations of his finds relied heavily on theories developed outside the German-language tradition, especially the Three Age system outlined above, and Lubbock's distinction between stone tools of the Palaeolithic (chipped) and Neolithic (polished) periods.

Haast's main aim in excavating the cave was to clarify 'the period of the extinction of the Moa'.[52] To this end, he described the geology of the surrounding area and the composition, thickness, and contents of the various stratigraphic layers, drawing conclusions from these about the intensity of human use of the cave over time. He also cited early European accounts and local oral traditions regarding the antiquity of cultural practices including cannibalism – 'practised at least for several centuries in New Zealand' – and the use of weka (*Gallirallus australis*) as a food source.[53]

Building on the results of his own excavations elsewhere in New Zealand, Haast hypothesized that the cave had been occupied by two distinct peoples, the older, 'primitive' 'Moa-hunters' and the more recently arrived 'Maoris' or 'shellfish eaters'.[54] He noted that Māori traditions described '[finding] the islands [of New Zealand] uninhabited', but claimed that 'the fact that the Maories are a mixed race, in which Malayan, Papuan, and […] Mongolian blood are apparently blended, seems to forbid such an assumption'.[55] Despite acknowledging that 'the Moa-hunters […] were possessed of polished stone implements, as well as […] chipped flint tools', a reversal of his earlier assumption that Moa-hunters and Māori could be assigned to Palaeolithic and Neolithic periods respectively, he

[49] Rudolf Virchow, ed., *General-Register zu Band I-XX (1869–1888) der Zeitschrift für Ethnologie* … (Berlin: A. Asher, 1894).

[50] Julius Haast, 'Die Moa Bone Point Cave auf Neu-Seeland', *VBGAEU* 7 (1875): 8–10; Julius Haast, 'Researches and Excavations carried on in and near the Moa-bone Point Cave […]', *Transactions and Proceedings of the Royal Society of New Zealand* 7 (1874): 54–85, 528–30.

[51] [Rudolf Virchow], 'Untitled [Corresponding Members]', *VBGAEU* 4 (1872): 3.

[52] Haast, 'Researches and Excavations', 54.

[53] Ibid., 74–5.

[54] Julius Haast, 'On Certain Prehistoric Remains Discovered in New Zealand […]', *Journal of the Ethnological Society of London* 2:2 (1870): 110–20; Haast, 'Researches and Excavations', 73–5; cf. Julius Haast, *Moas and Moa Hunters* (Christchurch: Philosophical Institute of Canterbury, 1871).

[55] Haast, 'Prehistoric Remains', 110–11.

maintained that the Māori were not the original inhabitants of New Zealand.[56] More recent archaeological research reveals that beliefs such as Haast's effectively denied the Māori important aspects of their own prehistory, notably their dynamic adaption to new lifeways following the extinction of the moa.[57] Such beliefs could also be instrumentalized to relativize or justify European dispossession of the Māori, on the grounds that they themselves had displaced an earlier population.[58]

Haast's younger contemporary Finsch, who travelled the Pacific from 1879 to 1882 collecting specimens and artefacts for Berlin's Royal Museums, described in his report on 'ancient Hawaiian burial grounds near Waimanalo, Oahu' (1879) archaeological field methods adhering closely to the BSAEP's instructions.[59] The connection here is obvious: Virchow had met with Finsch before his departure specifically to discuss 'anthropological responsibilities'.[60] Finsch described the location, topography, and geology of the burial grounds and surrounding area, with two site maps (Figures 2 and 3), detailed the positions of human skeletons, and documented associated faunal remains.[61]

Finsch interpreted material remains as evidence of a dynamic Hawaiian prehistory. The 'countless walls of lava blocks […] border[ing] the fields in which the natives cultivated sweet potatoes and pumpkins' convinced him that 'the Waimanalo stretch of coast, now inhabited by fewer than 50 people, could previously boast as many hundreds'; mysterious 'heaps of lava (basalt) pieces' between the dunes 'appear[ed] to have been made by human hands […] when Waimanalo was still densely populated'. The skulls he had excavated belonged, he insisted, 'to genuine Hawaiians […] from a time […] when they were still completely free from white influences', a claim somewhat undermined by his identifying 'the terrible epidemics of smallpox and measles (in the 1830s and 1840s)' as a probable cause of death.[62] His version of a 'fatal impact' theory was thus contradictory, and his awareness of metropolitan physical anthropologists' desire for skulls considered racially pure likely influenced his decision to describe those he had excavated as 'genuine Hawaiians'.[63]

[56] Haast, 'Researches and Excavations', 72.

