Theorising Race and Evolution - German Anthropologie's utilisation of Australian Aboriginal skeletal remains during the Long Nineteenth Century

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Theorising Race and Evolution

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German *Anthropologie*'s utilisation of Australian Aboriginal skeletal remains during the Long Nineteenth Century

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This thesis investigates the German physical anthropological discourse on Australian Aborigines during the long nineteenth century. It particularly explores, on the basis of contemporaneous German-language scientific publications, the way in which German physical anthropologists utilised Australian Aboriginal skeletal remains for their theorising on human diversity and evolution.

One focus lies on the discussion of the *Neuholländer* or *Australie*r in its various manifestations: ranging from the speculative theorising of the late Enlightenment period to the natural scientific, physical anthropological investigations of the mid-nineteenth to early twentieth centuries. It is shown that German physical anthropologists first relied on, and then continuously reinforced and thereby sustained existing notions of Australian Aboriginal physical and cultural-intellectual inferiority that were conveyed from the beginning of European contact. This bias was extraordinarily powerful, overriding the empirical evidence that challenged these pre-conceived ideas. The profoundly variable nature of humanity demonstrates the underlying fundamental problem; namely, the intrinsic fragility of classifying, typifying and ordering human diversity on the basis of one or another concept of race.

This thesis also examines the scientific investigation and interpretation of Australian Aboriginal ancestral remains in the context of the establishment of German *Anthropologie* as a natural science discipline in the second half of the nineteenth century. Sceptical of the idea of Darwinian human evolution from a common animal ancestor, the first generation of anthropologists used Australian Aboriginal skeletal remains as research material, attempting to rebuke Darwinist hypothesising. In this context, this thesis intervenes into the current historiographical debate about the relation between humanism, liberalism, Darwinism and (anti- or non-)racist approaches to human diversity in the early German physical anthropological community. It is shown in particular, that German anti-Darwinians, who have been credited with following a non-racist approach to the investigation of humanity, only in theory refrained from drawing conclusions about racial hierarchies. In practice, their skeletal investigations, whether undertaken by Darwinists or anti-Darwinians, remained within and furthered the prevalent paradigm of racial hierarchies throughout the time period in question.

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ORIGINALITY STATEMENT

‘I hereby declare that this submission is my own work and to the best of my knowledge it contains no materials previously published or written by another person, or substantial proportions of material which have been accepted for the award of any other degree or diploma at UNSW or any other educational institution, except where due acknowledgement is made in the thesis. Any contribution made to the research by others, with whom I have worked at UNSW or elsewhere, is explicitly acknowledged in the thesis. I also declare that the intellectual content of this thesis is the product of my own work, except to the extent that assistance from others in the project's design and conception or in style, presentation and linguistic expression is acknowledged.’

Signed …….....

Date …….....

This thesis contains images of Australian Aboriginal Ancestral Remains

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Introduction

During the 2009 Australia Day celebrations at the Australian Embassy in Berlin, the Australian Ambassador to Germany addressed his guests with a speech dedicated to the "culture of the first Australians." Pointing out their belief in the "vital importance that the human remains of those who have gone before … are united with the Land" he announced that Australia's First Peoples "want their ancestors back."[1] The Ambassador referred to the ongoing negotiations between the Australian government and German ethnological museums, physical anthropological departments and university anatomy institutes over the repatriation of Australian Aboriginal human remains still held in German physical anthropological collections.

The struggle for repatriation from similar collections in Australia, Europe and North America began in the 1960s, when Aboriginal political activists in Tasmania began to campaign not only for their Land Rights but also the return and laying to rest of their ancestors' remains.[2] In particular, the return of the skeleton of the Tasmanian Aboriginal woman Truganini, who died in 1876, presented a landmark achievement for the ensuing nationwide repatriation campaigns.[3] Her skeleton was regarded as scientific evidence for contemporaneous theories about the nature and origin of the "Tasmanian race." In this context, from 1904 until 1947, the Tasmanian Museum in Hobart exhibited Truganini's skeleton as that of "The Last Tasmanian" in an effort to substantiate the alleged extinction of the Tasmanian Aborigines.[4] Since the funeral of her skeleton by the descendants of her people in Tasmania – a hundred years after her death in 1876 –

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[1] Speech by H. E. Ian Kemish, Ambassador to Germany, Switzerland and Liechtenstein, on the occasion of Australia Day 2009, Berlin, 26 January 2009, http://www.germany.embassy.gov.au/beln/AusDay09.html (accessed November 19, 2009).

[2] On the spiritual connection between the dead and "Country" in Aboriginal society see Paul Turnbull, "Ancestors not Specimens: Reflections on the Controversy over the Remains of Aboriginal People in European Scientific Collections," *Electronic Journal of Australian and New Zealand History* (4 April 1997): 4–5; Paul Turnbull, "Enlightenment Anthropology and the Ancestral Remains of Australian Aboriginal People," in *Voyages and Beaches. Pacific Encounters, 1769–1840*, ed. Alex Calder, Jonathan Lamb and Bridget Orir (Hawaii: University of Hawaii Press, 1999), 205.

[3] See e.g. Cressida Fforde, *Collecting the Dead: Archaeology and the Reburial Issue* (London: Duckworth, 2004), 97–100; Lyndall Ryan, *The Aboriginal Tasmanians* (Brisbane: University of Queensland Press, 1981), 264–66.

[4] I became interested in this topic during my research for my German sociology diploma, from which my German language publication resulted: Antje Kühnast, "'In the Interest of Science and of the Colony'. Truganini und die Legende von den aussterbenden Rassen," in *Entfremdete Körper. Rassismus als Leichenschändung*, ed. Wulf D. Hund (Bielefeld: Transcript, 2009), 206–50.

Australian Aboriginal communities have succeeded in "bringing home"[5] significant numbers of their ancestral remains, mainly from Australian and European museums and anatomical institutions.[6]

With a view to the repatriation issues revolving around Australian Aboriginal human remains in Australian and European institutions, the Australian historian Paul Turnbull has argued that the theft and scientific utilisation of Aboriginal human remains cannot fully be "explained as having been a violent manifestation of colonialist desire to prove Indigenous racial inferiority, so as to justify the expropriation of ancestral country and the forced resettlement of its owners."[7] He has emphasised the necessity to additionally engage in the "scrutiny of the huge medico-scientific literature on the anatomy, morphology, and mentality of Aboriginal people that has accumulated over the past two centuries."[8] Turnbull has pointed to the historicity of "lousy"[9] physical anthropology, which was based on "the objectification and dehumanisation"[10] of Aborigines, highlighting that the science of the past still impacts on both Indigenous peoples and the science of today.[11] Turnbull has argued convincingly that in order to comprehend "how earlier biomedical knowledge served to render Aboriginal people [into] colonial subjects"[12] – by using their body parts as scientific specimens – it is essential to come to an understanding of "the conditions in which knowledge has been produced, has remained relatively stable, or has been subject to unpredictable evolution."[13] To make sense of

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[5] Paola Totaro, "Bringing home the dead so their spirits can rest," *Sydney Morning Herald*, May 13, 2009, http://www.smh.com.au/national/bringing-home-the-dead-so-their-spirits-can-rest-20090512-b1w9.html (accessed August 31, 2015).

[6] See e.g. Paul Turnbull and Michael Pickering, *The Long Way Home. The Meanings and Values of Repatriation* (New York: Berghahn Books, 2010); Paul Turnbull, "Scientific Theft of Remains in Colonial Australia," *Australian Indigenous Law Review* 11, no.1 (2007): 92–182; Turnbull, "Ancestors, not Specimens"; Fforde, *Collecting the Dead*; Cressida Fforde, Jane Hubert, and Paul Turnbull, *The Dead and Their Possessions. Repatriation in Principle, Policy and Practice* (London: Routledge, 2002); Claes Hallgren, "Eric Mjöberg and the Rhetorics of Human Remains," in Turnbull and Pickering, *The Long Way Home*, 135–43.

[7] Turnbull, "Anthropology and Ancestral Remains," 124.

[8] Ibid., 205–6.

[9] Paul Turnbull, *Science, National Identity and Aboriginal Body Snatching in Nineteenth Century Australia* (London: Sir Robert Menzies Centre for Australian Studies, University of London, 1991), 14–15.

[10] Ibid. See also Turnbull, "Anthropology and Ancestral Remains," 205.

[11] Turnbull, *Aboriginal Body Snatching*, 14.

[12] Turnbull, "Anthropology and Ancestral Remains," 221.

[13] Ibid., 206.

this history, we must, therefore, "contextualize historically the aims, assumptions, and intellectual products of late-eighteenth- and nineteenth-century 'sciences of man'."[14]

Throughout the last three decades Turnbull and others, such as Cressida Fforde, have researched both the historical circumstances of scientific human remains appropriation and its ongoing implications in predominantly the British-Australian contexts. The physical and cultural characteristics of the Great Southern Continent's inhabitants became interesting to Europeans as soon as the British set foot on Australia's eastern shores. In 1770, accompanying James Cook on his first voyage (1768-1771) to the Pacific, Joseph Banks (1743-1820) was among the first to encounter Australian Aborigines.[15] Having developed a specific interest in questions of human diversity, "the most influential British naturalist between 1770 and 1820"[16] henceforth provided a group of prominent European anatomists with "a small but steady flow of Aboriginal heads ... and skeletons."[17] Among those who benefited from Banks's scientific ambitions and global networks were the Dutch anatomist and artist Peter Camper (1722-1789)[18] and the famous Göttingen professor for anatomy, Johann Friedrich Blumenbach (1752-1840). The latter received two Australian Aboriginal skulls in the 1790s for his "anthropological researches."[19]

While Blumenbach was among the first Europeans to acquire and utilise Australian Aboriginal skulls for the purposes of ordering human diversity, it appears the very first to obtain such anthropological "material" was John Hunter (1728-1793). Turnbull has drawn attention to a revealing complementary item depicted in a well-known portrait of the eminent British surgeon and anatomist – namely a sketchbook page delineating the skulls of a European and an Australian Aborigine, followed by those of a chimpanzee, a macaque monkey and, finally, a crocodile. Exactly when and how the Aboriginal skull

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[14] Ibid., 205–6. Similarly, Nancy Stepan has argued in the context of the history of nineteenth-century race science in Britain that "to understand the history of race science, we must explore that history and that coherence, and reconstruct the internal logic of scientific arguments about race as it appeared to scientists at the time." Nancy Stepan, *The Idea of Race in Science. Great Britain 1800-1960* (Oxford: MacMillan in assoc. w. St. Anthony's College, 1982), xivi.

