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From Batticaloa via Basel to Berlin. Transimperial Science in Ceylon and Beyond around 1900

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ABSTRACT

Recent historiographies of 'Science and Empire' have successfully critiqued older euro-centric narratives. They highlighted how science was 'co-produced' through interactions between knowledgeable European and non-European actors in colonial 'contact zones', and how this 'pidginised knowledge' circulated through networks across various sites within the British Empire. This article shares and expands this approach. By focussing on continental European scholars in Ceylon around 1900, it argues that scientific networks were never confined to a particular empire. Science among Europeans was, rather, multi-lingual, mostly cross-disciplinary and always transimperial. Applying such an approach to the history of science in late colonial Ceylon allows us to uncover entanglements between historical processes that have for too long remained subject matters of disconnected historiographies: the emergence of Buddhist revivalism, evolutionary theories about human origins, the transformation from 'liberal race science' to Nazi eugenics in Germany, and the surfacing of British cultural anthropology.

KEYWORDS

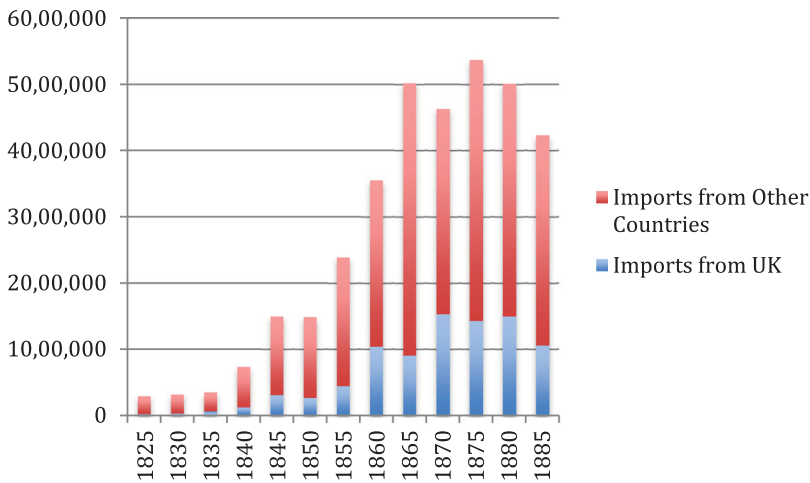
Science and Empire; colonial science; Ceylon; Sri Lanka; anthropology; Eugenics; Buddhism; Philology; Veddas

The 'British period' in Ceylon's long colonial history lasted from 1796 to 1948. During the entire period, non-British Europeans continually provided capital, staff, infrastructure and knowledge serving British colonial aims as much as their own. Throughout the nineteenth century at least 50 per cent of European imports came from countries other than Britain, and considerable parts of the exports went to other countries than the UK (see diagrams). Ceylon's trade relations to the world outside the British Empire were managed in Colombo by offices of trading companies such as *Volkart Bros.* from Switzerland or *Freudenberg & Co.* from Germany.¹ They not only played an important role in the creation of a world economy, but also for the establishment of global networks of science. As this article will show, they shipped scientific objects to Europe and accommodated continental European scientists, who had a broad range of British, French, Austrian, and German ship companies to choose from for

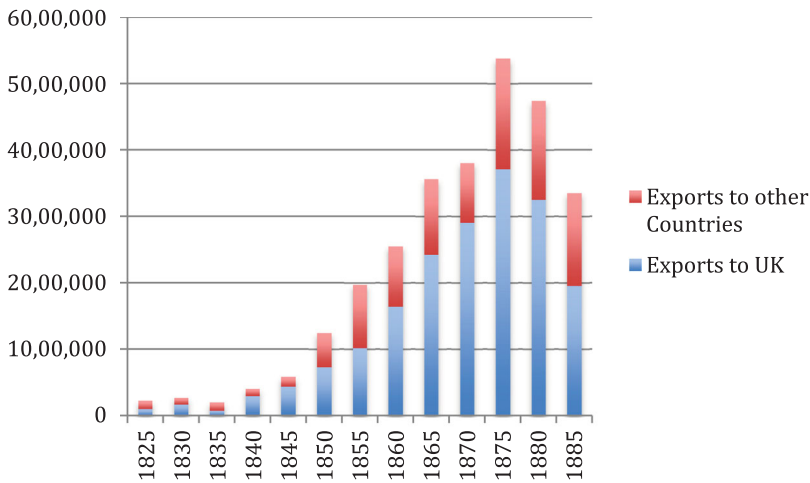
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their passage to Ceylon.



Imports (in Pounds) to Colombo from the UK and other Countries.



Exports (in Pounds) from Colombo to the UK and other Countries.²

According to Sujit Sivasundaram, a paradoxical effect of Sri Lanka's manifold economic, social, and cultural connections to the south-Asian mainland and beyond was that it resulted in a process of 'islanding'.³ The island was managed as a separate unit within the British imperial administration. This process both enforced and was enforced by constructing an understanding of Sri Lanka as a culturally, geologically and politically unique and isolated entity. This article picks up Sivasundaram's notion of 'islanding' Sri Lanka, focussing, however, more on the non-British contributions to this process in the years between the 1880s and the 1910s. Uncovering the role of these continental European 'foreigners' challenges not only the notion of Ceylon being an

isolated island within the Empire, but also of the British Empire being a self-sustaining entity within the world. This article therefore simultaneously follows and expands recent approaches in 'New Imperial History' and the historiography of 'Science and Empire'. The underlying idea of this scholarship is to see the British Empire as a 'web-like space' connected through various networks, through which multiple, and often competing, imperial projects were pursued.⁴ Science was one of these projects, as Tony Ballantyne, Joseph M. Hodge, Brett Bennet and others have convincingly shown. Yet, their analytical focus remains largely confined to the space created by the British Empire. Tony Ballantyne, for instances, rightly claims 'that empires were not hermetically sealed systems'.⁵ His examination of how orientalist and racial theories circulated and transformed on their trajectories through time and space, however, remains focused on Britain, New Zealand, India and other sites all within the British Empire. In a similar way, Helen Tilley rightly points out that British scientists in Africa were always 'connected ... with other scientists from around the world',⁶ but does not follow up their exchanges with colleagues and competitors from France, Germany, Switzerland or other nations using 'Africa as a Living Laboratory' during the time of Empire. I hence agree that the 'networked conception of empire ... offers much potential'⁷ for the global history of science, as Hodge and Bennet have argued. But for the 'networked conception' of 'imperial science' to reach its full potential it ought to free itself from what might be termed 'methodological imperialism'. Scientific exchanges during the time of empire were never restricted to imperial 'containers', but were rather always multi-lingual and transimperial. This becomes particularly visible if we trace the trajectories of scientist from the German speaking countries, who either never built an Empire of their own (Switzerland), or late (Germany), or restricted themselves to the continent (Austria). As recent scholarship has shown, scientists from these areas were astonishingly active and present in all overseas empires, which from their perspective were 'foreign'.⁸

Unsurprisingly they were heavily involved in localities, which were at the centre of some of the most heated scientific controversies of their time. Ceylon was one of those sites, because 'Islands are central to evolutionary theory.'⁹ The idea that islands had been cut off from the mainland in earlier geological history and therefore remained untouched by evolutionary change on the larger continents, led several generations of evolutionary scientists to explore islands as supposed windows into the earth's deepest evolutionary past. Ceylon, for many of them, was a particularly attractive because it was easy to reach. They contributed heavily to 'islanding' Ceylon, as this article seeks to discuss by focussing on one of the most controversial topics of the era concerning the question of the 'aboriginal inhabitants' of the island.

While shedding light on the transimperial character of these disputes is one major goal of this article, another one is to highlight cross-cultural exchanges on the island. The period covered here is most noted for the formation of a

‘bilingual intelligentsia’ among the colonised population, striving to revive and reform Buddhist tradition for nationalist aspirations.¹⁰ While some individuals from the multi-lingual and transimperial community of European scholars were—at least partially—in dialogue with their Lankan counterparts, others depended on Ceylonese knowledge in many other ways. Most importantly, core analytical categories were not exclusively European inventions, but rather rooted in a selective reading of Buddhist chronicles and the exploitation of manifold forms of ‘local knowledge’ on the ground.

Understanding Ceylon as an arena of local interactions between a transnational and multilingual community of scientists and various groups from the colonised societies as well as a nodal point within larger transimperial knowledge networks, allows for new readings of subject matters that are usually treated in isolation from each other in the historiographies of science and empire. As this article will show, Ceylon turns out to have been a relevant site for the histories of German racial science, feeding into the kind of Social Darwinism and Eugenics popular in Nazi Germany as well as controversies on ‘missing links’ between apes and humans. Conversely, disputes among continental European ‘Ceylonists’ shaped the translation of the Buddhist chronicles that would play an important role in the articulation of twentieth century Sinhalese nationalism. Last but not least they also affected the development of new fieldwork methods among British cultural and social anthropologists.