[57] R.C. Green, 'Adaptation and Change in Maori Culture', in *Biogeography and Ecology in New Zealand*, ed. G. Kuschel (The Hague: W. Junk, 1975), 591–642; Atholl Anderson, *Prodigious Birds: Moas and Moa-Hunting in Prehistoric New Zealand* (Cambridge: Cambridge University Press, 1989).

[58] Peter Clayworth, '"An indolent and chilly folk": The Development of the Idea of the "Moriori Myth"', PhD thesis, University of Otago, 2001; Francis Reid, 'The Sumner Cave Controversy Reconsidered: Provincialism, Identity and "Colonial" Science', *New Zealand Journal of History* 43:1 (2009): 18–38; cf. McNiven and Russell, *Appropriated Pasts*, 88–180.

[59] O. Finsch, 'Bericht über einen Besuch der alten hawaiischen Grabstätten bei Waimanalo, Oahu', *VBGAEU* 11 (1879): 327–31.

[60] Rud. Virchow, 'Vorwort', in O. Finsch, *Anthropologische Ergebnisse einer Reise in der Südsee* […] (Berlin: A. Asher, 1884), vii.

[61] Finsch, 'Grabstätten bei Waimanalo', 327–31.

[62] Ibid.

[63] See Hilary S. Howes, *The Race Question in Oceania: A.B. Meyer and Otto Finsch between Metropolitan Theory and Field Experience* (Frankfurt: Peter Lang, 2013), especially 54–8, 182–91.

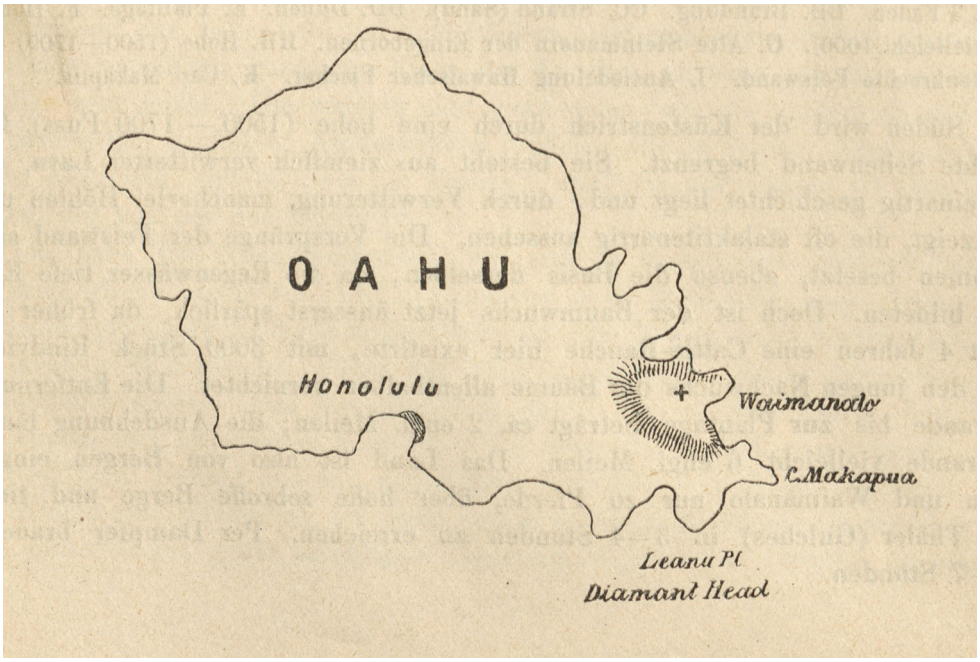


FIGURE 2: 'Ancient Hawaiian burial grounds near Waimanolo [Waimanalo], Oahu'. Finsch, 'Grabstätten bei Waimanolo', 327. Reproduction courtesy of Bayerische Staatsbibliothek München, Anthr. 154 t-11.