[15] John Gascoigne, *Joseph Banks and the English Enlightenment: Useful Knowledge and Polite Culture* (Cambridge: Cambridge University Press, 1994).

[16] Paul Turnbull, "British Anatomists, Phrenologists and the Construction of the Aboriginal Race, c.1790-1830," *History Compass* 5, no. 1 (2006): 28.

[17] Ibid.

[18] Gascoigne, *Banks and English Enlightenment*, 148–49.

[19] Johann Friedrich Blumenbach to Joseph Banks, 1 May 1795 (Letter 903), in *The Correspondence of Johann Friedrich Blumenbach. Volume IV: 1791-1795 Letters 645–965* ed. Frank William Peter Dougherty (Göttingen: Norbert Klatt Verlag, 2012), 395.

was procured remains unclear; however, the portrait was finished a year after Australia's occupation by the British in 1788.[20] Hunter, too, had close associations with Joseph Banks[21] who supplied him, among other natural history items, with numerous non-European skulls.[22] In any case, as Turnbull has shown, the piece of art documents "the beginnings of nearly two centuries of scientific trafficking in Aboriginal skeletal remains and soft tissue."[23]

From his surviving publications little can be discerned about Hunter's views on human diversity,[24] although he clearly positioned the Aboriginal skull hierarchically between the European and the chimpanzee. However, rather than classifying human diversity, the Enlightenment surgeon appeared to have been primarily interested in the varying structures of animal body parts (including humans') according to his vitalist ideas about function and form in animate matter.[25] Nevertheless, collections of human skulls such as Hunter's and, indeed, his own work in medicine and comparative anatomy were later used by early nineteenth-century anthropological scientists for the investigation and classification of human diversity.[26] In this context, British anatomists and others who engaged in what was later known as physical anthropology continuously appropriated and utilised Aboriginal skeletal remains for their research and theorising.

Turnbull has extensively investigated the historical processes through which Australia's indigenous peoples were construed as representatives of (one of) the "lowest races" in British scientific (and popular) discourse.[27] In his numerous publications he

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[20] Turnbull, "Anthropology and Ancestral Remains," 204–5.

[21] Gascoigne, *Banks and English Enlightenment*, 144–45.

[22] Turnbull, "British Anatomists," 31, 33; Paul Turnbull, "Lecture Week 5 John Hunter," http://paulturnbull.org/?q=node/60 (accessed February 21, 2016).

[23] Turnbull, "Anthropology and Ancestral Remains," 205.

[24] Ibid., 204, 211–12.

[25] Ibid., 211.

[26] Gascoigne, *Banks and English Enlightenment*, 144–48.

[27] E.g. Turnbull, *Aboriginal Body Snatching*; Turnbull, "Anthropology and Ancestral Remains"; Turnbull, "British Anatomists"; Paul Turnbull, "'Outlawed Subjects': The Procurement and Scientific Uses of Australian Aboriginal Heads, ca. 1803–1835," *Eighteenth Century Life* 22, no.1 (1998): 156–71; Paul Turnbull, "The Vermillion Accord and the Significance of the History of the Scientific Procurement and Use of Indigenous Australian Bodily Remains," in Turnbull and Pickering, *The Long Way Home*, 117–34; Paul Turnbull, "To What Strange Uses: The Procurement and Use of Aboriginal Peoples' Bodies in Early Colonial Australia," *Voices* 4, no. 3 (1994): 5–20. His most recent works include "Anthropological Collecting and Frontier Violence in Colonial Queensland: A Response to 'The Blood and the Bone'," *Journal of Australian Colonial History* 17 (July 2015): 133-58; "Australian Museums, Aboriginal Skeletal Remains, and the Imagining of Human Evolutionary History, c.1860–1914," *Museum & Society* 13, no.1 (January 2015): 72–87 and "The Lives of the Indigenous Dead," Lecture given at the Morphomata Inter-

has emphasised, firstly, the appropriation of Australian Aboriginal human remains in the context of early colonial frontier violence,[28] including the robbing of Aboriginal gravesites.[29] Secondly, he has pointed to the intricately linked epistemological association of Australian Aboriginal physical features with unfavourable colonial narratives about their alleged savagery by anatomists and phrenologists.[30] Accordingly, during the first fifty years of Australia's colonisation, British anatomists "infus[ed] anatomical knowledge with colonial testimony of Aboriginal savagery."[31] They did so by using Australian Aboriginal human remains for the instruction of their medical students and concurrently relating anecdotal information on their provenance. In a domino effect, this new generation of medical students became anatomists, physicians and physical anthropologists who believed in – and continued to convey to students, the public and governments – the idea that Aboriginal body characteristics reflected and/or caused their alleged cultural, mental and moral inferiorities. Their research thus, in turn, continuously built on such racialising notions of Australian Aborigines.[32] Therefore, "scientific aspirations and colonial ambitions informed the evolution of craniometry"[33] in the British sphere.

Phrenologists were interested in human skulls suggesting that the shape of the skull indicated the powers of the mind. As Roger Cooper has stated, the founder of phrenology, Franz-Joseph Gall (1758-1828), "was the first to treat mental phenomena as well as the human passions ... as purely organic problems of neuro-anatomy and neurophysiology."[34] The Swiss physician compartmentalised the brain into distinct regions of mental and emotional powers, maintaining that the brain's casing developed its shape according to its cerebral structure. Thus, phrenologists thought, by "reading"[35] the surface of a

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national Centre for Advanced Studies – Genesis, Dynamics and Mediality of Cultural Figurations – at the University of Cologne on 6 July 2015, http://www.researchgate.net/publication/281068635_The_Lives_of_the_Indigenous_Dead (accessed November 20, 2015).

[28] See also Turnbull, *Aboriginal Body Snatching*; Turnbull, "To What Strange Uses," 12; Turnbull, "British Anatomists," passim.

[29] Turnbull, "British Anatomists," 33.

[30] Turnbull, "'Outlawed Subjects'," 165–68.

[31] Turnbull, "British Anatomists," 38.

[32] Ibid., 39; Turnbull, "'Outlawed Subjects'," 164; Turnbull, "Vermillion Accord," 125.

[33] Turnbull, "'Outlawed Subjects'," 164.

[34] Roger Cooter, *The Cultural Meaning of Popular Science: Phrenology and the Organization of Consent in Nineteenth-Century Britain* (New York: Cambridge University Press, 1984), 3.

[35] Turnbull, "'Outlawed Subjects'," 166.

skull they were able to gain knowledge about its bearer's characteristic mental, emotional and ultimately moral capacities.[36] As Turnbull has emphasised, although phrenology was designed to elucidate the mental capacities of an individual's brain, its practitioners essentially regarded "cranial specimens of the 'savage races' of mankind ... as exemplifying with particular clarity"[37] some allegedly inferior mental capacities in human brains in general. Thereby, phrenologists significantly contributed to the enduring belief that Australian Aborigines were fundamentally less intelligent and/or less morally refined than Europeans. Here, too, based on colonial narratives of Australian "native" savagery, Aboriginal skulls seemingly explained and thus exemplified what their phrenologically inclined interpreters determined as inferior forehead shapes in general.[38]

Anatomists, in turn – despite their contention regarding phrenological methodology – took up this correlation between "fleeting" or "receding" foreheads and the ominous assumption of less usable or less functional brain tissue at the front of the skull – not only in Britain but, as I shall show in this thesis, also in Germany. As Turnbull has concluded, the skulls of Australian Aborigines were seen "as illuminating the physical basis of [their alleged] intellectual and cultural degradation."[39] Their skeletal remains thereby "gave cognitive strength to a range of assumptions about the physiology and mentality of Aboriginal people,"[40] for example, that Australia's harsh environment had caused its inhabitants to degenerate physically and intellectually,[41] whereas Europeans were seen to have progressed to higher civilisation due to their favourable environment. Such inferiorising claims seemingly legitimised the appropriation of their land and, in some cases, the persuasion that Australian Aborigines were by nature incapable of civilisation, rather than disinclined to submit to the colonisers' governments.[42]

As Patrick Brantlinger has shown, already late-Enlightenment naturalists linked hierarchical notions of racial diversity with those of different capacities for civilisation and progress, implying that "primitive races" were the result of degeneration. Hence they could never achieve the culture of allegedly higher standing races or had become

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[36] Cooter, *Cultural Meaning Popular Science*, 3; Turnbull, "British Anatomists," 3; Turnbull, "To What Strange Uses," 11.

[37] Turnbull, "British Anatomists," 39.

[38] Ibid., 39–42; Turnbull, "To What Strange Uses," 11–12.

[39] Turnbull, "British Anatomists," 43.