The ‘Vedda’-Problem

One of the most influential non-English contributions on the ‘aboriginal races’ of Ceylon appeared in 1881.¹¹ Its author was Rudolf Virchow (1821–1902). This eminent cell pathologist and liberal politician was also one of the founders of the German Anthropological Society in 1861 and one of the most authoritative voices in the fledgling European ‘race science’. His focus on Ceylon was part of growing popular interest in Ceylon in continental Europe at the time nourished by a series of ‘human zoos’ organised by the famous impresario Carl Hagenbeck from Hamburg. Just one year before Virchow’s piece on Ceylon’s ‘aboriginal races’, Hagenbeck had established contacts in Colombo in order to import Elephants from the island. Displaying up to 25 Elephants together with 67 ‘natives’ from Ceylon in Germany, Austria, Switzerland, France and the UK drew unprecedented crowds, including both the German and the Austrian ‘*Kaiser*’. Apart from Virchow many other scholars—Jean Louis Armand de Quatrefage in Paris among them—used the opportunity to measure and write about Hagenbeck’s ‘Sinhalese Troops’, as they were called.¹²

In Colombo, the Ceylon Branch of the Royal Asiatic Society, published no less than three English versions of Virchow’s piece entitled ‘The Veddas of Ceylon and their relation to the neighbouring tribes’: a short ‘abridgment’ in 1884, a translation of a section in 1887, and finally a full translation of the entire

book-length article in 1888.¹³ By examining Virchow's references and data we already get a first glimpse in to how the German anthropologist was quite naturally integrated in to several imperial knowledge networks dealing with South-asia. Thus, among many other titles his Berlin library included the famous seventeenth century treatise by Robert Knox, who was taken hostage by the king of Kandy for 20 years and later produced the first European insider account of that Kingdom.¹⁴ He also referred to the Austrian Novara-Expedition that had produced the first anthropological study of the island in the German language in the 1860s.¹⁵ Remarkably, Virchow was also able to borrow three Vedda, three Sinhalese and three Tamil skulls from the Natural History Museum in Colombo. The Museum's director, Dr. Amyrald Haly, was happy to send this material via Consul Freudenberg to Berlin.¹⁶

This material enabled Virchow to position himself in several controversies within the transimperial field of European naturalists and anthropologists of his time. Firstly, through his literature review, Virchow dismissed philological and orientalist research methods. The question at heart was 'phylogenies', that is to say the question of how the human species had evolved, and which stage 'primitive tribes' such as the 'Veddas' represented within this evolutionary process.¹⁷ This was an expression of what historian Andrew Zimmerman has referred to as German 'Antihumanist Anthropology'.¹⁸ Physical anthropologists in the German '*Kaiserreich*' challenged the dominance of the German liberal arts tradition ('*Geisteswissenschaften*') over the question of how to define humanity. Physical anthropologists with Virchow as their most powerful spokesman argued that only the study of the human body—skulls, bones, hair, skin and eye colours etc.—particularly among people supposedly living in a state of nature, possessing no or very little 'culture' ('*Naturvölker*') would reveal the true nature of humanity. As we shall see, this conflict between German Anthropologists on one side, and Orientalists and Philologists on the other, would also play out in Ceylon. A second cleavage shaping scholarly debates in Continental European academia was of a more intra-disciplinary nature. Thus, arguably, Virchow's main opponent in German speaking Europe was not a philologist or an orientalist, but rather another natural scientist: Ernst Haeckel (1834—1919). This zoology professor from Jena was an enthusiastic Darwinist. Where he and Virchow clashed was in their attitudes towards Darwin's theory of evolution by natural selection. While Virchow and his disciples rejected the theory as purely speculative, Haeckel was one of Darwin's most passionate advocates in continental Europe.¹⁹ As we shall see, the 'Vedda-Question' would become decisive for Haeckel's dispute with Virchow.

The controversy between German natural scientists and the humanities thus strongly overlapped with a cleavage between Darwinist and non-Darwinist natural scientists, dividing physical anthropologists into different factions.

Examining 'Vedda' skulls, and comparing them to Sinhala and Tamil skulls as well as to skulls of other 'primitive tribes' of 'dravidian origin' from the

south Asian mainland, the thrust of Virchow's article was to keep the door open for a non-Darwinist understanding of the 'Veddás': 'As they have not descended from the Sinhalese by regressive degeneration, neither surely have they been transformed by progressive evolution into Sinhalese.'²⁰ Virchow favoured a purely descriptive anthropology inquiring into the relations between various 'races' by examining morphological similarities and differences, but refraining from speculations on how these races might have 'evolved' into other races. Hence, he believed the 'Veddás' simply to be a very old and 'pure' race and the Sinhalese to be of 'mixed' composition. The only way to find out would be by 'enlarging by every possible effort the ethnology of the Indians' – in particular with regards to the 'Veddás'. Virchow therefore ended his article with a rousing appeal:

May the zeal of the observer know no flagging, that before the utter extinction of this already much depleted race, the language and customs, the physical and mental constitution, of the Veddás, be in all particulars firmly established.²¹

In Search of the Last 'wild Veddás'

This is precisely what two young Swiss zoologists set their minds on. Paul and Fritz Sarasin were two distant cousins hailing from one of the richest families in the Swiss town of Basel.²² Situated at the bend of the river Rhine, bordering Germany and France, Basel was ruled by a small oligarchy of patrician families who grew rich and powerful with the silk and cotton trade in the eighteenth and nineteenth centuries. The Sarasin cousins received their PhD in Würzburg with Carl Semper, an influential morphologist at the time, who had started his career as traveller naturalist in the Philippines in the late 1850s and early 1860s.²³ The most important influence for the Sarasin was their teacher during their early university training in Basel: Ludwig Rütimeyer (1825–1895). This conservative Protestant zoologist, based in one of the oldest universities in Europe, is largely forgotten today. In the nineteenth century he was, however, highly regarded by Charles Darwin and others for his evolutionary research in zoology and anthropology. He was also one of the founding members and editors of the *Journal for Anthropology (Archiv für Anthropologie)*, published since 1861 in Berlin.²⁴

Equipped with a PhD and almost inexhaustible financial means, the Sarasins boarded a ship from the Austrian-Hungarian 'Lloyds' company in Trieste in October 1883, and arrived in Ceylon on 14th of November. They spent three years on the island and returned to it several times in the years 1890, 1902 and 1907. Together they produced the first modern scientific account of Ceylon in the German language. It consisted of a four-volume series of books, which were published between 1887 and 1908, covering the island's zoology, geography, geology, anthropology and prehistory.²⁵ Of particular relevance

were volumes three and four, as they followed Virchow's call for a total anthropology of the 'Veddas', albeit in a somewhat obstinate fashion. They presented their extensive physical anthropological and ethnographical study of the 'Veddas' in 1893 as a contribution to the question of 'phylogeny', arguing, firstly, against Virchow that these groups represented an evolutionary link between primates and humans. In line with their admired teacher in Basel, Ludwig Rüttimeyer, the Sarasins tried to bridge modern, empirical biology and some of the core of ideas from the bible. They thus, secondly, suggested that 'already at the time when the biblical myth was recorded, the Veddas and their relatives lived in the same conditions as today; in the tale of Adam and Eve we see the oldest report on the aboriginal tribes of India.'²⁶ Responding to challenges to their unorthodox work, they published a second study in 1908 on the 'Stone Age' in Ceylon, which was supposed to prove that the 'Veddas' had lived on Ceylon before the arrival of the Sinhalese and thus represented the earliest stages of human evolution.²⁷

As will be spelt out below, the Sarasins' work had, multiple and contradictory effects in the fragmented landscapes of German and English-speaking naturalist and anthropological communities. Yet, before dwelling on these in more detail, it is instructive to examine more closely, what enabled the Swiss cousins to come up with their work. Their studies rested, essentially, on three main bodies of evidence: a literature survey, anthropological examinations of 'Vedda' bodies, skin, and skulls, as well as on interviews with 'Vedda', and on collecting ethnographic and prehistoric objects. All three sources of knowledge were highly 'pidginised' in the sense that they rested on generations of Lankans and Europeans borrowing, adapting and transforming each other's 'vocabularies of nature'.²⁸

Tapping into the Mahavamsa

This was true, in particular, for the notion of 'Veddas' in the first place. Systematising knowledge about 'Veddas' followed British victory over the kingdom of Kandy in 1815, which had remained autonomous during previous centuries of European colonisation. This confronted the new rulers with 'frequent inconvenience', as James Emmerson Tennent (1804—1869) remarked. On his tours through the Ceylonese highlands in the 1840s and 50s, this colonial secretary and later author of the first systematic account of the island, encountered several puzzling phenomena: ancient monuments, ruined temples, abandoned cities and artificial lakes with ancient irrigation systems. Regrettably for Tennent no one knew who had built these systems:

to every inquiry of this nature, there was the same unvarying reply: that information regarding them might possibly be found in the *Mahawanso*, or in some other of the native chronicles; but that few had ever read them, and none had succeeded in reproducing them for popular instruction.²⁹

The *Mahavamsa*, referred to in the quote, provides information on almost 23 centuries of Ceylon's history; ranging from 534 B.C., when the first Sinhalese kings arrived on the island, to the eve of British conquest of Kandy around 1800.³⁰ The 'Great Chronicle', written in Pali, the sacred language of Buddhism and the historical root language of Sinhalese, turned in to one of the main sources of historical, scientific and anthropological knowledge about Ceylon during British rule in the second half of the nineteenth century. James Emmer-son Tennent's two-volume account of Ceylon, published in 1859, played a major role in this process, as it rested mainly on information retrieved from the *Mahavamsa*. Tennent used the first English, yet still unpublished, translation of the 'Great Chronicle' in order to reconstruct the island's political, social, architectural, and cultural history, as well as its natural history.³¹ Moreover, Tennent, who arrived in Ceylon in 1845, was also a founding member of the Ceylon Branch of the Royal Asiatic Society in that same year. This society collected and published papers by colonial officials, planters, missionaries and some of the elite Lankan members of society, scattered across the island and who either came across curious phenomena while overseeing the expansions of roads, bridges, irrigations systems and other infrastructural projects on the island, or collected natural specimens or pursued *Mahavamsa* studies in their spare time.³² Within this bulk of historical, cultural and scientific knowledge, which accumulated over the years, the 'Veddas', although only accounting for a tiny minority of the island's population (roughly 2.200 among 2.7 Mio inhabitants in 1881), always played a relevant role. One of the reasons for this was that the *Mahavamsa* seems to refer to an aboriginal population inhabiting the island before the first people considered to be the ancestors of the Sinhalese arrived.³³ According to the chronicles, the newly arriving invaders mixed with this aboriginal population producing two lineages: one leading to present Sinhalese, the other to the 'Veddas' living in the forests. Combining these 'insights' from the *Mahavamsa* with similar mentions of 'wild' people in ancient Chinese and Greek accounts as well as periodic mentions in European accounts from the seventeenth century onwards, nineteenth century European Ceylonists adapted and nurtured the idea that their contemporary 'Veddas' were remaining descendants of these prehistoric 'Yakkos' mentioned in the Buddhist chronicles.³⁴ With regard to the late nineteenth century racial anthropology of the 'Veddas' produced by Virchow and the Swiss naturalists Paul and Fritz Sarasin, it is thus important to emphasise that the notion of 'Veddas' was from the outset an outcome of cultural entanglements. The idea that 'Veddas' constitute a distinct category within the island's population was nurtured by Buddhist chronicles in combination with European and other accounts. When the Swiss traveller zoologists Paul and Fritz Sarasin arrived in Ceylon, they were thus able to familiarise themselves with this knowledge rather easily by reading through 'an almost complete series'³⁵ of the Journal of the Ceylon Branch of the Royal Asiatic Society in Colombo. They were provided to them

by their British supporters and friends, which brings us to the second source of 'pidginised knowledge' flowing into their racial study of Ceylon.