Nevertheless, his interpretation acknowledged a connection between current indigenous inhabitants and ancient material remains.

Both Haast and Finsch conducted early excavations in the Pacific using very similar methods and techniques, reflecting archaeological best practice as it was then imagined in metropolitan manuals and instructions. However, they reached distinctly different conclusions about the relationship between the ancient material remains they uncovered and the living indigenous populations they encountered. This suggests that the interpretation of findings from early archaeological investigations in the Pacific was not wholly predetermined by the application of field methods derived from metropolitan models. In Haast's and Finsch's cases, additional influences may have included a desire to ensure their findings would be valued by metropolitan experts, the application of theories derived from texts other than metropolitan manuals and instructions, and (in Haast's case) vigorous discussion and debate in situ, with the involvement of both colonial scientific luminaries and metropolitan experts.[64]

[64] John Yaldwyn, Elliot Dawson, and Janet Davidson, 'The First Ethical Controversy in New Zealand Archaeology: Joseph Hooker's Confidential Ruling in the Haast v. McKay Case', *Archaeology in New Zealand* 49:4 (2006): 282–92.

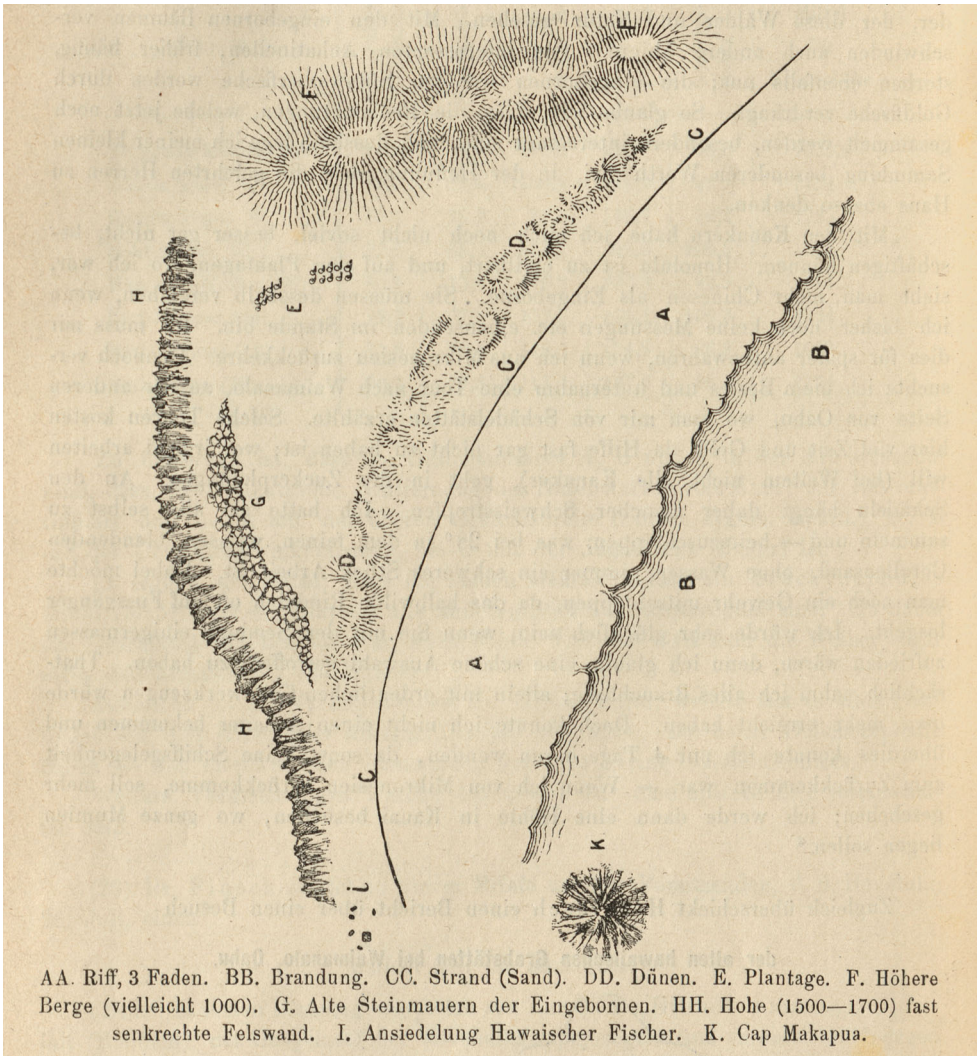


FIGURE 3: Detailed site map of burial grounds near Waimanalo. Legend: 'AA. Reef, 3 fathoms. BB. Surf. CC. Shore (sand). DD. Dunes. E. Plantation. F. Highish mountains (perhaps 1000 [feet]). G. Old stone walls of the natives. HH. High (1500–1700 [feet]), almost vertical cliff face. I. Settlement of Hawaiian fishers. K. Cape Makapua'. Finsch, 'Grabstätten bei Waimanolo', 328. Reproduction courtesy of Bayerische Staatsbibliothek München.

The English-Language Tradition: Publications of the Australasian Association for the Advancement of Science and the Polynesian Society

In the 1880s and 1890s, local scientific societies modelled after the BAAS emerged in Australia and New Zealand, taking anthropological and archaeological research in both old and new directions. In the Australian and Pacific context, Gardner and

McConvell's groundbreaking recent monograph *Southern Anthropology* has revealed the limitations of a centre–periphery model assigning theorizing to metropolitan centres and data collection to colonies, demonstrating that 'the anthropology of the colonies […] forced the British theorists to rethink their expectations'.