[40] Turnbull, "To What Strange Uses," 16.

[41] Turnbull, "'Outlawed Subjects'," 163.

[42] Turnbull, "To What Strange Uses," 17; Turnbull, "'Outlawed Subjects'," 157, 164.

obsolete once the white race had emerged as the perfect human race.[43] Animal species extinction was deemed possible following the discovery of geological fossil evidence; additionally, the archaeological cultural record in Europe and elsewhere suggested ancient, more primitive human societies had similarly vanished.[44] In this pre-Darwinian context, Australian Aborigines frequently represented a remnant prehistoric race that must eventually dwindle away through the advent of the higher standing, civilised race of its colonisers – as had Europe's ancient tribes.

Until the1860s, few Aboriginal skeletal remains were brought to British metropolitan collections for phrenological and anatomical investigation.[45] Turnbull has cited a variety of ethical and practical inhibitions at work in Britain and its colonies that prevented anatomists from obtaining the number of Aboriginal skulls they demanded – ranging from religious qualms, respect for Aboriginal customs and dependency on Aboriginal labour to indigenous mortuary practices that rendered the remains useless for scientific purposes. Turnbull has also highlighted the efficacy of Aboriginal resistance, which made the appropriation of their ancestral remains a dangerous undertaking.[46]

From the 1860s on, the debate and acceptance of Darwinian evolutionary theory[47] coincided with a change of circumstances in Britain and its Australian colonies, whose relevant scientific communities became more stringently organised in their objectives, methodologies and associations.[48] According to Turnbull, "by the early 1880s, there was a complex scientific discourse in operation, centred on the Aboriginal body [which was] generated and sustained by a variety of scientific and cultural factors."[49] As a result, the "Darwinian-inspired"[50] approach to "the central problem of science"[51] at the time – human specification and diversification[52] – inextricably linked the already existing notions of Aboriginal savagery and degeneracy with claims that Australia's indigenous peoples

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[43] Patrick Brantlinger, *Dark Vanishings: Discourse on the Extinction of Primitive Races, 1800-1930* (Ithaka: Cornell University Press, 2003), 19.

[44] Ibid., 26.

[45] Turnbull, "To What Strange Uses," 5.

[46] Ibid., 13–16; Turnbull, "Ancestors, not Specimens," 8–11; Turnbull, "'Outlawed Subjects'," 168–69.

[47] Turnbull, *Aboriginal Body Snatching*, 3; Turnbull, "To What Strange Uses," 18.

[48] Turnbull, "To What Strange Uses," 18; Turnbull, "Ancestors, not Specimens," 7.

[49] Turnbull, *Aboriginal Body Snatching*, 3.

[50] Turnbull, "To What Strange Uses," 18.

[51] Turnbull, *Aboriginal Body Snatching*, 3.

[52] Peter J. Bowler, *Theories of Human Evolution: A Century of Debate, 1844–1944* (Baltimore: John Hopkins University Press, 1986), 4, 5.

carried pre-human or animal traits and lived in non-cultural, uncivilised states of existence. Accordingly, Australian Aborigines were regarded as (still) living remnants of ancient human biological evolutionary stages long surpassed by Europeans – or even as pre-human. Representing the missing link between the human and a variety of ape species, their living bodies and skeletal remains potentially became even more desirable scientific evidence for the occurrence of physiological and morphological atavisms. As a result, existing notions of Aboriginal degeneracy were additionally interpreted as signs for natural, biological and evolutionary unfitness in the proclaimed struggle for existence among the different human races – to the extent that Australian Aborigines were expected to inevitably become extinct.[53]

The trope of the natural extinction of "savages" predated Darwinist trajectories of racial struggles of existence, namely in the early scientific discourses of natural history, Malthusian economics and cultural anthropology – all of which inspired Darwin to develop his theory of evolution.[54] In the second half of the nineteenth century, the anticipated extinction of Australian Aborigines generated urgency in European human sciences to secure their skeletal remains, magnified by a change in methodology which required statistically usable, that is high numbers, of anthropological material as evidence for humanity's evolutionary trajectory.[55] The declared common good of science now overruled previously existent ethical and legal qualms in both the British scientific metropoles and Australia's settler society.[56] It generated scientific and commercialised global networks of human remains collecting and exchanging that far outstretched those of Banks and his late-Enlightenment era protégées, filling the filing and exhibition cabinets in British and other European anthropological institutions.

As the above contextualising summary demonstrates, the science-instigated appropriation and utilisation of Australian Aboriginal human remains in the British sphere has been investigated throughout the last three decades. In the German-Australian context, however, the issue has not been comprehensively researched, largely because of the limited English-language sources by and about German anthropologists. In 1997, the Australian Consulate contacted a number of German university departments and

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[53] Turnbull, "Ancestors, not Specimens," 4, 7.

[54] Brantlinger, *Dark Vanishings*, Chapter 2.

[55] Turnbull, *Aboriginal Body Snatching*, 3; Turnbull, "To What Strange Uses," 8, 18–19; Turnbull, "Ancestors, not Specimens," 7.

[56] Turnbull, "Ancestors, not Specimens," 8.

museums about Australian Aboriginal human remains.[57] It took another decade before the issue was put on a more visible agenda; notably in 2007 when the Australian Government requested their return from German collections.[58] In the following year, the Charité in Berlin signed an agreement for the return of Australian Aboriginal skulls to their traditional owners.[59] As the successor institution of the former Berlin universities' anatomical institutes, the Charité unwittingly inherited their physical anthropological collections, including their highly problematic Australian Aboriginal contents.[60] It took several years of negotiations and research into their provenance before it handed them over to the relevant representatives of indigenous communities in April 2013 and July 2014.[61] Whereas the Charité is the first German institution to have returned Australian Aboriginal ancestral remains, provenance research and/or repatriation negotiations are meanwhile considered by a number of German institutions.[62] The Freiburg University's Department of Anthropology, for example, has researched the history and contents of the Alexander Ecker collection, today located in the university's archives. These investigations aimed at establishing the collection's acquisition contexts and the provenance of its contents in order to determine its scientific value and to address potential repatriation requests, including those for Australian Aboriginal skeletal remains.[63] Similarly,

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[57] Britta Lange and Julia Voss, "Unter Tieren," *Frankfurter Allgemeine Zeitung*, March 3, 2007.

[58] Heinrich Wefing, "Entweihte Gebeine, Die Aborigines wollen ihre Vorfahren zurück – aus deutschen Museen," *Frankfurter Allgemeine Zeitung*, March 3, 2007; Claudia Renk, "Australien will Gebeine der Ureinwohner zurückholen," *Badische Zeitung*, March 20, 2007.

[59] Charité Universitätsmedizin Berlin, "Charité will Aborigine-Schädel zurückführen," news release, November 11, 2008, http://www.charite.de/charite/presse/pressemitteilungen/artikel/ detail/charite_will_aborigine_schaedel_zurueckfuehren/ (accessed August 26, 2015).

[60] Andreas Winkelmann, "Die Anatomische Sammlung der Berliner Universität und ihre anthropologischen Bestände," in *Sammeln, Erforschen, Zurückgeben? Menschliche Gebeine aus der Kolonialzeit in akademischen und musealen Sammlungen,* ed. Holger Stoecker, Thomas Schnalke and Andreas Winkelmann (Berlin: Christoph Links Verlag, 2013), 70.

[61] Charité Universitätsmedizin Berlin, "Charité gibt Gebeine an indigene Gemeinschaften Australiens zurück," news release, April 26, 2013, http://www.charite.de/charite/presse/ pressemitteilungen/artikel/detail/charite_gibt_gebeine_an_indigene_gemeinschaften_australiens_zurueck/ (accessed August 26, 2015); Louise Gorman, "Homecoming tinged with pride and sadness," *The Weekend Australian* April 27-28, 2013; Charité Universitätsmedizin Berlin, "Menschliche Gebeine kehren nach Australien zurück," news release, July 14, 2014, http://www.charite.de/charite/presse/ pressemitteilungen/artikel/detail/menschliche_gebeine_kehren_nach_australien_zurueck/ (accessed August 26, 2015).

[62] Hilary Howes, "Germany's Engagement with the Repatriation Issue," in *The Routledge Companion to Repatriation: Return, Reconcile, Renew*, ed. Cressida Fforde, Tim McKeown, and Honor Keeler (forthcoming). My sincere thanks go to Hilary Howes who has permitted me to use her mansucript of this forthcoming publication.

[63] Mareen Kästner, Simone Ortolf, Alexandra Rüdell, Daniel Möller and Ursula Wittwer-Backofen, "The Alexander Ecker Collection in Freiburg," *Documenta Archaebiologiae* 8 (2011): 275–84. See also Daniel Möller, *Die Geschichte der Anthropologischen Sammlung Freiburg. Entstehung, Zusammenführung, Verlust* (Marburg: Tectum Verlag, 2015), 236; Georg Etscheit, "Makabres Erbe," *Süddeutsche Zeitung*, April 11, 2009.

the Department of Anatomy and Cell Biology at the University of Halle and the Landesmuseum Hannover have announced to be prepared for the return of the Australian Aboriginal skeletal remains in their collections.[64]

This recent readiness to engage with the historical circumstances in which these human remains were acquired has only slowly developed during the last decade. When I started my research in 2007, German institutions had not yet begun to address the potentially problematic nature of their anthropological collections. I began my investigation by contacting German institutions that potentially held Australian Aboriginal skeletal remains, based on the collection inventories compiled and published in the *Archiv für Anthropologie* between 1877 and 1902. My enquiries concerned any sort of documentation that might have survived and from which information about the collection and utilisation of Australian Aboriginal human remains in Germany might be derived. At the time, however, access to the document archives of many institutions currently or formerly holding anthropological collections was difficult, in most cases even impossible.[65] I have therefore limited my sources for this thesis to published material and focussed my research to the development of scientific notions of Australian Aborigines throughout the long nineteenth century, the intellectual history of German physical anthropology, and its dealings with Australian Aboriginal skeletal remains.