Moving along Colonial Webs in Ceylon

After embarking in Colombo in 1883, the Sarasins' compatriots representing the Swiss trading house *Volkart Brothers* in Colombo helped them get settled and introduced them to the British colonial establishment.³⁶ They set up their first residence in an abandoned coffee plantation estate near the botanical garden Peradenya in the Kandy area in the highlands. In nearby Kandy, Sir Arthur Hamilton Gordon, the Governor of Ceylon at the time, received the two 'gentlemen scientists' in his residence. Gordon, who was also the patron of the Ceylon branch of the Royal Asiatic Society, promised the two young Swiss his unconditional support in their scientific ambitions. Among other things he had the Surveyor General's office produce a map for the Swiss, indicating all the known roads and pathways—something that was at the time not publically available.³⁷ Moreover, the Sarasins received full access to accommodation, 'coolies', local guides, translators, trackers and hunters in all the districts of the British colonial government on the island.

In other words: Apart from making use of knowledge inscribed in Buddhist chronicles, as explained above, the Sarasins' actual exploration of Ceylon's animals, plants, geology, and 'races' too rested on multiple forms of skills and knowledge by people who were part of moving nodal points contributing to the colonial extraction of information, resources, and labour from Ceylon. This affected not only how the Sarasins collected their data, but also how they interpreted it, as a closer look at their 'Vedda'-research reveals.

On their first trip designed to study the island's aboriginal population in the spring of 1885, the Sarasins contended themselves with groups living near the coast in the Batticaloa area. These communities had been forced to settle from the 1840s onwards and were subjected to proselytising and 'civilizing' programmes by missionaries.³⁸ Government agent Bailey, who had studied and written about the Veddas himself when he was a younger man,³⁹ ordered the village chiefs to have all 'Veddas' assemble so that the Sarasins could interview, measure and photograph them; and also dig up the skeletons and skulls of some of their deceased.⁴⁰

The Swiss naturalists returned with this data back to Europe. They settled in Berlin, which was one of the intellectual centres of European racial anthropology at the time. There they concluded that their data on the 'Veddas' was insufficient to produce a total and defining Anthropology of the 'tribe', like Virchow had called for. They therefore decided to return to Ceylon in 1890 to collect more data, namely on the 'real' and 'pure blooded' 'wild Veddas' dwelling in the remote Nilgala hills. There again, the Sarasins depended on numerous 'coolies', guides, and translators who knew how to find these communities

and were willing to lead the Sarasins to them. The Veddas were ordered to appear before the Sarasins who took measurements, photographs, interviewed the objects of their study and obtained skulls and skeletons. The important point to stress here is that it was local government officials and village headman, some of which Sinhalese and Veddas themselves, who decided which individuals to present to the foreign Swiss scientists as 'Veddas' and thus ultimately co-shaped the Sarasins collection of scientific data.

To be sure, this was not only true for the case of the Sarasins, but was a feature of a certain culture of displaying 'Veddas' to European foreigners more generally.⁴¹ Between 1880 and the early 1900s several naturalists and travellers from various parts of Europe dedicated entire chapters or books to the 'last Veddas of Ceylon'.⁴² The 'Veddas' became a popular subject in the colonial press as well.⁴³ All this attention seemed to have left an impression among the inhabitants of the 'Vedda country', particularly in the southeastern Province, as a young physicist reported, who attempted to reassess Virchow's and the Sarasins' physical anthropology of the 'Veddas' in the 1940s:

Unfortunately the Veddahs soon learned of this increased interest in themselves and became adept showmen, assisted, as was to be expected, by unscrupulous individuals from outside villages, who soon got to know that money and other presents were to be made out of the proceedings. Consequently the Veddahs themselves soon put on attitudes and feigned habits they do not normally possess. But what is more important to the student of their physical characters is the fact that numerous individuals, who had little or no justification for calling themselves Veddahs at all, posed as such for the delectation of the passing visitor, and hence to their own material betterment.⁴⁴

Taking the agency and potentially applied strategies of subversion of Veddas and Sinhalese into account, one of the most irritating facts from the Sarasin expeditions ought to be read with caution. As the Swiss report, Veddas supposedly volunteered to lead them to the graves where their ancestors were buried. The Sarasins claim that in some sites the Veddas did so voluntarily and had no objections to them having their 'coolies' dig up their ancestors' graves. On other occasions the Swiss did encounter resistance.⁴⁵ While it is undeniable that the Sarasins were able to procure skulls and skeletons, it remains inconclusive whose bones they actually received. The important thing to retain here is that passing on skulls and skeletons to the Sarasins did not only entail an act of offering skills and knowledge on how to find and obtain these materials, which the two Swiss did not have. The exchange of skulls via Veddas themselves, local Sinhalese Government Agents and local British Missionaries also entailed an act of passing on a particular kind of knowledge that shaped the Sarasins' own scientific interpretation of these materials. In all instances, it was the 'Veddas' and the other informants who told the Sarasins whether the skulls in questions had belonged to 'Veddas', Tamils or Sinhalese, and whether they had belonged to male or female individuals. Thus missionary Daniel Somanader whose mission society had tried to proselytise 'Veddas' since the early nineteenth

century and who was one of the Sarasins' main skull suppliers assured them: 'I was careful to select none but genuine Veddah skulls [...]. My long communications with the Veddahs enable me to do this.'⁴⁶ Another important provider of information and skulls was a Sinhalese Government Agent (Rate Mahatmaya) named Jayemaidane. In exchange for 29 pieces of diamonds, he sent the Swiss several skulls explaining: 'The man who dug them assures me that they are skulls of genuine Veddahs'.⁴⁷ A Vedda informant, named Sella, 'showed us two graves close to a small stream. ... One of them belonged to a nephew of Sella, the other one to his daughter', writes Fritz Sarasin in his travel report on the incident.⁴⁸

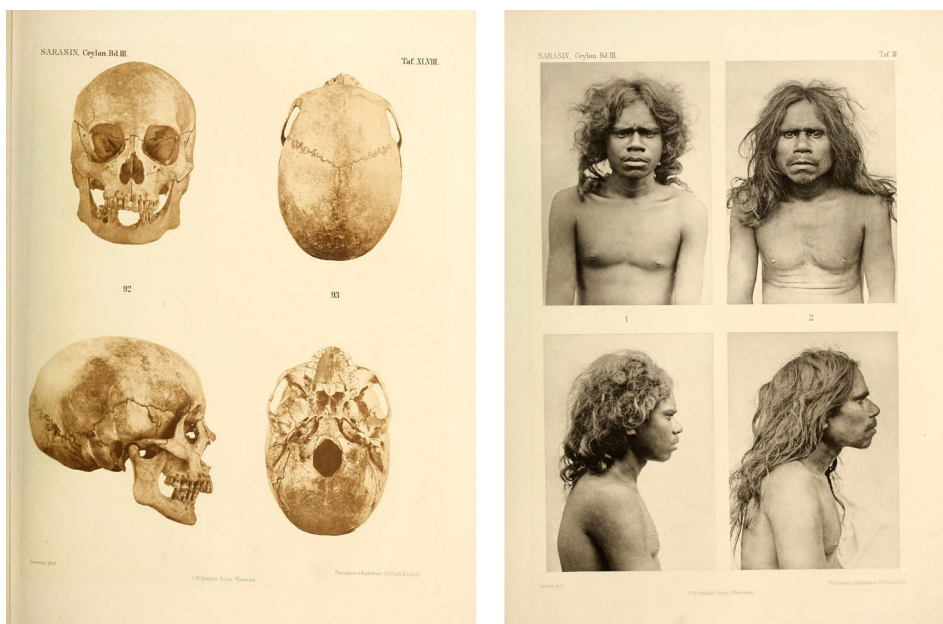
Whether the individuals who were presented to the Swiss as 'Veddahs' were 'really Veddahs' in the sense that they themselves would have identified with this racial category, and whether the skulls belonged to 'real Veddahs' we shall never know. What we can know is that they depended on the collaboration and knowledge from their informants. The Sarasins' interpretations of the Veddahs rested upon a pre-selection and pre-identifications of data by various local groups—among them Vedda individuals (or Vedda 'showmen') themselves.