[65] It is likely that similar processes occurred in relation to archaeology; however, our examination of publications by two major local scientific societies, the Australasian Association for the Advancement of Science (AAAS) and the Polynesian Society, is inconclusive on this point. Rather, major themes emerging from these publications include, first, an emphasis on stone tools; secondly, a tendency to attribute older settlement to extinct populations unrelated to the current inhabitants; and, thirdly, an interest in Polynesian migrations. The first and second themes chime with the 'ARCHÆOLOGY' chapter in *N&Q*, especially when changes in stone tool type were interpreted as revealing population replacement. The third theme cannot be traced directly to Pitt-Rivers' recommendations. It may partly be linked to the increasing discovery of subsurface archaeological evidence in other parts of the Pacific than New Zealand, as detailed below, and the desire to make sense of this evidence. Key Polynesian Society members Percy Smith and Tregear were also obsessively interested in Polynesian origins; '[a]t the heart of that project', Graeme Whimp notes, 'was a colonial salvage ethnology propelled by belief in […] [the] impending extinction' of the Māori.[66]

The AAAS was established in 1888 to promote science in Australasian colonies.[67] Its annual reports clearly adhered to the *N&Q* format, from the topics studied to the questions addressed, with some accommodation of topics relevant to the new colonies' needs (for example, town planning). Dedicated sections generally included Physics, Chemistry, Geology, Biology, Anthropology, and Ethnology. The lack of any dedicated archaeology papers under the Anthropology section tends to support Mulvaney's argument that Australia was not considered to have a deep or dynamic prehistory.

The first Anthropology paper, 'Outlines of Anthropology' by Swiss-born linguist and oceanographer John J. Wild, suggests that some contributors to the AAAS annual reports held similar beliefs about Pacific prehistory. Wild scarcely separated what we would currently consider archaeological methods and what was then defined as anthropology. He described 'the student of Anthropology' '[a]bandoning […] the often doubtful testimony of books', 'seiz[ing] the spade and the pickaxe', and 'in turning over the soil of Italy, Greece, Syria and Egypt […] obtain[ing] ample proof of the existence of races and nations which have left little or no trace in the pages of history'. In contrast, he dismissed the 'aboriginal tribes still found' in 'Australia, and the islands of the Pacific Ocean' as mere remnants of humankind's shared primitive past, preserving the 'moral and intellectual conditions which appertain to the earliest stages of the human race', but lacking a dynamic prehistory of their

[65] Gardner and McConville, *Southern Anthropology*, 7.