From the scientific literature produced on the basis of the investigation of Australian Aboriginal human remains during the long nineteenth century, I conjecture that German physical anthropologists obtained around 200 to 250 of such "anthropological specimens". This number includes Hermann Klaatsch's proportionally large conglomerate of Australian Aboriginal skulls and skeletal remains, which he probably brought to Breslau in 1904, then still belonging to Germany.[66] It is difficult to ascertain how many of these are still held in the filing cabinets of current and former physical anthropologi-

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[64] Peter Godazgar, "Auf der Suche nach Skeletten aus Australien," *Mitteldeutsche Zeitung* October 26, 2012; Dirk Altwig, "Landesmuseum: Kopflos zurück in die Heimat," *Neue Presse*, September 18, 2016 http://t.neuepresse.de/Hannover/Meine-Stadt/Landesmuseum-Kopflos-zurueck-in-die-Heimat (accessed February 26, 2017).

[65] The reasons given ranged from a lack of staff, time and/or order in the archives to articulations of one or another affiliated researcher's personal interests in the topic, to attempts at redirecting my interests to other, less contentious matters, to no reasons at all.

[66] Hermann Klaatsch, "Ergebnisse meiner australischen Reise," *Korrespondenzblatt der Deutschen Gesellschaft für Anthropologie, Ethnologie und Urgeschichte* 38, nos. 9/12 (September/December 1907): 80; Andreas Winkelmann and Barbara Teßmann, "'... und gewinne die Leiche' – Zur Geschichte eines australischen Skeletts in der Berliner Anatomischen Sammlung," in Stoecker, Schnalke and Winkelmann, *Sammeln, Forschen, Zurückgeben*, 188n9.

cal institutions in Germany. This would require systematic searches. The main reason for their very inclusion and lingering existence in specimen drawers lies in the racialising and dehumanising notions of Indigenous Australians which European, including German, anthropologists formed and continuously perpetuated.

As John J. Cove has pointed out in his work on the scientific appropriation and political utilisation of Tasmanian Aboriginal skeletal remains, "science is first and foremost a human activity with associated ethical responsibilities."[67] There are a number of practical reasons for the slow progress in the repatriation of Australian Aboriginal ancestral remains from Germany, such as the lack of resources and difficulties to undertake provenance research in anthropological collections.[68] Another significant reason, I believe, lies in the challenge that confronting these ethical responsibilities initially presented for collection curators. Especially among the older generation of curators, a reluctance to investigate the historic, intrinsically racist context of the original appropriation of Aboriginal human remains was palpable during my enquiries – partly due to the fact that often the very founding personnel of their institutions were inevitably and actively involved in these activities.[69] Except for the Berlin Charité, which has finally been prompted to engage with its institutional forebears' history by the Australian repatriation demands, research into German physical anthropologists and their human remains acquisition practices and theorising in the context of former colonialism has just begun, initiated by the demand for repatriation.

While I shall not engage in the practical, theoretical or legal questions of human remains repatriation in this thesis, I contend with Turnbull that comprehending and accepting the historic context of the issue is one of the pivotal prerequisites to resolving the problem in an ethical way rather than being part of it. In Germany, as elsewhere in Europe, Australian Aboriginal human remains were obtained under unacceptable circumstances – not only by today's ethical standards but also according to contemporaneous moral, and in many cases legal, norms. In Germany too, the unscrupulous practices of the "collecting" of these indigenous ancestral remains were framed by scientifically

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[67] John Cove, *What the Bones Say: Tasmanian Aborigines, Science and Dominion*. (Carleton: Carleton University Press, 1995), ix.

[68] See e.g. Winkelmann, "Anatomische Sammlung Berliner Universität," 81.

[69] For example the former Rudolf Virchow collection at the Berliner Gesellschaft für Anthropologie, Ethnologie und Urgeschichte, see Hilary Howes, *Provenance Report. Society for Anthropology, Ethnology and Prehistory (BSAEP), Berlin, Germany, April-August 2016.* Compiled for the Australian German Association Inc. Submitted 15 November 2016.

allegedly legitimised and co-produced ideas about Australian Aborigines as a so-called lower, or even the lowest, race of humanity – underscored or seemingly proven by their skeletal and cranial features. Only if the historic fact is recognised that they were used in a racialising, dehumanising and inferiorising way, can it be attempted to genuinely right these wrongs.[70]

In this thesis I therefore take up Turnbull's proposal to engage with the intellectual history of racial thought and of theories of human evolution in the context of German physical anthropological investigations of Australian Aboriginal human remains. Based on natural scientific publications about the physical nature of Australian Aborigines, I investigate the scientific discourse on the *Neuholländer*, *Australneger* or *Australier* during the long nineteenth century among German naturalists and physical anthropologists. I examine the scientifically framed theories about race and human evolution that German anthropologists sought to develop, justify or reject by their investigations of Australian Aboriginal bones and skulls. This thesis therefore links and adds to the scholarship of several tightly entangled areas of historical investigation; namely, the intellectual histories of racial thought, scientific racism and theories of human evolution, the historiography of German physical anthropology (or *Anthropologie*) and the scholarship on the scientific appropriation and utilisation of Australian Aboriginal skeletal remains.

Chapter Overview

While the acquisition and investigation of Australian Aboriginal body parts by German anthropologists has to date scarcely been the objective of detailed historical research, there exists a considerable body of research on the history of physical anthropology in general. In *Chapter 1* I elaborate on the historiography of the German anthropological disciplines. In short, post-World War Two historians of German physical anthropology equated late-nineteenth-century physical anthropologists with Social Darwinism, arguing the entire discipline inherently generated the Nazi genocides. Since the 1980s, this approach has been criticised as over-simplistic and emphasis has been placed on the humanist-liberal tradition in German anthropology. This view has recently culminated in the declaration of an anti-Darwinian, and thus non-racist, "liberal paradigm" dominating the German anthropological disciplines of the late nineteenth century. Contrary to this approach Andrew Zimmerman has argued that German *Anthropologie* was estab-

[70] For the British and Australian contexts see Turnbull, "Ancestors, not Specimens" and Turnbull, "Anthropology and Ancestral Remains," 205.

lished as a decidedly "antihumanist" discipline that was inherently racist despite its liberal roots and anti-Darwinian stance.[71]

In summary, the existing scholarship can roughly be divided into two interpretational approaches to the question of continuity of or transition to racist ideologies in the German anthropological disciplines. This debate has informed my research insofar as it has provided a set of testing hypotheses for my own findings about German anthropologists' dealings with Australian Aboriginal human remains. My research has led me to argue with Zimmerman – in opposition to the claim of a non- or anti-racist "liberal paradigm" in early German anthropology – that the German physical anthropological research agenda, despite its predominantly non- or anti-Darwinian position, from the start operated within the pre-existent paradigm of the hierarchical racialisation of humanity, and of Australian Aborigines in particular.

To a degree these pre-existing notions represented reiterations of the knowledge production of their British counterparts. Further, European ideas about the nature and origin of Australian Aborigines were devised on the basis of earlier "constructions" or "inventions of race" as a concept to describe, differentiate and evaluate human diversity. In *Chapter 2*, reaching back in time from late-nineteenth-century *Anthropologie,* I therefore review pre-scientific and scientific concepts of race and human development, which were developed in Europe during the Enlightenment period. I first review the beginnings of race categorising by Francois Bernier, Carolus Linnaeus and Georges-Louis Leclerc Comte de Buffon. My main focus in this chapter, however, is on the great German philosopher Immanuel Kant's race theorising, because of its significance for the "invention" of the scientific concept of race. Within this framework, I investigate those naturalists' and philosophers' notions of Australian Aborigines, which persisted into the nineteenth century and thereby implicitly informed later physical anthropological investigations of their human remains.

Chapter 3 analyses Blumenbach's ideas about the characteristics and nature of Australia's indigenous peoples which he derived from, first, his readings of travel literature about New Holland and, then, his description and classification of his two *Neuholländer* skulls. I focus on a comparison of the three editions of his most famous

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[71] Andrew Zimmerman, "Adventures in the Skin Trade: German Anthropology and Colonial Corporeality," in *Worldly Provincialism: German Anthropology in the Age of Empire*, ed. Henry Glenn Penny and Matti Bunzl (Ann Arbor: University of Michigan Press, 2003), 156–78.

work *De Generis Humani Varietate Nativa*, his collection catalogue descriptions of the two skulls in his *Decas craniorium* and a number of his general publications on humanity. Due to his monogenist conviction and his emphasis on the transitional nature of human differences, he has acquired a reputation among historians that he was cautious in his racial distinctions and evaluations. Despite this moderateness, I shall argue that Blumenbach classified Australian Aborigines in part on the basis of deprecatory information about the "savage" nature of the *Neuholländer* from travel accounts, conflating this with his skull descriptions.