Ordering Data into Racial Differences

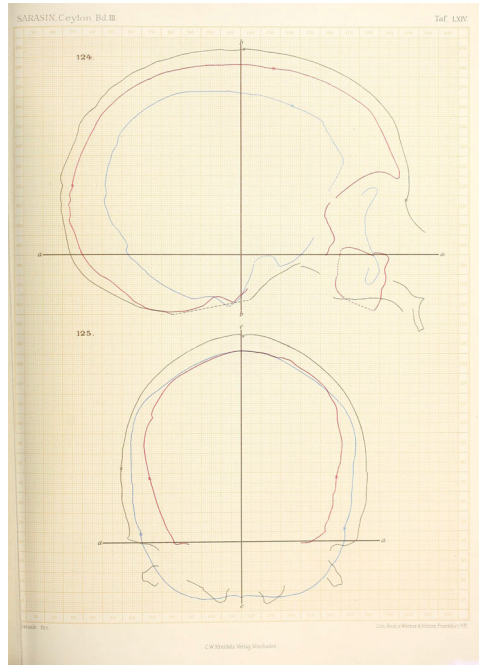
Skulls, skeletons, measurements, photographs, and interviews constituted the Sarasin's core body of data for their first Vedda study. Their main aim was to illustrate empirically that 'pure blooded natural Veddahs' represented one of three 'primary varieties' of homo sapiens; ancient 'races' in other words from which all other human races had supposedly evolved. To this end, they firstly tried to prove that the 'Veddahs' differed clearly in morphological terms from the surrounding Tamil and Sinhalese population. The Sarasins discussed this by comparing body features such as average size, but also by comparing skull volumes. Besides 37 Veddah skulls they had also managed to obtain 27 Tamil and 16 Sinhalese skulls from low cast burial sites and the government hospital in Kandy.⁴⁹ Secondly, the Sarasins then tried to show that 'Veddahs' were morphologically and evolutionary closer to chimpanzees than the average European. This is where the local interpretation of the Vedda skulls' racial and sexual identity played an important role. The Vedda skulls were the only ones that were clearly identified through the information on the names, age, sex, genealogy and origin provided by the Sarasins' Vedda or other informants. The Tamil and Sinhalese skulls, by contrast, lacked information on sex, age, origin etc. In order to create evidence for clear racial differences between 'Veddahs' on the one hand, and Tamils and Sinhalese on the other hand, they ascribed a sexual identity to each skull. Following the assumption that male skulls have a larger brain volume than female skulls, they ascribed larger skulls a male and smaller ones a female identity. This way three Tamil skulls remained with no clear sexual identity, which they dismissed from their sample.⁵⁰ They then

went on to compare male Vedda skulls to male Tamil and Sinhalese skulls, and female Vedda skulls with female Tamil and Sinhalese skulls. Keeping the sexes separate was necessary, they explained, to avoid false conclusions based on comparing, e.g. a relatively large Vedda skull with a relatively small Tamil skull, which could give the impression that Veddas were evolutionary more advanced than Tamils, which, of course, they were not.⁵¹ In other words: starting from the ‘fixed’ identities of the Vedda skulls, the Sarasins arranged their comparative data in a way that would allow them to find empirical evidence for their conclusion, which they had already settled on before their analysis: namely that sexual and racial differences are clearly visible in the skulls.

The next step for them was then to select from the Vedda skulls those that were most ‘pure’. The ‘purest’ skulls were 18 male items collected from among ‘natural’ or ‘Rock Veddas’ in the Nilgala hills. Within this group, they were again able to separate 8 specimens that were supposedly ‘purer’ than the others. Close examinations of these 8 ‘typical’ skulls then allowed the Sarasins to discuss the evolutionary and racial position of the ‘Veddas’ in relation to chimpanzees and ‘Europeans’ (see images), which enabled them finally to create suggestive evidence for their main hypothesis, namely that the ‘Veddas’ represented the last remains of a pre-Sinhalese aboriginal race, constituting one of the three prime races connecting modern humans to their ape-like ancestors. The difference in the skull volumes between ‘Veddas’ and ‘Europeans’ to them was a ‘wonderful’ illustration of ‘how this surplus of brain volume enabled the creation of the entire European culture’.⁵²



Two of the 8 ‘Typical’ Vedda Skulls, and two living ‘pure blooded Veddas’ according to the Sarasins (Sarasin & Sarasin 1893).



Comparing the contours of a 'typical' Vedda skull with that of a 'European' and a Chimpanzee skull (Sarasins & Sarasins 1893).

Circulating 'Vedda' Skulls & Knowledge Across Empires

The Sarasins' Vedda anthropology, published in 1893, entered a connected, but fragmented landscape of European and Asian scholars from various language communities dealing with Ceylon. The impact of their work differed accordingly. In hindsight, we can distinguish one major long-term effect. It laid the ground stone for paleontological research into the 'Stone Age' of Ceylon. In reaction to critique, which I shall turn to shortly, they returned to Ceylon in 1907 to demonstrate the existence of a Stone Age population on the island prior to the arrival of the Sinhalese. They did so by uncovering Neolithic tools in excavation sites close to Katragam in the southern part of the island.⁵³ In the following years, these and other sites were further explored by British Colonial archaeologists, and eventually by postcolonial Lankan scholars.⁵⁴ More recently human geneticists and current biologists joined the debate. While their DNA-research technologies are new, the basic question remains remarkably unchanged. Namely, what 'Veddas' as one of the supposedly last 'foraging' and 'hunter gatherer societies' allegedly untouched by history can tell us about humanity's earliest biological, cultural and social evolution.⁵⁵

The Sarasins' work, however, also had a considerable impact outside Ceylon and outside the realm of the natural sciences.

How to ‘Know’ the ‘Veddas’?

The first and most far-reaching critique of the Sarasins’ anthropology was formulated by Wilhelm Geiger (1856—1943).⁵⁶ This philologist came from the university of Erlangen near Nuremberg. Around 1890 Geiger began to specialise in Pali, the ancient language contained in the Buddhist scriptures from Ceylon. In 1895, the Royal Bavarian Academy of Science offered him a scholarship to travel to Ceylon to study these manuscripts. Geiger combined two methods: firstly, he studied the two main chronicles, the above-mentioned *Mahavamsa*, as well as the *Dipavamsa*. His main theses suggested that these two chronicles had grown out of an older text, which did not exist anymore—an *Ur-chronicle* so to speak. Geiger was convinced that these chronicles opened not only a door into the deepest Buddhist history, but also allowed to connect Ceylon’s history to the Aryan language groups. He believed that Pali and the spoken Sinhalese languages were Aryan languages.⁵⁷ Geiger combined a second method to corroborate his claims, namely study the vernacular languages of the oldest ‘tribes’ on the island, among them most prominently the ‘Veddas’.⁵⁸ In much the same way as the Sarasins, Geiger benefitted from the generous support of Pundits, British and Sinhalese colonial servants, who—among other things—rounded up ‘Veddas’ in their dwellings in order for them to be examined and interviewed by Geiger. It was these encounters with ‘Veddas’ that brought Geiger into a fundamental opposition to the Sarasins. Concluding from the fact that ‘Veddas’ spoke ‘a corrupt form of the Sinhalese language’ he did not believe that they were the ‘aborigines of Ceylon’ like the Sarasins had claimed. Rather he saw them as a ‘species of degenerate Sinhalese, who have sunk into their present condition from the nature of their secluded life.’⁵⁹ He became more explicit in his published travel reports in 1898. Conceding that he was no expert in physical anthropology, Geiger claimed:

At any rate, my studies and observations led me to substantially different results. I recognize no principal difference between Sinhalese and Wäddas, only a gradual difference. Both peoples are mixed races stemming from Ceylon’s aboriginal inhabitants and immigrated Aryans. The intermixture of aboriginal blood is stronger among the Wäddas than among the Sinhalese.⁶⁰

The conflict between Geiger and the Sarasins was an expression of the larger clash between Orientalists and Philologists on one hand, and the ‘racial sciences’ on the other hand.⁶¹ The effect of this dispute in Ceylon was largely twofold. Wilhelm Geiger quickly grew into one of the most authoritative voices in Pali studies. The Ceylon Government and the London Pali Society commissioned him to produce a new and improved translation to replace the out-dated Tournour translation from 1836, which had gone out of print. Geiger’s translation was published in 1908 and is

accepted among scholars of Buddhism as the standard translation to this day.⁶² Geiger, unlike the Sarasins, developed a close and, in some cases, cordial relationship with some eminent Buddhist monks and scholars, such as Vaskaduve Sri Subhūti Thera (1835—1917), in Ceylon. These were part of a ‘bilingual intelligentsia’ leading a Buddhist reform movement, which emerged, with support from American Theosophists, in the 1870s to counter British cultural hegemony.⁶³ Although Geiger expressed himself disparagingly about the ‘unsystematic’ scholarship of many of these monks, and considered the attempts to alleviate Buddhism to a ‘world religion’ on a par with Christendom to be ‘pathological’,⁶⁴ his friendship with some of the most senior Buddhist scholars was very cordial and continued in some instances for 30 years. In so doing, he provided a scholarly expertise that was very much in line with the cultural and political goals of the Buddhist revival movement. Not only did he confirm ‘scientifically’ that the chronicles were valid sources for the history of Buddhism. His erudition and standing among western Pali scholars elevated this view to the state of the art internationally. Furthermore, he also gave academic support to the conviction that the Buddha’s original words were contained and preserved in the Pali scriptures. All this supported Sinhala nationalist claims that they supposedly stood in the most direct and uninterrupted lineage to the Buddha among all Buddhist communities worldwide.⁶⁵

The other effect of the dispute between Geiger and the Sarasins was that the Swiss returned to Ceylon in 1907 to find a new sort of empirical evidence for their ‘aboriginal’ thesis, namely ‘Stone Age’ remains in caves formerly inhabited by the Veddas. From this they concluded:

On the whole, these stone implements are of small size to be used by small hands, and therefore by a small-sized type of mankind. ... In opposition to the opinion often times repeated (chiefly by linguists and by some anthropologists, who did not think it worthwhile to study the question to the bottom), that the Veddas would represent nothing else than some hordes of degraded Sinhalese, we repeat that we must now maintain that the autochtony of the Veddas in Ceylon is a proved fact.⁶⁶

The ‘Veddas’ as ‘Missing Link’