[66] Graeme Whimp, 'Polynesian Origins and Destinations: Reading the Pacific with S. Percy Smith', PhD thesis, Australian National University, 2014, 228.

[67] H.C. Russell, 'President's Address', in *Report of the First Meeting of the Australasian Association for the Advancement of Science*, ed. A. Liversidge and R. Etheridge (Sydney: AAAS, 1888), 1.

own.[68] Subsequent Anthropology papers in 1888–9 included notes on Australian Aborigines, including genealogies and comparative studies of languages, customs, art, and stone implements. None described distinct archaeological methods as outlined by Pitt-Rivers in *N&Q*, although the comparative ethnography of stone implements would prove useful to future archaeologists. The lack of an archaeological focus in the AAAS annual reports over the period 1891–1930 meant that aspiring anglophone archaeologists in the Pacific region might have continued to refer to the 'ARCHÆOLOGY' chapter in *N&Q*.

The BAAS and AAAS remained separate organizations. Perhaps a competitive divide existed, as *Stone Implements of the Australian Aborigine* (1914) hinted: 'the purpose […] of the implements […] is now a matter of conjecture, since the Australian pioneer was rarely the type of man trained to exact scientific observation'. This publication, a 'guide to the classified collection in the Australian Room, National Museum, Public Library Buildings Melbourne, arranged for the Australian Meeting of the British Association for the Advancement of Science', included archaeological content, namely photographs of the stone implements, with measurements and details of find locations. Remarkably, it also included probably the first ever comparative geochemical oxide composition analysis of Australian diabase (basalt) stone axes (Figure 4). The authors concluded that 'the typical diabase used for polished axes is not found in Tasmania, and it is possible that this, rather than the low culture of the natives may account for the absence of the ground axe'.[69]

However, the application of advanced archaeological techniques to this collection did not exempt it from serving a degrading imperialist agenda: 'The main purpose of the collection is to demonstrate that, although the aborigine has been classed as Neolithic, he habitually employed a whole range of implements which elsewhere would be classified as palæolithic, or even doubtfully recognised as human'. Aboriginal Australians were identified as living fossils, a point hammered home by arranging 'stone implements of prehistoric man in Europe and Africa' and 'Australian implements in pairs to match one another'. The authors made no effort to investigate a potentially long Australian prehistory, now known to extend back to the Pleistocene, insisting instead that 'all the Australian implements shown were fashioned by the existing Australian race'.[70]

In 1892, ethnologist and New Zealand Surveyor-General Stephenson Percy Smith and surveyor Edward Tregear, both AAAS members and regular contributors to its Anthropology papers section, co-founded the Polynesian Society. Its purpose was 'to promote the study of the Anthropology, Ethnology, Philology, History and Antiquities of the Polynesian races, by the publication of an official journal […] and by the collection of books, manuscripts, photographs, relics, and other illustrations'. The term 'Polynesia' was 'intended to include Australia, New Zealand, Melanesia,

[68] J.J. Wild, 'Outlines of Anthropology', in Liversidge and Etheridge, *Report*, 444–5.
[69] A.S. Kenyon and D.J. Mahony, *Stone Implements of the Australian Aborigine* (Melbourne: Arnall & Jackson, 1914), 4, 13–4.
[70] Ibid., 4.

ANALYSES OF DIABASES.

The following analyses of diabases used for native axes were made at the Geological Survey laboratory, under the supervision of Mr. P. G. W. Bayley :—

	1	2
SiO_2	53.70	56.75
Al_2O_3	14.76	5.37
Fe_2O_3	2.52	4.60
FeO	5.63	6.71
MgO	7.97	19.56
CaO	8.45	5.42
Na_2O	1.57	*nil*
K_2O	0.97	0.30
H_2O +	3.07	0.80
H_2O –	0.26	0.31
CO_2	trace	trace
TiO_2	0.84	—
P_2O_5	0.13	—
SO_3	*nil*	—
Cl	trace	trace
MnO	0.06	—
NiO CoO	0.02	—
CoO	trace	—
Li_2O	*nil*	—
	99.95	99.82

Sp. gr., 2.886.

1.—Aborigines' quarry, Hopkins River, near Chatsworth; analysis by A. G. Hall.