Whereas Blumenbach's categorisation of humanity into five human races in its essence has survived to this day, his craniological approach to racial classification was only taken up again by German practitioners of physical anthropology in the second half of the nineteenth century. In *Chapter 4*, I first examine the physical anthropological papers presented during roughly the first half of the nineteenth century at the only German naturalists' association at the time, the Gesellschaft Deutscher Naturforscher und Ärzte (German Naturalists Association). On that basis, I analyse how German naturalists perceived and contextualised the *Australier* or *Neuholländer* in terms of race. I also explore, with a specific focus on their reference to Australia's indigenous inhabitants, the debates about human animal descent at the association's meetings before and after the publication of Charles Darwin's theory of evolution. In this context, I briefly recapitulate the history of the establishment of *Anthropologie* as a scientific research discipline during the second half of the nineteenth century in Germany, which developed from the organisational structures of the German Naturalists Association during the 1860s.

The systematic appropriation and physical anthropological investigation of Australian Aboriginal human remains began in Germany only in the early 1860s, coinciding with the debate about human evolution in the wake of Charles Darwin's publication of *The Origin of Species*. In *Chapters 5,6 and 7* I turn to the investigations of Australian Aboriginal skeletal remains by the early German physical anthropologists, Alexander Ecker, Gustav Lucae and Rudolf Virchow, all of whom to differing degrees dedicated their physical anthropological and anatomical work to the refutation of Darwinian evolutionary theory. I shall show that they built on an existing body of knowledge about Australian Aborigines' perceived low status. I examine these investigations also with a view to the historiographical debate on the question whether *Anthropologie* in its begin-

ning was non- or anti-racist because its liberal practitioners were anti- or at least non-Darwinians. I argue that, in spite of their anti-Darwinism, they operated within the paradigm of race hierarchisation and evaluation and can thus not be regarded as non-racist.

Chapter 8 then deals with the outspoken Darwinist Hermann Klaatsch as an example for the German Darwinist approach to the measurement and interpretation of Australian Aboriginal skeletal remains. Klaatsch travelled to Australia just after the turn of the century in search of humanity's "Australoid root", investigating Aboriginal skeletal remains as signifiers for human or pre-human evolutionary stages.

Comments on Terminology

Finally, it is appropriate, even necessary, to address the problem of terminology when writing about the history of racial thought. As my research is based on historical physical anthropological literature, the readers (as much as the writer) are inevitably confronted with the derogative terminology of race and racism. It is thus necessary, as Bronwen Douglas and Chris Ballard have termed it, to consider "the moral perils of writing on an issue as fraught as race and the necessity to navigate scrupulously between the opposed temptations of excessive outrage or of desensitization to the revolting language of much raciological discourse."[72] I have largely attempted to follow their strategy of critiquing racialising language by putting it into its historical and epistemological context.[73] I have in this introduction placed terms such as "lower races" or "savage" in scare quotes. However, I shall omit these markers of critique in the remainder of this thesis – firstly, for reasons of readability, and secondly, in the hope that my wording and argument unmistakably demonstrate my objection to racialising practises, language and thought. Following Wulf D. Hund's sociologically argued racism analysis, I understand "race" as the "social construction of natural inequality"[74] based on a conglomerate of culturalist and ideological inferiorisations of human social groups which are deemed different and therefore discriminated against and excluded from the dominant community. As Hund has argued "natural elements play a rather subordinate

[72] Bronwen Douglas and Chris Ballard, preface to *Foreign Bodies: Oceania and the Sciences of Race 1750–1940*, ed. Bronwen Douglas and Chris Ballard (Canberra: ANU Press, 2008), xiv.

[73] Ibid.

[74] Wulf D. Hund, *Rassismus. Die soziale Konstruktion natürlicher Ungleichheit* (Münster: Westfälisches Dampfboot, 1999), 11.

role"[75] in the process of racialising human groups, therefore "races are the result not the premise of racist argumentation."[76]

All translations from German, French and Latin sources are my own except where indicated. I acknowledge, however, that translation is always an act of interpretation – in particular in the context of the history of racial thought. For example, during the nineteenth century, German anthropologists used a variety of terms to denominate human groups such as *Volk*, *Nation* or *Rasse*, all of which I have predominantly translated with the English term "race" according to the context of their use. Similarly, I have translated terms denoting the human such as *Mensch/Menschen*, *Menschheit* or *menschlich* as "the human"/"humans", "humankind" and "human". This is not a mere choice of convenience but signposts my perspective on the historiographical debate about *Anthropologie*'s imminent racism. It underscores my contention that early liberal German physical anthropologists, despite their verbal criticism of *Rasse* as a distinct category and their alternative choice of terms such as *Völker* or *Nationen*, remained within the paradigm of the hierarchisation and racialisation of humanity.

With respect to German names of the academic disciplines under discussion, my use of the term *Anthropologie* exclusively refers to German physical anthropology, whereas *Ethnologie*/ethnology point to the general sphere of cultural anthropology. However, when I use the terms "anthropological sciences" or simply "anthropology" or "anthropological" I refer to both the ethnological/cultural and physical anthropological fields.[77]

I have not translated contemporaneous terms such as *Australier*, *Australneger* or *Neuholländer* because their use by various anthropologists often indicates their notion of Australian Aborigines as a race. *Australneger*, for example, mostly signifies the user's racial categorisation of Australian Aborigines as the same as or closely related to Africans, while the older Enlightenment term "New Hollander" lacks such obvious classificatory implication (it was, nevertheless, at times used for such purposes). In my own

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[75] Ibid., 9.

[76] Ibid., 10.

[77] For differentiation of the term "anthropology" in the Anglophone, German and European language spheres see e.g. Volker Schurig, "Konkurrierende Begründungen einer Sonderstellung der Anthropologie im System der Biowissenschaften," in *Physische Anthropologie – Biologie des Menschen,* ed. Michael Kaasch, Joachim Kaasch and Nicolaas A. Rupke (Berlin: Verlag für Wissenschaft und Bildung, 2007), 34–35.

analysis of these notions, however, I use terms such as Australian Aborigines, Australian Aboriginal communities or Australia's indigenous peoples or inhabitants.

Another of my "words of contention" concerns the language of "collecting" human remains. During the nineteenth century, "anthropological material" was frequently regarded as just another natural history item, acquired by amateurs and professional collectors alike. In 1871, for example, the professional plant collector Henry Hammersley Travers (1844-1928), from Wellington in New Zealand, offered Moriori and Maori skeletons and skulls alongside the skins, eggs and skeletons of birds to the Berlin Ethnological Museum.[78] By the end of the century, however, physical anthropologists were aware that these human "collectibles" had a different status. Felix von Luschan (1854-1924), the curator of the African-Oceanic department of the Berlin Ethnological Museum, posted serial letters to Germans in the German and non-German colonial sphere, asking for the acquisition of indigenous skeletal remains. In these letters he frequently cautioned potential collectors to avoid upsetting the locals whose skeletal remains were obtained. Anja Laukötter has argued that this was predominantly to ensure a smooth operation while excavating human remains, thus more of a pragmatic than an ethical concern.[79] However, as Dag Henrichsen has shown, in his paper about the Swiss botanist Hans Schinz's anthropological collecting practices in Namibia in 1885, collectors were well aware of the precarious ethics of anthropological collecting in Germany as well as the indigenous communities' strong objection to the appropriation of their ancestors' remains.[80] Similarly, in 1905 von Luschan wrote to the German government doctor in the Caroline Islands "not to hurt the natives' justified feelings."[81] This shows that there was a clear understanding that grave robbing and the desecration of indigenous human remains presented unethical behaviour. The classification of these skeletal re-

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[78] Henry Travers to Adolf Bastian, 10 June 1871, *Acta betreffend die Erwerbung ethnologischer Gegenstände aus Australien Vol 1. Vom 1. Oktober 1845 bis zum Dezember 1876 Pars IB* (SMB-PK, EM 696/71).

[79] Anja Laukötter, "Die 'Sammelwut' der Anthropologen," in Stoecker, Schnalke and Winkelmann, *Sammeln, Erforschen, Zurückgeben*, 31–32.

[80] Dag Henrichsen, "Die 'Skelettaffaire' und andere 'Geheimnisse' – Sammlungsstrategien, Grenzüberschreitungen und Wissenskonzeptionen des Zürcher Botanikers Hans Schinz," in Stoecker, Schnalke and Winkelmann, *Sammeln, Erforschen, Zurückgeben*, 124–6.

[81] Felix von Luschan to Max Girschner, 17 July 1905, *Acta betreffend die Erwerbung ethnologischer Gegenstände aus Australien Vol 17. Vom 1. Juni 1905–31. März 1906 Pars IB* (SMB-PK, EM 1318/05) ("Sollte es Ihnen also möglich sein, uns, ohne die berechtigten Gefühle der Eingeborenen zu verletzen, eine möglichst grosse Serie von Schädeln und wenn es angeht, auch einige Skelette zu verschaffen, so würden wir Ihnen zu grossem Danke verpflichtet sein").

mains as scientific evidence, however, overrode such qualms, rendering them into collectable data.

This tension still reverberates in Germany today in relation to the repatriation issues, as institutions holding contentious bones and skulls attempt to determine the *Unrechtskontext* or "context of injustice" that led to their initial acquisition.[82] It can be said with a high degree of certainty that most Australian Aboriginal human remains in German and other European anthropological institutions were acquired without the consent of the deceased or their descendants – predominantly through the means of grave plunder. Even if settlers incidentally discovered skeletal remains and offered them to scientists or scientific institutions, everyone involved was aware that their taking would have met with resistance by their traditional owners. An analysis of the ways in which Australian Aboriginal skeletal remains were obtained and used for racialising anthropological research (namely grave plunder and other forms of desecration) needs to acknowledge the unethical contexts of their acquisition. Using the term "collecting" when writing today about these circumstances (and describing the scientists involved in them as "collectors") continues to legitimatise these circumstances.[83] I therefore refer to "appropriation" rather than using the more innocent term "collecting".