One of the Sarasins’ most enthusiastic readers was German Darwinian Ernst Haeckel. He had visited Ceylon in the 1880s.⁶⁷ The three of them got to know each other after the Swiss had returned from their first Ceylon trip to Berlin in 1886, where they worked on their *Natural History of Ceylon*. In 1893, they sent Haeckel a copy of their 600-page *Vedda-Anthropology*. He was thrilled:

I am afraid that this truly comparative-anthropological and phylogenetic-critical study will prepare many agonizing hours for [Rudolf] Virchow, the great opponent

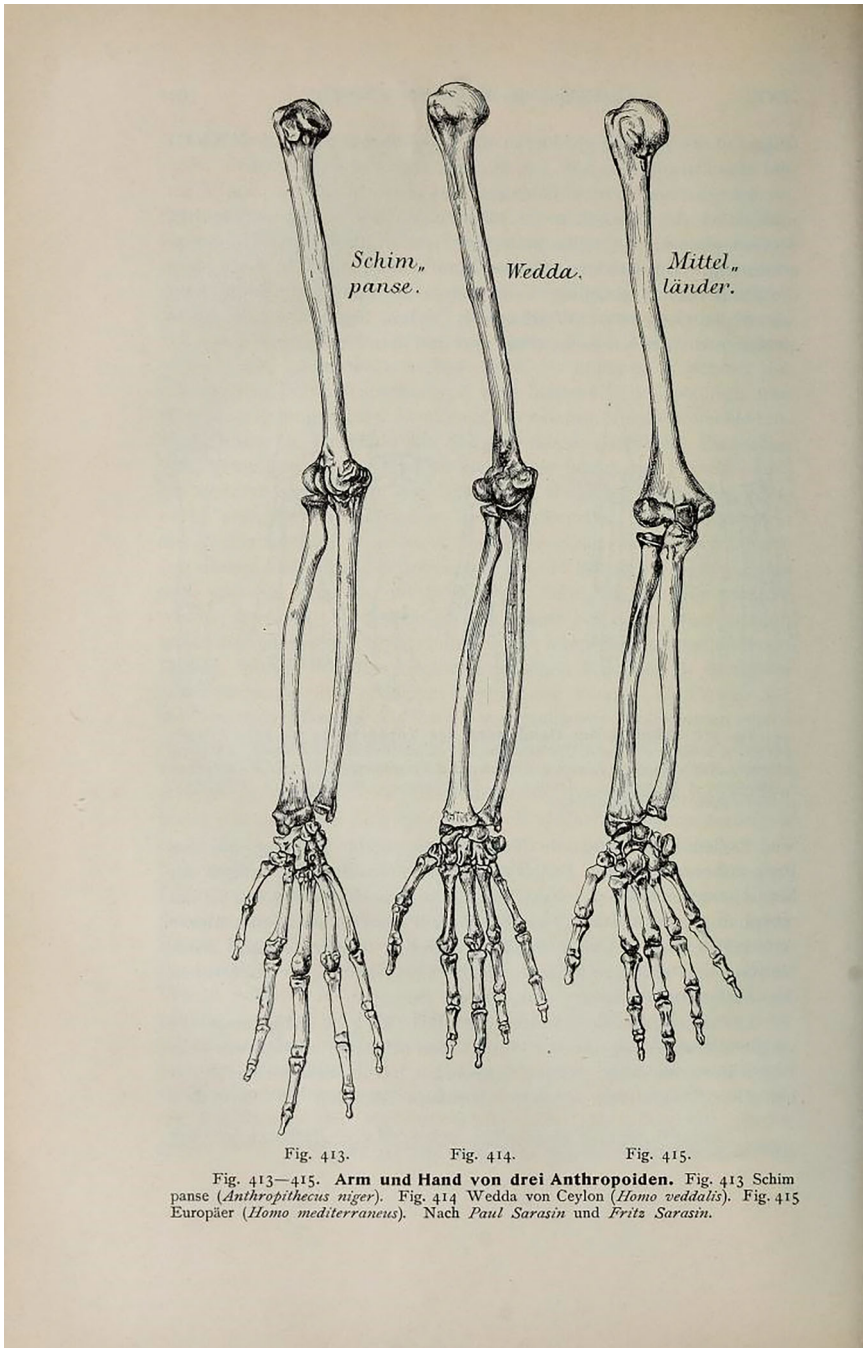
of Darwinism. Of course, we need to consider that he has no understanding whatsoever for comparative analysis or phylogenies, nor is he willing to understand! Since, by the way, I too am a (rather mediocre) human, I should not want to conceal my confession that your valuable and splendid book awakens in me (and probably in Virchow too!) a miserable feeling of envy – a threefold envy that is: (1) for your having spent almost three years in Ceylon, (2) for your having collected the most valuable observations, and (3) for your having presented these observations in such a magnificent manner!⁶⁸

The reason for Haeckel's enthusiasm was that he had argued for a 'phylogenetic' (a term invented by him) reading of humanity for many years; that is an understanding of humans having evolved from earlier ape-like species. This was one of the main claims in his immensely popular books with which he tried to spread Darwinism.⁶⁹ They were translated into several languages and usually saw more than a half a dozen of reprints. The Sarasins' Wedda-Anthropology offered Haeckel a small, but crucial empirical piece of evidence, for 'the questions of all questions', as Haeckel explained in his keynote address at the 1898 International Zoological Congress in Cambridge.⁷⁰ He referred to the problem formulated by Darwin's 'Descent of Man' and Thomas Huxley's 'Man's place in nature' on the evolutionary relationship between apes and humans. The hypothesis of these two thinkers formulated in the 1860s and 1870s had found support from Haeckel but remained extremely controversial. Not least for the lack of empirical evidence—the 'missing link' connecting primates and humans. Going through the relevant literature in palaeontology, comparative anatomy, zoology etc. that had accumulated in the last decades, and extensively refuting Virchow's radical critique of Darwinism,⁷¹ Haeckel ended his evolutionary *tour de force* in Cambridge by concluding:

Observing the current state of the art in Anthropogenie [Haeckel's term for evolutionary anthropology, bs] and summarizing all the empirical arguments, we have the fullest right to claim: The descent of man from an extinct tertiary primate-chain is no longer a vague hypothesis, but a historical fact.⁷²

Haeckel's 'fact' rested, essentially, on two main empirical pieces of evidence. Firstly, on Eugène Dubois' discovery of 'Pithecanthropus erectus', also referred to as 'Java man'.⁷³ The other empirical argument that Haeckel leaned on in Cambridge was the Sarasins' Vedda-Anthropology from Ceylon. Their 'diligent, critical comparative' anthropology had brought to light that 'the Veddas still living today, the dwarf like aborigines of Ceylon, are closest related to great apes (*Menschenaffen*) in the primitive conditions of their physique, and that among the latter the Chimpanzees and the Gorilla stands closest to humans.'⁷⁴

Haeckel elaborated these claims in an extensive review of the Sarasins' work⁷⁵ and added their findings into his popular monographs (see below).



Haeckel, *Anthropogenie*, 1910 (6. Auflage), S. 792.

Haeckel's endorsement of the Sarasins' research entailed an irony. The Sarasins themselves shared Haeckel's evolutionary ('phylogenetic') stance, but not his atheism. Attached to Haeckel's scientific work was a particular worldview,

which he coined ‘monism’—the idea that there is no separate spiritual or religious sphere outside of nature.⁷⁶ This was too radical for the Sarasins, who had been socialised in a particularly Protestant-pious milieu in Basel. Echoing their teacher Ludwig Rütimeyer’s attempt to reconcile bible and biology they deduced, e.g. a moral obligation to preserve not only nature, created by God, but also the last ‘primitive tribes’, such as the Veddas, who—according to them—are referred to in the oldest books of the bible.⁷⁷

The Sarasins and the Transformation of German ‘Racial Science’

Around 1900, the two Swiss naturalists were the only German speaking field anthropologists explicitly contradicting Virchow. After Virchow’s death in 1902, therefore, the Sarasins became an important point of reference for a younger, more radical and more Darwinist inclined generation of German race scientists, which would eventually pave the way for National socialist ‘racial hygiene’.⁷⁸ They took inspiration from the Sarasins in two respects: methodologically and conceptually. In methodological terms, the Sarasins Vedda-Anthropology played a considerable role for the process of standardisation of anthropological data gathering and in visualising racial difference in photographs and charts, as well as to distinguish and objectify different shades of skin-color. Thus, the Sarasins pioneering work in Ceylon inspired the German-Swiss anthropologist Rudolf Martin, based at the University of Zürich. Martin embarked on an extensive anthropological field study among the ‘interior tribes’ (*Inlandstämme*) in British Malaya in the 1890s.⁷⁹ In preparation for this trip he corresponded extensively with the Sarasins, adopted several of their innovative techniques for his own study and also was one of the few German racial scientists to adopt a peculiar analytical concept coined by the Sarasins: ‘Ergology’ – the study of material culture among ‘tribes’ who, by definition, possessed no or very little culture.⁸⁰

Rudolf Martin’s admiration for the Sarasins is relevant for the history of German racial anthropology because, as Israeli historian Amos Morris Reich has recently pointed out, Martin became the key figure for international standardisation of racial science techniques in the twentieth century.⁸¹ In 1914, he authored a book of more than 1.000 pages detailing various techniques of measuring physical features.⁸² In this book, he also adapted and developed further the Sarasins’ innovations. Moreover, he listed their Vedda-Anthropology in the same category as other foundational texts such as Darwin’s ‘Descent of Man’ or the work of French anthropologists Paul Broca.⁸³ Rudolf Martin’s ‘*Lehrbuch*’ gained international reputation at a time of intensifying conflict among European racial scientists during and after the Great War. Martin’s supposedly entirely apolitical methodological ‘*Lehrbuch*’ produced in politically neutral Switzerland, allowed the fundamentally divided community of French, German, British and other race scientists in the first half of the twentieth

century to agree on at least one thing: measuring standards. Thus the ‘Zurich school of anthropology’, which Rudolf Martin and his successor Otto Schlaginhaufen founded, enjoyed almost unconditional international respect, as historian Pascal Germann has shown.⁸⁴