2.—Aborigines' quarry, Mount William, near Lancefield; analysis by P. G. W. Bayly.

FIGURE 4: Table showing the diabase (basalt) oxide compositions (wt%) of two Australian axes. Kenyon and Mahony, *Stone Implements*, 14. Reproduction courtesy of Australian Museum, Sydney.

Micronesia, and Malaysia, as well as Polynesia proper'. In the *Journal of the Polynesian Society* (JPS) index, 'Artifacts' did not appear until the 1920s, and 'Archaeology' was not listed until 1933.[71] However, several papers between 1892 and 1899 showed consideration of archaeological techniques and discussions of Polynesian prehistory. Tregear, Percy Smith, and Joshua Rutland, an Irish-born politician and amateur naturalist, were particularly interested in these topics and applied methods resembling those prescribed in *N&Q*.

The first volume of *JPS* contained a paper by Tregear on the 'Polynesian Bow'. He described the importance of recording the location and soil matrix surrounding an archaeological find, noting that a friend, while 'digging a drain upon his property at Mangapai',

[71] C.R.H. Taylor, 'Index Volumes 1–75, 1892–1966', *JPS* 75 (1966): 4.

> came upon a bow in a perfect state of preservation […] lying in a bed of sandy clay, the surface of which was apparently undisturbed … the original soil adheres to a portion of the weapon.[72]

Tregear speculated that this bow was unlikely to have been 'buried in modern times by a European', given its value, and equally unlikely to be 'a Maori weapon'; 'no explorer or missionary' had described bows as 'weapon[s] of the New Zealander', nor were bows included 'in the lists of weapons mentioned in New Zealand tradition'. Instead, he suggested, the bow 'might have belonged to some pre-historic inhabitant' of a since 'exterminated' race.[73]

The same year, Percy Smith's paper 'Stone Implements from the Chatham Islands' reported on 27 *toki* (adzes) found 'buried about a foot under the surface' at Opuhi. Percy Smith dismissed their prehistoric potential, suggesting that they had 'probably been deposited there for safety during some crisis in the lifetime of the proprietor, not improbably at the time the island was conquered by the Maoris in 1835'. He illustrated the adzes, provided measurements, described the kinds of stone used, and quoted a Moriori song describing adze production.[74]

Percy Smith's interest in archaeology was even more evident in *JPS*'s dedicated Notes and Queries section. Under the heading 'Prehistoric Remains in Samoa', he reproduced a description of a 'burying-place […] in the mountain ranges of Upolu' from one of explorer Handley Bathurst Sterndale's notebooks, hoping 'that some of our members resident in Samoa may […] make enquiry and research with a view to further discoveries'. Sterndale himself had not undertaken excavations; he 'much regretted' having 'neither leisure nor appliances to dig […] for skulls, so as to have them submitted for examination to some man of science'. However, he was 'well convinced that these remains were the work of a people anterior to the existing race of Samoans', though his sole justification was that '[t]he Samoan natives, as far as I have been able to learn, have no tradition of what people inhabited this mountain fastness'.[75] Like Tregear, Percy Smith, and Haast, Sterndale attributed the prehistory of these material remains not to the current inhabitants, but to a conveniently vanished race.

By the end of 1899 there had been 128 submissions to the Notes and Queries section. Twenty (15.6 per cent) were archaeological in nature. Of these, over half concerned New Zealand and links to the Loyalty Islands, Norfolk Island, New Hebrides, and New Guinea, while Samoa, Easter Island, and South America also featured. New Zealand's predominance probably reflects the fact that *JPS* and most of its contributors were based there. Caution is required in attempting to draw further conclusions from this relatively small number of archaeological submissions; however, the three general themes outlined above dominate.

Percy Smith's contributions to the Notes and Queries forum revealed his interest in the migrations and origins of people in Polynesia. In 1892 he requested

[72] E. Tregear, 'The Polynesian Bow', *JPS* 1:1 (1892): 58.
[73] Ibid.
[74] S. Percy Smith, 'Stone Implements from the Chatham Islands', *JPS* 1:2 (1892): 80–2.
[75] [S. Percy Smith], 'Prehistoric Remains in Samoa', *JPS* 1:1 (1892): 62–3.