[82] See the chapters on "Restitution" in Stoecker, Schnalke and Winkelmann, *Sammeln, Erforschen, Zurückgeben*, esp. Wiebke Ahrndt, "Zum Umgang mit menschlichen Überresten in deutschen Museen und Sammlungen – Empfehlungen des deutschen Museumsbundes," 314–22 and Anne Wesche, "Im Zweifelsfall als Einzelfall – Überblick zu vorhandenen Empfehlungen für den Umgang mit menschlichen Überresten vor dem Hintergrund zunehmend gestellter Rückgabeforderungen," 339–52.

[83] See also Wulf D. Hund, review of *Sammeln, Erforschen, Zurückgeben? Menschliche Gebeine aus der Kolonialzeit in akademischen und musealen Sammlungen*, by Holger Stoecker, Thomas Schnalke, Andreas Winkelmann, eds., *Archiv für Sozialgeschichte* 55, 2015, http://www.fes.de/cgi-bin/afs.cgi?id=81622 (accessed February 28, 2017).

1 Historiography of nineteenth-century *Anthropologie*

In contrast to the Australian and British contexts, the appropriation of Australian Aboriginal human remains and its underlying racialising rationale have to date not been investigated comprehensively in the German setting.[1] It will become evident throughout this thesis that German physical anthropologists in general shared their British and Australian counterparts' basic assumptions about Australian Aboriginal bodies and minds. Accordingly, they were generally convinced of their intellectual and/or physical inferiority. Most also believed Australian Aborigines would vanish in the more or less near future, adding to a feeling of urgency to acquire their skeletal remains. There are, however, a number of historical differences in the national histories of physical anthropology: in particular, in Germany, the scientific interest in Australian Aboriginal remains became most prominent in the 1860s, coinciding with both the establishment of the discipline as a field of research in its own right and the debate concerning Darwinian evolutionary theory. German physical anthropologists were also far more reluctant than their British counterparts to accept Darwin's ideas. After *Origin of Species* was translated to German in 1860, Ernst Haeckel (1834-1919) was the first to apply the theory of common descent to the human species and popularise the idea of humanity's genetic relation to apes. The majority of the first generation of German anthropologists, however, rejected Darwinism based on a number of grounds. Most importantly, they criticised Darwin's methodology as deductive and, thus, his theory's hypothetical character. And

[1] The only exception to date are a number of chapters in Holger Stoecker, Thomas Schnalke and Andreas Winkelmann, eds., *Sammeln, Erforschen, Zurückgeben? Menschliche Gebeine aus der Kolonialzeit in akademischen und musealen Sammlungen* (Berlin: Christoph Links Verlag, 2013): Daniel Möller, "Die Alexander-Ecker-Sammlung in Freiburg," (pp. 106–20, Möller fleetingly engages with the Australian Aboriginal remains in Alexander Ecker's collection in Freiburg i. Br. to which I shall return in Chapter 5 of this thesis. Möller uses them as "case study for anthropological collecting" but does not engage in detail with the content of Ecker's investigations); Birgit Scheps, "Skelette aus Queensland – Die Sammlerin Amalie Dietrich," (pp. 130–45); Andreas Winkelmann and Barbara Teßmann, "'... und gewinne die Leiche' – Zur Geschichte eines australischen Skeletts in der Berliner Anatomischen Sammlung," (pp. 184–98) and in some aspects Maria Teschler-Nicola, "Das forMuse-Projekt und die Beforschung und Restitution überseeischer menschlicher Skelettreste in Wiener Sammlungen," (pp. 259–89).

they outright rejected and often ridiculed the idea of human-animal descent, "refer[ing] to Darwinism derisively as the 'monkey doctrine' (*Affentheorie*)."[2]

The interpretation of this historic fact presents a major point of controversy among historians of German physical anthropology. The debate provides the analytical frame of reference for my own research exactly because the dispute over human evolution and diversity was fought at the same time as the skeletal remains of Australian Aborigines became interesting (and more available) to German physical anthropologists. In order to situate and evaluate their racial theorising in the ensuing chapters, I shall therefore in the first part of this chapter recapitulate the lines of argument for a "liberal paradigm" and "antihumanism" in the historiographical debate about German physical anthropology. I shall first review, by example of Georg Stein's work, American post-World War Two scholarship about German physical anthropology that generated a teleological narrative of a racist determinism which inevitably led to the genocides committed by Nazi Germany. I shall then explain how more recent scholars such as Benoit Massin and Andrew D. Evans have challenged this narrative and established the currently dominant view, arguing for the predominance of intrinsically humanist, liberal and non-racist roots of German anthropology. Andrew Zimmerman, in turn, has disputed this claim, arguing that German anthropology was decidedly "antihumanist" in its social and scientific practice and theory but that this did not make it non-racist.

1.1 *Anthropologie*'s "Liberal Paradigm"

From Haeckel to Hitler determinism

The historiographical analysis of nineteenth-century anthropology has traditionally dealt with the national contexts of colonial anthropologies.[3] Partly due to the late emergence of a German colonial empire and the long tradition of the other empires' colonialisms with their implications for anthropological research, "Germans … have largely been left out of the story."[4] Whereas a considerable body of work has been undertaken relating to the entanglement of cultural anthropology with German colonialism in Africa and the

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[2] Andrew Zimmerman, *Anthropology and Antihumanism in Imperial Germany* (Chicago: University of Chicago Press, 2001), 68.

[3] Henry Glenn Penny and Matti Bunzl, "Introduction: Rethinking German Anthropology, Colonialism, and Race," in *Worldly Provincialism: German Anthropology in the Age of Empire*, ed. Henry Glenn Penny and Matti Bunzl (Ann Arbor: University of Michigan Press, 2003), 3.

[4] Ibid., 4.

Pacific, this scholarship rarely concerns physical anthropology; nor does it extend to the involvement of German anthropologists in the non-German colonial sphere such as Australia. Late-nineteenth-century German physical anthropology, however, has been the object of historiographical analysis in the context of its significance for Nazi *Rassenkunde* in the 1930s and 40s.

Until the 1980s, historians approached the history of German physical anthropology predominantly "looking backward from the Nazi Holocaust."[5] As a result, German nineteenth-century physical anthropology has been perceived predominantly as a pivotal step in a deterministic trajectory to Nazi Germany's genocidal policies. The most prominent proponent of a direct link between the populariser of Darwinism in Germany, Ernst Haeckel, and Adolf Hitler is Daniel Gasman. In his 1971 publication *The Scientific Origins of National Socialism* (reprinted in 2004 and 2007), the controversial historian has argued that Haeckel's monism was the ideological precursor and origin to National Socialist Aryanist, eugenicist and exterminatory antisemitic policies. This view, however, has been (and still is) contentious – current anti-Darwinian creationists have, for example, appropriated Gasman's argument.[6]

Another example of the claim for German physical anthropology's racist continuity is George J. Stein who, in 1988, argued for the "Roots of Nazism" in Haeckelian biological sciences. He has compared Hitler's and Haeckel's Social Darwinisms, proclaiming "that almost every element of Nazi biopolicy was already well established in the German political culture in both a vulgar, man-in-the-street sense and, more importantly,

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[5] Benoit Massin, "From Virchow to Fischer. Physical Anthropology and 'Modern Race Theories' in Wilhelmine Germany," in *Volksgeist as Method and Ethic: Essays on Boasian Ethnography and the German Anthropological Tradition*, ed. George W. Stocking (Madison, Wisconsin: University of Wisconsin Press, 1996), 79.

[6] Daniel Gasman, *The Scientific Origins of National Socialism: Social Darwinism in Ernst Haeckel and the German Monist League* (London: Macdonald, 1971). For the debate between Peter J. Bowler and Robert J. Richards and Daniel Gasman on the possible link between Darwinian/Haeckelian theory and Nazi race ideology and policies see Peter J. Bowler, "The Eclipse of Pseudo-Darwinism? Reflections on Some Recent Developments in Darwin Studies," *History of Science* 47, no. 158 (Dec 2009): 431–43; Robert J. Richards, *The Tragic Sense of Life. Ernst Haeckel and the Struggle over Evolutionary Thought* (Chicago: University of Chicago Press, 2008); Robert J. Richards, "Ernst Haeckel's Alleged Anti-Semitism and Contributions to Nazi Biology," *Biological Theory* 2, no. 1 (Winter 2007): 97–103; Daniel Gasman, "Have Ernst Haeckel's Alleged Connections with Nazism been Disproved? A Reply to Peter J. Bowler," (2010) http://www.ferris.edu/isar/academic-controversies/gasman.htm; Richard Weikart, *From Darwin to Hitler. Evolutionary Ethics, Eugenics and Racism in Germany* (New York: Palgrave Macmillan, 2004); Richard Weikart, "Darwinism and Death: Devaluing Human Life in Germany 1859–1920," *Journal of the History of Ideas* 63, no. 2 (April 2002): 323–44. Weikart has been profoundly criticised by academic historians, e.g. Andrew Zimmerman, review of *From Darwin to Hitler. Evolutionary Ethics, Eugenics and Racism in Germany* by Richard Weikart, *The American Historical Review* 110, no.2 (April 2005): 566–7.

among the educated elite who took their views from the representative science of the day."[7]

Stein's argument is based on two assumptions that are exemplary for this traditional determinist argument. Firstly, Stein has generally linked German Romanticism and *Naturphilosophie* with *völkisch* racism, arguing there were two conflicting intellectual movements influencing German physical anthropology in the mid-nineteenth century: On the one hand, the anti-Enlightenment and anti-progressive "xenophobic and irrationalist romantic naturalism" that consolidated a *völkisch* ideology and, on the other hand, materialism represented by scientific positivism of the eminent physical anthropologist Rudolf Virchow (1821-1902).[8] The "achievement" of Haeckelian Social Darwinism, Stein has claimed, was the synthesis of German "romantic folkism … with scientific evolutionism"[9] through which Darwinism "became the foundation for national socialism."[10] Furthermore, by suggesting that the clearly anti-Darwinian Virchow and the populariser of biological and Social Darwinism Haeckel equally represent "scientific evolutionism" Stein has depicted the German physical anthropological community as a homogeneous entity that shared one (Social) Darwinist view of humanity.