Some German racial scientists also took theoretical inspiration from the Sarasins. The most prominent case is Eugen Fischer (1874–1967), who is mostly known for founding the ‘Kaiser Wilhelm Institute of Anthropology, Human Heredity, and Eugenics’ in Berlin, which informed not only the ‘Nuremberg Laws’ in 1935 but also gave scientific legitimacy to national socialist race politics more generally.⁸⁵ His PhD on ‘Rehoboter Bastards’, people with African and European (Dutch) parentage in what today is Namibia, is mostly, and rightly, seen as foundational for a shift in German Physical Anthropology—away from purely descriptive measuring (in a Virchowian paradigm) to applying mathematical-statistical methods in pursuit of uncovering how human ‘racial’ features are either hereditary or influenced by social and natural environments.⁸⁶ What is often overlooked, however, is that Fischer, at least in his early career, remained passionate about intricate details concerning measuring and objectifying bodily and cultural ‘racial features’. This becomes visible in his infamous ‘Bastard-Book’, published in 1913. It contained a large chapter of over 70 pages, which adopted and applied the Sarasins’ notion of ‘Ergology’, described above.⁸⁷ After his return to Germany, Fischer became one of the most loyal pen friends of the Sarasins.⁸⁸ Fischer, at the time, was head of his institute in Freiburg, which is located only about 70 kilometres from Basel. In 1913, he suggested holding regular informal meetings among southern German and Swiss racial anthropologists to discuss methodological questions. It was probably because of the outbreak of the Great War that this idea never seemed to have been realised.⁸⁹ The friendship continued, nevertheless, during and after the war. In 1923 Fischer published the new standard work entitled simply ‘Anthropologie’, which he had co-edited with Gustav Schwalbe, who had died during the war. In the anthology Fischer characterised the Sarasins’ Vedda anthropology as ‘one of the most thoroughly worked through anthropologies that exist’ belonging to the ‘most important literature’ in the field.⁹⁰ Shortly before the beginning of the Second World War, he wrote to Fritz Sarasin that he still used their ‘magnificent’ Vedda-Anthropology in his lectures, and assured him:

I know of no other case in which a researcher tried and achieved to study foreign races alive overseas and managed to bring back home well succeeded photographs, and then in a later expedition to dig up the bones of this individual and produce an immaculate analysis of his skull and other bones in order to shed light on the physical appearance of this person.⁹¹

Fischer’s high regard for his Swiss colleagues illustrates an underexposed, yet important, feature of his scientific persona. There is no doubt that Fischer’s primary interest lay in the question of heredity and ‘racial hygiene’, and that

he willingly entered a ‘symbiosis’ (Sheila Feith Weiss) with the Nazi racial state. Yet, in order to understand which supposed racial features in humans’ body and behaviour were hereditary, he needed solid empiricism and a trustworthy methodology. This led to methodological discussions that grew ever more complex—and absurd for onlookers. Yet, this was something also his Swiss colleagues were very passionate about. The Fischer-Sarasins-Martin connections thus supports recent historiographical claims that there was nothing ‘pseudo-scientific’⁹² about Fischer’s eugenic research agenda. On the contrary, he was part of a larger trans-national community of excessively scientific racial anthropologists. Fischer’s chapter on ‘human racial differences’ in the infamous 1921 *Grundriss der menschlichen Erblichkeitslehre und Rassenhygiene*, co-edited with Erwin Bauer and Fritz Lenz, corroborates claims regarding the supposed hereditary or environmental characteristics of racial features with case studies from all over the world. Among them are also references to the ‘Veddas’ of Ceylon.⁹³

The ‘anthropological facts’ regarding ‘Veddas’, which the Sarasins collected in Ceylon not only featured prominently in scholarly disputes revolving around the evolutionary ‘missing link’, as the example of Ernst Haeckel illustrates. These ‘facts’ as well as the methodological insights the Sarasins developed, had also an impact on friendships and scholarly exchanges during the period in which ‘liberal’ German ‘racial science’ transformed into a more policy oriented and theory-ridden science about heredity. This is not to suggest that there is a direct causal link between the Sarasins’ Vedda-Anthropology in British Ceylon around 1900 and the Nazi racial state in the 1930s and 40s. But the Sarasin-Haeckel-Fischer-Martin connections do suggest that German ‘Antihumanist Anthropology’ (Zimmerman) and the ‘Nazi Symbiosis’ (Weiss) grew out of much more complex mind-sets and webs of social relations than classical accounts of the subject matter convey.

After these digressions in to the complexities of Germanophonic racial science, let us return to Ceylon: How did the British react to the German-Swiss studies and quarrels in their crown colony?

Claiming the ‘Veddas’ for British Anthropology

As mentioned, the Sarasins got along rather well with the British colonialists on the island, many of which pursued their own research. Two particularly well documented examples were John Pole and Edward Ernest Green. Both of them were planters and members of the Ceylon Branch of the Royal Asiatic Society in Colombo. The collaboration between them and the Sarasins was most pronounced in 1907, when the Swiss returned to Ceylon to corroborate their ‘aboriginal-thesis’ regarding the ‘Veddas’ by uncovering the island’s ‘Stone Age’. In pursuit of this goal, the Sarasins profited from Pole and Green. They both had collected stone artefacts supposedly showing traces of ancient human handling a few years earlier. Their findings, however, were not

deemed conclusive by British colonial archaeologist in India.⁹⁴ Moreover, the amateur interpretations of these stone artefacts seemed much too detailed and too little systematic for outsiders to follow. 'I must confess, I am out of my depth',⁹⁵ was a typical remark by Ceylon's Governor who had sat through one of John Pole's lengthy papers presented in the Colombo learned society in 1907. In order to gain reputation and to have their findings validated, Pole and Green seemed eager to cooperate with the Sarasins. They both sent them some of their artefacts and indicated possible excavation sites where more of them might be found.⁹⁶ Indeed the Sarasins found many artefacts, which they identified as belonging to the Palaeolithic period. Consequently, the Sarasins' academic reputation in Europe established the 'Stone Age of Ceylon' as a fact that was hardly disputed anymore.⁹⁷ In their 1908 monograph on the 'Stone Age in Ceylon', the Sarasins based parts of their own analysis on Poles's flint stone and hand axe collection. They also cited the work of these two amateur archaeologists in Ceylon and emphasised its importance.⁹⁸ This gave Pole's and Green's disputed reputation a considerable boost. After receiving a copy of the book, Edward Ernest Green thanked the Swiss very warmly and stated: 'It is very satisfactory to me that, after years of discredit, the stone age in Ceylon has so been so firmly demonstrated by means of your careful work.'⁹⁹

Although the Sarasins enjoyed generous British support, their growing success did seem to raise some concerns in the higher echelons of the colonial administration and among colonial scientists. In 1907 the Governor in Ceylon responded to requests from British anthropologists in London to put aside 'whatever sum may be necessary up to 500 pounds'.¹⁰⁰ The money was supposed to 'set going a full and final scientific investigation of the Veddas, as so earnestly desired by Professor Virchow more than a quarter of a century ago'.¹⁰¹ The task fell upon Charles Gabriel Seligman, a trained medical doctor, who had assisted A. C. Haddon on his expedition to the Torres Straits in the 1890s, and had received a training in physical as well as social anthropology.¹⁰² Seligman spent roughly one year in Ceylon, during which he—together with his wife Brenda—conducted research among the Veddas, which was very different from that of the Sarasins. The Seligmans conducted what would become known as 'participatory observation', the field method to define social and cultural anthropology for the decades to come, associated usually with Seligman's most famous student: Bronislaw Malinowski (1884—1942). What was unique about the Seligmans' Ceylon research is that they worked as a couple. Brenda Seligman in particular was able to gain insight into the life world of female Veddas, something that male anthropologist could never have done, as Charles Seligman stressed in the introduction to their book, which they authored jointly.¹⁰³ It was published in 1911 and remained the standard work throughout the twentieth century, pushing the Sarasins' German book into oblivion within English speaking academia. The Seligmans' book dwelled mostly on cultural and social aspects of Vedda life and thus was quite different from the Sarasins mostly

material and physical anthropology. However, the Seligmans and the Sarasins did share some common ground. Charles Seligman's familiarity with physical anthropology comes through in the introductory chapters. They basically followed Virchow's and the Sarasins' findings regarding the racial identity of the Veddas. They supported and defended the Sarasins claim that their present-day Veddas 'do in fact represent the aboriginal inhabitants of Ceylon.'¹⁰⁴

The Seligmans thus shared a similar understanding of an overarching racial history. Moreover, the Seligmans seemed to have drawn inspiration from the Sarasins paleontological methods, which consisted in letting 'coolies' dig up stone implements in the deeper geological layers beneath the (former) dwellings occupied by 'primitive tribes'.¹⁰⁵ The Seligman adopted and applied this technique shortly after they finished in Ceylon, namely in 1908 during a visit in Egypt. They would pursue this line of research in Sudan and other places making it an integral part of their work.

When Science was Transimperial: Concluding Remarks

How might the hitherto sadly neglected story of Swiss scientific ambitions in Ceylon shape our understanding of the history of science in the island colony and possibly in the British Empire more generally? I see three interrelated points.