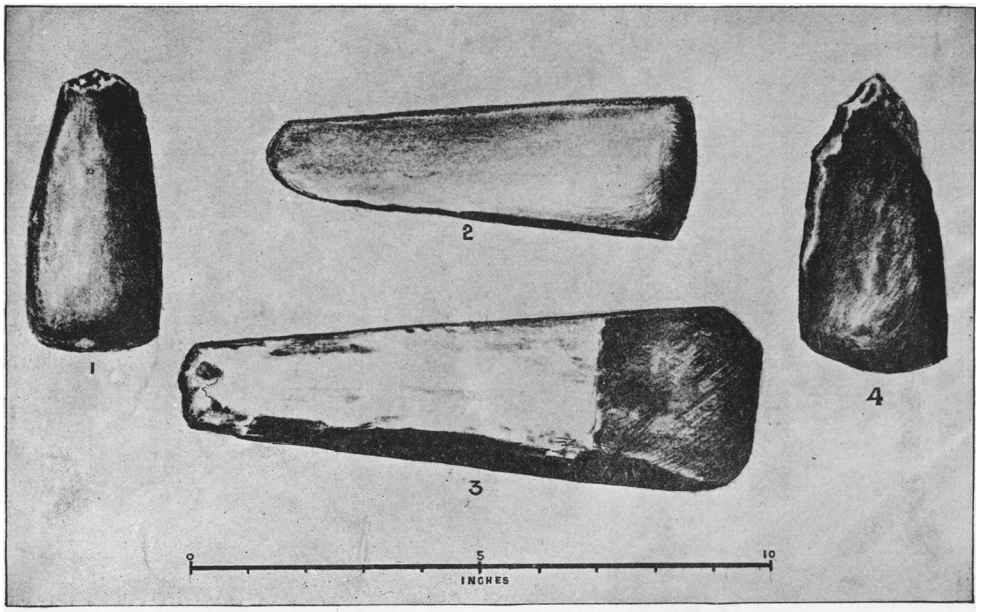
'information as to the migration of the Polynesians to Uea or Halgan Island of the Loyalty Islands',[76] and enquired about 'stone axes […] made of green jade, a stone […] believed to be found in situ only in New Zealand, New Caledonia and the Louisiade Archipelago'.[77] J.B. Thurston replied to the former question with a quote from Armand de Quatrefage's *Les Polynésiens* suggesting historical evidence of 'the Polynesian race mixing with the Melanesian race' in the Loyalty Islands 'about the year 1730'.[78] This underscores the prevalent conviction that Polynesian migrations were very recent, arriving only a few decades before Captain James Cook.

However, Percy Smith himself was open to considering an older date for the current Māori population's migrations. In 1893, he argued that 'stone hatchets of the usual Polynesian type', 'dug up in the soil' on Sunday Island, offered incontestable proof 'that some numbers of the Polynesian race had visited those solitary islands […] most probably […] those who made voyages to and fro between New Zealand and the central Pacific during the time of the great migration to New Zealand – in the fourteenth century'. This archaeological evidence, he argued, supported traditional Māori accounts of their origins, adding that '[d]iscovery of the same kind of stone implements at Norfolk Island proves that island also to have been known to the Polynesians; indeed it is difficult to point to any island in the central Pacific where traces of these old sea rovers cannot be found'.[79] Gradually, subsurface archaeological evidence was being reported and queried from places other than New Zealand. In 1896 Percy Smith and Tregear quoted correspondence from 1791 describing 'stones resembling adzes and […] chisels having been found in turning up some ground' in Norfolk Island, and solicited 'further information […] in regard to the ancient occupation of this island by the Polynesians'.[80]

Like Percy Smith, Rutland advocated recording archaeological information, although his thoughts on Māori prehistory are less clear. In 1895 he reported on 'a greenstone image' found while ploughing in Nelson, and stressed the importance of preserving 'a knowledge of the exact locality where relics have been obtained', because '[t]he only means of ascertaining anything trustworthy regarding that period [prior to Cook's arrival], is to bring together every trace of human occupation that can now be obtained'.[81]