Humanism and the liberal roots of *Anthropologie*

From the 1980s onwards, however, both the linking of *Naturphilosophie* or Romanticism in Germany with *völkisch* ideology and the notion of German physical anthropology as a uniformly racist (Social) Darwinist scientific community, have been questioned as simplistic, teleological and limiting generalisation of the complex nature of the discipline. In this context, historians have begun to further examine the link between anthropology and German colonialism[11] and the role the German anthropological tradition played for the work of the German-American physical-turned-cultural anthropologist Franz Boas (1858-1942) and his school.[12] Aiming for a comprehensive consideration of

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[7] J. George Stein, "Biological Sciences and the Roots of Nazism," *American Scientist* 76, no. 1 (Jan-Feb 1988): 51.

[8] Ibid., 53.

[9] Ibid.

[10] Ibid., 52.

[11] See the respective chapters in Henry Glenn Penny and Matti Bunzl, eds., *Worldly Provincialism: German Anthropology in the Age of Empire* (Ann Arbor: University of Michigan Press, 2003).

[12] Penny and Bunzl, "Introduction: Rethinking German Anthropology," 2–3; Andrew D. Evans, "A Liberal Paradigm? Race and Ideology in Late-Nineteenth-Century German Physical Anthropology," *Ab Imperio* 8, no. 1 (2007): 114. On German ethnology and colonialism see e.g. Hans Fischer, *Hamburger Südsee-Expedition: Über Ethnographie und Kolonialismus* (Frankfurt a. M.: Syndikat, 1981). As Benoit

the history and philosophy of German *Anthropologie*, historians such as Robert Proctor, Benoit Massin or, more recently, Andrew D. Evans have challenged the Haeckel-to-Hitler argument, rightly proposing that German anthropologists were not united in their views of Darwinian evolutionary theory. Following from this argument, it has further been claimed that there was no racist continuity in German anthropology from its establishment in the late 1860s to its complicity with National Socialism in the 1930s and 1940s. Rather, these authors have in varying ways emphasised the non-racist nature of the liberal tradition in German late-nineteenth-century physical anthropology. They maintain that a distinct shift occurred towards a hierarchical and racist perspective on humanity only due to the dwindling influence of German anthropology's founding figures at the turn to the twentieth century.[13]

In particular, Andrew D. Evans has recently postulated a non-racist "liberal paradigm" for late-nineteenth-century German physical anthropology.[14] His line of argument reflects and extends similar arguments made by previous historians of German anthropology. Robert Proctor, for example, has argued for a series of shifts that transformed the, in his view, implicitly non-racist "physicalist tradition"[15] of *Anthropologie* to the Social Darwinist racism of *Rassenkunde*, while Benoit Massin has proposed a

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Massin has critically demonstrated, until the 1980s German literature on physical anthropology during National Socialism was largely apologetic, partly possibly due to its authors' involvement in Nazi anthropology. Benoit Massin, "Anthropologie und Humangenetik im Nationalsozialismus oder: Wie schrieben deutsche Wissenschaftler ihre eigene Wissenschaftsgeschichte," in *Wissenschaftlicher Rassismus. Analysen einer Kontinuität in den Human- und Naturwissenschaften*, ed. Heidrun Kaupen-Haas and Christian Saller (Frankfurt a. M.: Campus Verlag, 1999), 12–64. On Nazi racial hygiene see Paul Weindling, *Health, Race and German Politics between National Unification and Nazism, 1870–1945* (Cambridge: Cambridge University Press, 1989). On the ideological and personal continuities from Nazi to post-World War Two anthropology see e.g. the essay collection published by AG gegen Rassenkunde, ed. *Deine Knochen – deine Wirklichkeit. Texte gegen rassistische und sexistische Kontinuität in der Humanbiologie* (Münster: Unrast, 1998); Andreas Lüddecke, *Rassen, Schädel und Gelehrte. Zur politischen Funktionalität der anthropologischen Lehre in der Tradition Egon von Eickstedts* (Frankfurt a. M.: Peter Lang, 2000); AG gegen Rassismus in den Lebenswissenschaften, ed., *Gemachte Differenz. Kontinuitäten biologischer 'Rasse'-Konzepte* (Münster: Unrast, 2009). On Boasian anthropology and its German intellectual links see George W. Stocking, *Race, Culture, and Evolution. Essays in the History of Anthropology* (Chicago: University of Chicago Press, 1982), esp. Chapters 7 and 8; George W. Stocking, *Volksgeist as Method and Ethic: Essays on Boasian Ethnography and the German Anthropological Tradition* (Madison, Wisconsin: University of Wisconsin Press, 1996).

[13] Robert Proctor, "From Anthropologie to Rassenkunde," in *Bones, Bodies, Behaviour: Essays on Biological Anthropology*, ed. George W. Stocking (Madison, Wisconsin: University of Wisconsin Press, 1988),142, 147–48, 155–57; Massin, "Virchow to Fischer," 80–81, 100, 120; Evans, "Liberal Paradigm," 135–37; Andrew D. Evans, *Anthropology at War. World War I and the Science of Race in Germany* (Chicago: University of Chicago Press, 2010), 7, 59.

[14] Evans, "Liberal Paradigm."

[15] Proctor, "From Anthropologie to Rassenkunde," 141.

"break in the liberal-humanitarian tradition"[16] that resulted in a change of research agendas, methodology, paradigm and ethics from "racial liberalism"[17] towards anthropological racism.

The argument for a non-racist liberal tradition is based on three pivotal interpretations of early German anthropologists' practice and theory. Firstly, emphasis is put on a liberal-humanitarian, monogenetic tradition.[18] Secondly, it is claimed that liberal physical anthropologists categorically separated "race" from culture and intellectual capacity. And, finally, the predominance among German anthropologists of a non- or anti-Darwinian insistence on inductive empirical methodology is interpreted as a categorical rejection of the construction of racial hierarchies and systemisations.

The first line of reasoning refers to a traditional enlightened universalist and humanist worldview among German anthropologists. Following a Humboldtian approach they aimed at understanding the human world based on a combination of political and philosophical ideas of human equality and unity. Accordingly "a common set of assumptions about humanity, progress and rationality"[19] shaped and dominated German anthropologists' principal approaches to both human nature and their scientific research.[20] One of these principles was their insistence on the monogenetic origin and unity of mankind.[21] Massin, for example, has argued that "monogenist humanitarians"[22] or "humanitarian monogenists"[23] practised an "anti-racist"[24] Virchowian anthropology based on the "humanitarian ethics" of "universal brotherhood or spiritual unity of humankind."[25] Evans has similarly stated that their insistence on monogenetic origin was one of the cornerstones in German anthropologists' approach to the question of human diversity.[26] He has further strongly emphasised the pluralist-universalist aspect in Ger-

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[16] Massin, "From Virchow to Fischer," 80.

[17] Ibid., 86.

[18] Urs Bitterli, *Die 'Wilden' und die 'Zivilisierten': Grundzüge einer Geistes- und Kulturgeschichte der europäisch-überseeischen Begegnung* (Munich: C. H. Beck, 2004), 327.

[19] Evans, "Liberal Paradigm," 120, 137. Evans has explained his arguments for a liberal paradigm as well in Evans, *Anthropology at War*.

[20] Evans, "Liberal Paradigm," 116, 119, 121.

[21] Massin, "From Virchow to Fischer," 86–87, 100. On monogenism as a reflection of Enlightenment ideals see e.g. Evans, "Liberal Paradigm," 121–22.

[22] Massin, "From Virchow to Fischer," 120.

[23] Ibid., 95.

[24] Ibid., 80.

[25] Ibid., 100.

[26] Evans, "Liberal Paradigm," 121–23.

man physical anthropology. Accordingly, they regarded physical (as well as cultural) differences as transitional variations that reflected universal human relatedness because their enquiry into the nature of human diversity was "indebted to liberal universalism."[27] Thus, Evans has maintained, similarities mattered more to the founders of German physical anthropology than racial distinctions or hierarchies. This humanist universalism was strongly linked to liberal Enlightenment ideas about human equality, universal human capacity for intellectual and cultural progress and improvement through science and education. According to Evans, liberal German physical anthropologists extended their belief in individual equality and potential for rationality and progress to the collective units of human cultures and societies. As a result, they believed that *Naturvölker* (natural peoples) – despite their low stage of cultural development – had the capacity to develop towards the civilisation of the *Kulturvölker* (cultured or civilised peoples). Based on their belief in universal potential for progress, Evans has contended, German physical anthropologists refused to deny any group of humans the capacity for reason and progress.[28]

The claim that German physical anthropologists categorically separated race from culture and intellectual capacity presents the key argument for a non- or anti-racist liberal tradition in German physical anthropology. Proctor has argued for this conceptual disjunction based on the "physicalist tradition" of German anthropological enquiry in the late nineteenth century, arguing that the discipline "confined itself to the measurement and description of human physical forms"[29] in order to differentiate racial types. Thereby they deliberately rejected any cultural, intellectual or moral implications of physical characteristics,[30] leaving the analysis of culture to the "non-physical branch of the science,"[31] ethnology. The conflation of evaluations of cultural, moral and intellectual characteristics with race, according to Proctor, only occurred after the discipline lost its "external other" when Germany lost its colonies in the First World War. In a

[27] Ibid., 121–22.
[28] Ibid., 116–29.
[29] Proctor, "From Anthropologie to Rassenkunde," 142.
[30] Ibid., 141.
[31] Ibid., 142.