Firstly, it helps us understand how and why exploring Ceylon's nature and 'tribes' was not only of an imperial concern in the narrow sense of the term. Rather, Ceylon, and the 'Vedda question' in particular, were part of controversies and debates among a multilingual and multidisciplinary network of scholars from Britain as well as from continental Europe. The prime motivation for non-Britons such as Haeckel, Virchow, Geiger, or the Sarasins to invest, time, money, and reputation in Ceylon was certainly not to further any British colonial interests on the island. Rather, research on and in Ceylon for them was a means to take part in grand theory disputes over the evolution of human languages, cultures, and biological races. This is not to deny the relevance of British colonial power. Without the generous support by the British colonial state, none of these scholars could have laid hands on any empirical data and 'facts', which they collected on the island.

Secondly, zooming in on the concrete practice of collecting and constructing scientific 'facts' in Ceylon, reveals that the field of science was populated by far more people than only scholars in the narrow sense of the term. The Sarasins built on an established milieu of amateur scholars in Ceylon, centred around the local Royal Asiatic Society in Colombo. Within this society a bulk of knowledge, which had also been gathered by mining through the *Mahavamsa* and other Buddhist chronicles, had accumulated over the decades. This knowledge played a pivotal role for naturalists such as Virchow or the Sarasins to corroborate their claims regarding the racial history of the 'Veddas'. British planters, such as Ernest Green or John Pole, or missionaries such as Daniel Somanader,

and British government agents, who were also members of the Royal Asiatic Society, were instrumental for the Sarasins to be able to travel through the island and collect data. Particularly relevant were Ceylonese Rate Mahatmayas (Government Agents) such as Jayewardane, as well as informants among the 'Vedda' communities themselves. They not only knew, how to find 'wild Veddas' and procure skulls and skeletons of their deceased. More importantly, they figured as kind of interpretational gatekeepers. In many instances, it was they who decided which groups, individuals, or skeletons to introduce to the Sarasins as 'Veddas'. In the case of the skulls, it is they who defined their racial and sexual identity. In other words: The Sarasins' far reaching claims regarding the 'Veddas' phylogenetic position in the chain of life were deeply ingrained in the knowledge and practices of a host of 'go-betweens'—not least of individuals who were 'Veddas' or claimed to be 'Veddas' themselves.

The latter point is of particular relevance, thirdly, to understand how the 'facts' from the field were later disputed, traded and translated in scientific discourse. Following Sivasundaram's notion of 'islanding', we can see how Ceylon's accelerated integration into transimperial infrastructures of trade and communication in the late nineteenth century simultaneously enabled a variety of competing 'islanding' projects. A new generation of Lankan thinkers revived Buddhism for anti-imperial and eventually nationalist purposes. Yet, in direct or indirect interaction with these activists, there was also multilingual community of European naturalists and anthropologists who embarked on their interrelated and often competing 'islanding' missions. Wilhelm Geiger, the German philologist, lent his scholarly reputation to a new scientific reading of the *Mahavamsa*, which claimed that these and other chronicles give Ceylon a special status in the Buddhist ecumene. Geiger's scholarship depended, among other things, on the cooperation of 'Veddas'. He reconstructed their vernaculars as a means to understand the linguistic evolution from 'primitive' Sinhalese, which was supposedly used in the missing 'Ur-Chronicle', to the more advanced Pali scriptures used in the *Mahavamsa* and the *Dipavamsa*. This brought him into direct opposition to the Sarasins who, applying physical anthropological methods in their study of the 'Veddas', propagated the opposite. This conflict was never resolved. What is important to retain here, however, is the point mentioned above: These competing scholarly 'facts' about the 'Veddas' ought to be seen as 'co-constructions' involving many different actors. These 'co-constructed' facts then circulated to Europe where they became key elements in grand-theory controversies revolving around the 'missing link' argument, as Haeckel's usage of the Sarasins' work illustrates. They also contributed to the forging of friendships and methodological exchanges between racial anthropologists during the transition phase from 'liberal racial science' to Eugenics and 'Racial Hygiene' in Germany, as the case of Eugen Fischer illustrates.

Taken together these findings illuminate intricate connections between historical developments that are usually treated in isolation from each other in

historiographies of Science and Empire. Thus, the Sarasins, the ‘Veddas’, and Ceylon are absent in the disciplinary histories of paleoanthropology, which discusses the ‘missing link’ controversies as a dispute primarily over pre-historic skeleton findings.¹⁰⁶ They also go unmentioned in the standard accounts of the history of German and British anthropology and racial science.¹⁰⁷ In studies on the histories of Ceylon and the ‘Veddas’, the Sarasins barely receive any scrutiny as well.¹⁰⁸ The micro-historical inquiry of the Sarasins and the ‘Veddas from Ceylon’ thus allow us to capture how several historical key-processes shaping the modern world interlinked with each other in Ceylon at a time when the island was at the centre of various transimperial connections. Among these were the rise of evolutionary anthropology, the transformation from ‘liberal’ German racial science to Eugenics, the formation of a Buddhist revival movement, and the formation of ‘British’ social and cultural anthropology.

Last, but not least, Ceylon was also a major site for the formation of colonial science and anthropology in a small European country without colonies. Thus the Sarasins’ Ceylon adventures—together with equally extensive scientific travels on Celebes in the Dutch Indies—enabled the two Naturalists to establish themselves as two of the most powerful and influential scientists in their native Switzerland. Their legacies live on to this day in one of Central Europe’s the largest anthropological Museums in their hometown of Basel, a national park in Switzerland’s Southeastern Alps, and in a host of other Swiss scientific institutions. This, however, is a story for another article.¹⁰⁹

Notes

1. Dejung, *Die Fäden Des Globalen Marktes*, 60–3; Prüser, “Freudenberg, Johann Philipp”; Beckert, *King Cotton*.
2. Ceylon Blue Book 1891, 6–7, in: Sri Lanka National Archives
3. Sivasundaram, *Islanded*.
4. Lester, “Imperial Circuits and Networks: Geographies of the British Empire”; Lambert and Lester, *Colonial Lives across the British Empire*.
5. Ballantyne, *Orientalism and Race*, 12.
6. Tilley, *Africa as a Living Laboratory*, 7.
7. Bennet, “Science and Empire: An Overview of the Historical Scholarship,” 3.
8. Neill, “Science and Civilizing Missions. Germans and the Transnational Community of Tropical Medicine”; von Brescius, “Empires of Opportunity: German Scholars between Asia and Europe in the 1850s”; Germann, “Race in the Making: Colonial Encounters, Body Measurements and the Global Dimensions of Swiss Racial Science, 1900–1950”; Gascoigne, “The German Enlightenment and the Pacific.”
9. Beer, “Writing Darwin’s Islands: England and the Insular Condition,” 119.
10. Frost, “Wider Opportunities’.”
11. Virchow, *Ueber Die Weddas von Ceylon Und Ihre Beziehungen Zu Den Nachbarstämmen*.

12. Hagenbeck, *Von Tieren Und Menschen. Erlebnisse Und Erfahrungen*, 96; Zimmerman, *Anthropology and Antihumanism in Imperial Germany*, 15–37; Thode-Arora, “Charakteristische Gestalten Des Volkslebens”; Ames, *Carl Hagenbeck’s Empire of Entertainments*.
13. Virchow, “The Veddas of Ceylon”; Virchow, “Professor Virchow’s Ethnological Studies on the Singhalese Race”; Virchow, “The Veddas of Ceylon and Their Relation to the Neighbouring Tribes.”
14. Winterbottom, *Hybrid Knowledge in the Early East India Company World*, 140–62.
15. He referred to Friedrich Müller’s Anthropology of the Veddas published in Volume 3 of the Novara Reports, Virchow, *Ueber Die Weddas von Ceylon Und Ihre Beziehungen Zu Den Nachbarstämmen*, 7.
16. Haly, “Report of the Director of the Colombo Museum for 1883,” p. 128D, in: Sri Lanka National Archives.
17. Virchow, “The Veddas of Ceylon and Their Relation to the Neighbouring Tribes,” 387.
18. Zimmerman, *Anthropology and Antihumanism in Imperial Germany*, 38–61.
19. Di Gregorio, *From Here to Eternity*; Richards, *The Tragic Sense of Life*; Backenköhler, “Only ‘Dreams from an Afternoon Nap?’ Darwin’s Theory of Evolution an the Foundation of Biological Anthropology in Germany 1860–75.”
20. Virchow, “The Veddas of Ceylon and Their Relation to the Neighbouring Tribes,” 490.
21. *Ibid.*, 493.
22. For a detailed biography see Simon, *Reisen, Sammeln Und Forschen*.
23. Semper, *Die Philippinen Und Ihre Bewohner*.
24. Hopwood, “Pictures of Evolution and Charges of Fraud”; I discuss Rütimeyer more extensively in my Schär, *Tropenliebe*, 103–24.
25. Paul and Fritz Sarasin, *Ergebnisse naturwissenschaftlicher Forschung auf Ceylon*.
26. Sarasin and Sarasin, *Die Weddas von Ceylon*, 595.
27. Sarasin and Sarasin, *Die Steinzeit Auf Ceylon*; Sarasin, “Unsere Vierte (Paul Und Frith Sarasin’s) Forschungsreise Nach Ceylon Und Die Steinzeit Der Weddas.”
28. Fischer-Tiné, *Pidgin-Knowledge*.
29. Tennent, *Ceylon*, xxii–xxiii.
30. Wijeyeratne, *Nation, Constitutionalism and Buddhism in Sri Lanka*; Fernando, *Religion, Conflict and Peace in Sri Lanka*; de Silva, *A History of Sri Lanka*, 427–46.
31. Kemper, *The Presence of the Past*, 85–6.
32. Rösel, *Die Gestalt Und Entstehung Des Singhalesischen Nationalismus*, 238–44.
33. Tennent, *Ceylon*, 325–30.53.
34. Brow, *Vedda Villages of Anuradhapura*; Obeyesekere, “The Vaddas: Representations of the Wild Man in Sri Lanka.”
35. Sarasin and Sarasin, “Outline of Two Years’ Scientific Researches in Ceylon.”
36. Sarasin, *Reisen Und Forschungen in Ceylon*, 10.
37. Barrow, *Surveying and Mapping in Colonial Sri Lanka*, 2; Sarasin, *Reisen Und Forschungen in Ceylon*, 74.
38. Scott, “The Wesleyan Mission, North Ceylon as Contained in Reports, Pamphlets, Etc. Collected by Luke Scott”; *The Report of the Wesleyan-Methodist Missionary Society, 1838–1840*.
39. Bailey. “An Account of the Wild Tribes of the Veddahs of Ceylon,” 278–320.
40. Sarasin, *Reisen Und Forschungen in Ceylon*, 87.
41. Virchow mentions two photographs of ‘Veddas’, which his colleague, Adolf Bastian, obtained in Colombo during the Prince of Wales’s visit there. Virchow, *Ueber Die Weddas von Ceylon Und Ihre Beziehungen Zu Den Nachbarstämmen*, 43.