A year later, Rutland contributed a paper to *JPS* on stone adzes from New Zealand's Pelorus district (Figure 5). Although he assessed them as 'cruder' than other, superior adze forms, he warned 'against concluding that the very rough unpolished tools found everywhere are the remains of a ruder people than the later inhabitants; they may have been made for work that did not require a more finished implement'. Determining if 'the superior finish of the Waikato implements was due to the introduction of foreign ideas' would require a culture-historical or typological

[76] S. Percy Smith, 'Notes and Queries. 10', *JPS* 1:2 (1892): 127.
[77] S. Percy Smith, 'Notes and Queries. 12', *JPS* 1:2 (1892): 128.
[78] J.B. Thurston, 'Notes and Queries. 20', *JPS* 1:4 (1892): 274.
[79] S. Percy Smith, 'Notes and Queries. 28', *JPS* 2:2 (1893): 126.
[80] [S. Percy Smith and E. Tregear], 'Polynesian Occupation of Norfolk Island', *JPS* 5:4 (1896): 241.
[81] Joshua Rutland, 'Maori Relics', *JPS* 4:4 (1895): 295.



ANCIENT STONE WEAPONS.

FIGURE 5: Stone adzes from New Zealand's Pelorus district. Rutland, 'Ancient Stone Implements'. Reproduction courtesy of Scholarly Information Services, The Australian National University.

comparison 'with implements of the same class from various parts of Polynesia'.[82] Despite his apparent preference for historicist methodologies, it is striking that Rutland was prepared to consider explanations for the existence of 'cruder' specimens which did not involve population replacement.

In the next volume of *JPS*, amateur ethnologist William Walter Smith praised Rutland's 'illustrated paper' for 'afford[ing] me an opportunity of comparing other stone implements of the prehistoric Maori inhabitants of Canterbury', obtained 'from the floors of caves and painted limestone rock shelters' and 'from friends who ploughed them up on their properties'.[83] Reverting to population replacement as an explanation, Smith asserted that these tools belonged to an extinct Māori tribe, the 'Ngati-Mamoe', supposedly responsible for the 'higher art' of the Canterbury Rock Drawings.[84]

CONCLUSION

Archaeological techniques as practised today evolved from a multidisciplinary scientific approach drawing on both the natural and social sciences. However, our

[82] Joshua Rutland, 'On Some Ancient Stone Implements, Pelorus District, Middle Island, N.Z.', *JPS* 5:2 (1896): 111.
[83] W.W. Smith, 'Flint Instruments', *JPS* 6:2 (1897): 93–4.
[84] W.W. Smith, 'Origin of the Canterbury Rock Drawings', *JPS* 6:3 (1897): 158.

comparative analysis of early English- and German-language instructions for scientific travellers demonstrates that recognizably distinct field methods for archaeological practice were included in such instructions from at least 1870, even though archaeology and prehistory were not clearly distinguished at that time from physical anthropology and ethnography/ethnology. English- and German-language instructions concurred in their identification of suitable sites for archaeological investigation, but differed on the significance of particular techniques (excavations) and artefact types (stone tools) to observe change over time. Furthermore, early instructions in both languages explicitly identified the Pacific as a suitable location for archaeological investigations, and we have identified researchers in each language tradition applying field methods corresponding to those prescribed by early instructions in various parts of the Pacific during the period 1870–1900. These researchers interpreted their findings in various ways, indicating that applying field methods derived from metropolitan models did not wholly determine how the results would be understood. Other factors, including concern for the opinion of metropolitan experts, debate and discussion in situ, and the nature of previous archaeological findings, could also impinge on independent interpretations of the material.

We conclude that Golson's, Green's, and Mulvaney's characterizations of archaeology in the Pacific before the 1950s do not accurately describe the situation in the late 19th century. If '[a]rchaeological techniques in the Pacific' did indeed '[lag] behind those adopted in most other regions', this must have been a later development. Further research into Pacific archaeology's 20th-century trajectories could help establish when and if archaeological techniques in the Pacific began to lag behind those used elsewhere. If so, further research could establish what might explain this phenomenon and whether it was widespread or confined to the archaeological techniques of particular national or language traditions.