42. Haeckel, *Die Urbewohner von Ceylon*; Zeno, “Wedda”; Deschamps, *Au pays des Veddass, Ceylan*; Le Mesurier, “The Vedda’s of Ceylon”; Moszkowski, “Amongst the Last Veddass.”
43. D. W. F., “All about the Veddass’ and other ‘News’ from the Metropolis,” *The Monthly Literary Register and Notes and Queries for Ceylon*, January 01, 1895, 2; A Russian Account of the Veddass in Ceylon. Translated by Cpt. F. Chapman, *The Monthly Literary Register and Notes and Queries for Ceylon*, July 1, 1894, p. 149; A. De Silva, History of the Veddass of Ceylon, *The Monthly Literary Register and Notes and Queries for Ceylon*, November 1, 1893, 245; Rev. J. Crowther, The Veddahs, *Ceylon Literary Register*, December 17, 1886, 150; Mrs. Battersby, Veddass At Home, *Young England*, July 01, 1888, 298; Richard Cutler, Visit to a Vedda Village, *The Monthly Literary Register and Notes and Queries for Ceylon*, April 1, 1894, 83.
44. Osman Hill, “Ceylon Journal of Science,” 30.
45. Sarasin and Sarasin, *Die Veddass von Ceylon Und Die Sie Umgebenden Völkerschaften*, 164–7.
46. Somanader to the Sarasins, Batticaloa 10th March 1886, in: StaBS, PA 212a, T2, X, 72; On the Wesleyan’s Vedda Mission see Robert Spence Hardy, *Jubilee Memorials of the Wesleyan Mission, South Ceylon*, 25–38; On how the Swiss used this data, see Sarasin and Sarasin, *Die Veddass von Ceylon Und Die Sie Umgebenden Völkerschaften*, 165, 198, 209. On Somanader see also Rigg, *The Memoirs of R. D. Somanader Mudaliyar and His Family at Batticaloa*.
47. ‘Ratamahatmaya Jayewardane’ [Rate Mahatmaya] to the Sarasins, 13th October and 10th November 1890, in: StaBS, PA 212a, T2, X, 48 & 49. See also Sarasin and Sarasin, *Die Veddass von Ceylon Und Die Sie Umgebenden Völkerschaften*, 80, 165, 199, 200–1, 391.
48. Sarasin, *Reisen Und Forschungen in Ceylon*, 82.
49. Sarasin and Sarasin, *Die Veddass von Ceylon Und Die Sie Umgebenden Völkerschaften*, 164.
50. *Ibid.*, 168–9.
51. *Ibid.*, 368.
52. *Ibid.*, 214.
53. Sarasin and Sarasin, *Die Steinzeit Auf Ceylon*.
54. The foundational text for current post-colonial archaeology in Sri Lanka was Deraniyagala, *The Prehistory of Sri Lanka*. Perera, *Prehistoric Sri Lanka*. Allchin, “The Late Stone Age of Ceylon.”
55. See e.g. Hill et al., “Co-Residence Patterns in Hunter-Gatherer Societies Show Unique Human Social Structure”; Fortier, “The Ethnography of South Asian Foragers.”
56. On the following see Bechert, *Wilhelm Geiger*.
57. Geiger, “Dipavamsa Und Mahavamsa, Die Beiden Chroniken Der Insel Ceylon”; Bechert, *Wilhelm Geiger*, 86–7.
58. Geiger, “Zur Kenntnis Der Sprache Der Vädass”; Geiger, “The Language of the Veddass.”
59. Departure of Professor Geiger. An exciting finish to his visit, in: *Ceylon Independent*, reprinted in Bechert, *Wilhelm Geiger*, 69–70.
60. Geiger, *Ceylon*, 131.
61. Trautmann, “Constructiong the Racial Theory of Indian Civilization”; Zimmerman, *Anthropology and Antihumanism in Imperial Germany*.
62. Everding and Tilakaratne, *Wilhelm Geiger and the Study of the HHistory and Culture of Sri Lanka*.
63. Frost, ““Wider Opportunities””; Bechert, *Wilhelm Geiger*, 48–62.

64. Geiger, *Unter Tropischer Sonne*, 24–5.
65. I am indebted to Dr. Tilman Frasch (Manchester Metropolitan University) for sharing his expertise with me on this question. On Geiger’s relationship with Buddhist revivalist monks and his academic legacy, see Bechert, *Wilhelm Geiger*, 48–62; 71–83, 84–95. Valuable clues to Geiger’s role in the Buddhist revival movement can be found in Wijeyeratne, *Nation, Constitutionalism and Buddhism in Sri Lanka*, 89–90; Kemper, *The Presence of the Past*, 89–92.
66. Sarasin and Sarasin, “Stone Implements in Vedda Caves,” 188–90.
67. Aldrich, *Cultural Encounters and Homoeroticism in Sri Lanka*. See also Richards, *The Tragic Sense of Life*, 344–9.
68. Haeckel to the Sarasins, 29 April 1893, in: StABS PA 212a T2 III (translated from German, accentuation in the original).
69. Richards, *The Tragic Sense of Life*, 113–70.
70. Haeckel, *The Last Link*.
71. On Haeckel’s feud with Virchow: Richards, *The Tragic Sense of Life*, 312–28.
72. Haeckel, *The Last Link*.
73. Theunissen, *Eugène Dubois and the Ape-Man from Java*.
74. Haeckel, *Ueber unsere gegenwärtige Kenntniss vom Ursprung des Menschen*, 29.
75. Haeckel, *Indische Reisebriefe*.
76. Richards, *The Tragic Sense of Life*, 352–6.
77. Wöbse, “Separating Spheres”; Simon, *Reisen, Sammeln Und Forschen*.
78. This shift is explored in most detail by Massin, “From Virchow to Fischer.”
79. Martin, *Die Inlandstämme Der Malayischen Halbinsel*.
80. *Ibid.*, 655; The correspondence can be found in StaBS PA 212 T 2 XV, 39–62.
81. Morris-Reich, “Anthropology, Standardization and Measurement,” 487–516.
82. Martin, *Lehrbuch Der Anthropologie in Systematischer Darstellung*.
83. *Ibid.*, 1073.
84. Germann, “Race in the Making”; Germann, *Laboratorien Der Vererbung*.
85. Weiss, *The Nazi Symbiosis*; Schmuhl, *The Kaiser Wilhelm Institute for Anthropology, Human Heredity, and Eugenics, 1927–1945*.
86. The classic argument for his is Massin, “From Virchow to Fischer.”
87. Fischer, *Die Rehobother Bastards*, 228–300.
88. The correspondence between Sarasin and Fischer can be found in StaBS, PA 212 T2, Vols. XLII and XXX
89. Julius Kollmann from Basel was considered too old, and Gustav Schwalbe too ill to travel. Fischer to the Sarasins, 21 April 1913, in: StABS, PA 212 T2, XXX.
90. Schwalbe and Fischer, *Anthropologie*.
91. Eugen Fischer to Fritz Sarasin, 30th November 1939, in: StABS, PA 212 T2, XLII.
92. Weiss, *The Nazi Symbiosis*, 6.
93. Fischer, “Die Rassenunterschiede Des Menschen,” 86.
94. Perera, *Prehistoric Sri Lanka*, 20–1.
95. The protocol of the (non-)discussion is included at the end of: Pole, “A Few Remarks on Prehistoric Stones in Ceylon.”
96. Letters of Pole and Green to the Sarasins between 1907 and 1910 in StABS, PA 212 T2 XXVI.
97. An exception was Wayland, “Outlines of the Stone Age of Ceylon”; Perera, *Prehistoric Sri Lanka*, 20–5.
98. Sarasin and Sarasin, *Die Steinzeit Auf Ceylon*.
99. Green to the Sarasins, 13.4.1909, in: StABS, PA 212 T2, XXVI.

100. Registers of the Proceedings of the Executive Council, 2/116, 600, p. 320–1, in National Archives of Sri Lanka, Colombo.
101. Ferguson, “President’s Address.”
102. On the following see Myers, “Charles Gabriel Seligman. 1873–1940.”
103. Seligman and Seligman, *The Veddahs*.
104. Seligman and Seligman, *The Veddahs*, 415.
105. Seligmann, “63. Quartz Implements from Ceylon”; Seligman and Seligman, *The Veddahs*, 18–27.
106. Reader, *Missing Links*; Kjærgaard, “‘Hurrah for the Missing Link!’”
107. Zimmerman, *Anthropology and Antihumanism in Imperial Germany*; Penny, *Objects of Culture*; Hossfeld, *Geschichte der biologischen Anthropologie in Deutschland*; Kuklick, *A New History of Anthropology*; there is a brief mention of the Sarasins in Massin, “From Virchow to Fischer,” 87.
108. Dharmadāsa and Samarasinghe, *The Vanishing Aborigines*; Brow, *Vedda Villages of Anuradhapura*; Obeyesekere, “Colonial Histories and Vādā Primitivism.”
109. For the time being see Schär, *Tropenliebe*.

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