"therapeutic impulse"[32] anthropologists subsequently turned towards the "internal other" and "internal us", their German *Volk*.[33]

Massin has argued similarly for a liberal-humanitarian distinction between race and culture, exemplifying this assertion in the context of *völkisch* ideology. In Massin's view, Virchow and his colleagues strictly separated race as a physical category from nation or *Volk* (a people or ethnic group) as political or cultural entities, which led Virchow to assert that Jews in Germany– despite the racial difference he thought to have determined between them and non-Jewish Germans – were capable of cultural assimilation.[34] Contrasting it with French and American assumptions about Aryanism and antisemitism,[35] Massin has suggested that German physical anthropology "could ... in fact be described as 'anti-racist'."[36] Taking up this argument, Evans also has asserted that German liberal anthropologists regarded nation and *Volk* as political and historical (that is, social) organisations that lay beyond the investigation of race as a strictly zoological-anthropological matter.[37] He has emphasised that German physical anthropologists were fundamentally opposed to regarding different levels of culture (or intellectual capacity) as a function of race and racially ascribed physical characteristics.[38]

However, the examples given in support of the separation of race and culture point to one of the limitations of the argument for a non-racist tradition in *Anthropologie*: They refer exclusively to *völkisch* attempts of rendering Jewish and Eastern European populations into inferior races, all of which eventually culminated in antisemitic *Rassenkunde*. This argument thereby neglects to examine in depth German physical anthro-

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[32] Ibid., 144.

[33] Ibid., 152, 142.

[34] Massin, "From Virchow to Fischer," 90.

[35] I use the term "antisemitism" instead of "anti-Semitism" as a signifier that there exists no Semitism. See e.g. Jehuda Bauer, "Problems of Contemporary Antisemitism," in *Varieties of Antisemitism. History, Ideology, Discourse*, ed. Murray Baumgarten, Peter Kenez and Bruce Thompson (Newark: University of Delaware Press, 2009), 315; Shmuel Almog, "What's in a Hyphen?" http://sicsa.huji.ac.il/hyphen.htm (accessed November 9, 2016), also cited in Robert Michael and Philip Rosen, *Dictionary of Antisemitism. From the Earliest Times to the Present* (Lanham, MD: Scarecrow Press, 2007), 29; Michel J. Jordan, "The Semantics of Anti-Semitism," *Jewish Telegraph Agency*, April 9, 2002 http://www.jta.org/2002/04/09/life-religion/features/the-semantics-of-anti-semitism (accessed November 9, 2016). See also the International Holocaust Remembrance Alliance's "Memo on Spelling of Antisemitism" issued in April 2015, https://www.holocaustremembrance.com/sites/default/files/memo-on-spelling-of-antisemitism_final-1.pdf (accessed November 9, 2016).

[36] Massin, "From Virchow to Fischer," 80, see also pg. 86.

[37] Evans, "Liberal Paradigm," 125, 135.

[38] Ibid., 132.

pologists' dealings with what they regarded as "lower races," in other words non-Europeans or *Naturvölker*.

While Proctor has not addressed this strand of German anthropological practice and theory, Massin has considered "the serious qualifications of racial liberalism"[39] in the context of German colonialism and nationalism. Accordingly, Massin has described liberal anthropologists' approaches to the study of colonised peoples as a "combination of generous humanitarian feeling and callous scientific utilitarianism." On the one hand, their monogenetic stance affected humanitarian views of universal humanness and prompted frequent defences against malicious colonialist treatment. And although they shared Europeans' prevalent assumptions about their own superiority, they "expressed it in a softer manner" and "sought to protect" non-Europeans from Darwinists' attempts to animalise and link them with apes. On the other hand, they welcomed the possibilities the acquisition of colonies opened up for the acquisition and investigation of physical anthropological "material."[40] Massin has also acknowledged the frequent combination of ethnological with physical anthropological evaluations of human differences in the era of German colonialism. Based on the "progressive linear framework" of cultural evolution from a natural, uncivilised stage without or with little culture towards a highly developed cultural stage of civilisation, "cultural hierarchy was often assumed to have physiological and racial correlates."[41] Massin has exemplified this conflation by Virchow's comments on Australian Aboriginal skulls whose eyebrow region he regarded as in some way correlated to their perceived less developed culture and, albeit, reluctantly, considered the feature as apelike.[42] Nevertheless, according to Massin, liberal anthropologists were "too cautious"[43] to construct definite representations of these implicit racial hierarchies and evaluations – especially when their craniological investigations contradicted the assumed hierarchy from the lowest stage of Australian Aborigines to the highest position of Europeans: "More important than hierarchy was the commitment to empirical method, and sometimes the purely craniometrical point of view could in fact contradict European ethnocentrism."[44]

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[39] Massin, "From Virchow to Fischer," 94.
[40] Ibid., 95.
[41] Ibid., 97.
[42] Ibid., 97–98. I shall return to this in Chapter 7 of this thesis.
[43] Ibid., 99.
[44] Ibid., 98–99.

Evans has similarly indicated that liberal physical anthropologists were not as strict with their categorical separation of race from culture or their rejection of hierarchical race classifications when it came to what was regarded as "lower races", stating that "at times, such assumptions of cultural hierarchy crossed into physical and racial categorizations."[45] Accordingly, "Virchow himself was not immune"[46] in his consideration of Australian Aboriginal skulls.[47] To Evans, however, Virchow's conflation of race and culture was an exception to the contemporaneous "general rule … that physical anthropologists should rely on the disciplinary dictum that culture was a matter for ethnologists to explore and had no place in physical anthropology."[48] He has also pointed to Virchow's own realisation of his cross-disciplinary transgression when the eminent scientist stated he could find no signs for progression in the skulls of representatives of highly developed cultures,[49] or that the bony signs of culturally low standing peoples were occurred in the skulls of all peoples.[50] As I shall show in Chapter 7, this is in part a misunderstanding of Virchow's investigation of Australian Aboriginal skulls.

Massin's statement about the importance of method points to the third crucial strand in the argument for a liberal-humanist, non-racist physical anthropological tradition in Germany. As Evans has explained, liberal anthropologists' understanding of their science was based on the Baconian model of inductive empiricism.[51] Accordingly, natural scientists sought to acquire knowledge through the accumulation of empirical evidence, which would eventually enable them to draw general conclusions.[52] Physical anthropologists, whose main quest it was to determine race categories, regarded the human body as the prime source for such data.[53] Measuring the body parts of indigenous people across large numbers of human populations, they calculated statistical means for comparative investigations and the standardised determination of human difference.[54] The aim was to gather all information in their field, on the basis of which general con-

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[45] Evans, *Anthropology at War*, 75.
[46] Ibid.
[47] Ibid., 71–80; Evans, "Liberal Paradigm," 128.
[48] Evans, "Liberal Paradigm," 130.
[49] Ibid.
[50] Evans, *Anthropology at War*, 76.
[51] Ibid.
[52] Evans, "Liberal Paradigm," 121.
[53] Massin, "From Virchow to Fischer," 112; Proctor, "From Anthropologie to Rassenkunde," 142; Evans, *Anthropology at War*, 68.
[54] Evans, "Liberal Paradigm," 124, 106–7.

clusions could (one day) be drawn. This led to the large-scale acquisition of indigenous cultural items, body measurements of the living and the appropriation of skeletal remains. The dictum of knowing all there was to know before it appeared appropriate, even possible, to understand and construe a general theory on the basis of these facts entailed the fundamental challenge of deciding when this state of complete understanding was achieved. Inevitably, it called for caution regarding definite conclusions or proclamations of theoretical accomplishment.

Liberal anthropologists' belief in inductive empiricism was the basis for their principal objection – or reservation – against both Darwin's evolutionary theory (which they regarded as speculatively hypothetical) and antisemitic and Germanic race theorists (who were seen as dwelling in imagination only[55]). Massin has described Virchow's "scientific anthropology"[56] as a "*docta ignorantis*" which prevented the discipline's "surrender … to Darwinism"[57] until the deductive-hypothetical method eclipsed inductive empiricism after his death in 1902.[58] Virchow regarded the evidence brought forward by Darwinists, (for example Haeckel's phylogenetic tree or the evolutionist interpretation of the Neanderthal fossils) as deductive speculation that remained beyond facts. Evans has interpreted this scepticism against Darwinism as an additional sign of German physical anthropologists' non-racist liberalism, causing them to reject the idea of human animal descent and the association of certain races with the evolutionary missing link or apes. He has further argued that liberal German physical anthropologists remained cautious about concepts of racial purity and hierarchisation because of their reservations against Darwinian principles of evolution as merely speculative and unproven by empirical evidence.[59]

1.2 *Anthropologie*'s "Antihumanism"

The term "anthropology" – derived from the Greek *anthropos* (human, human being) and *logos* (word, speech, discourse) – refers broadly to the study and knowledge of hu-

[55] Massin, "From Virchow to Fischer," 93.
[56] Ibid., 86.
[57] Ibid., 118.
[58] Ibid., 118, 119, 123.
[59] Evans, "Liberal Paradigm," 121.

man nature.[60] While it can be traced back to the first "genuine 'anthropologist',"[61] the Greek philosopher Aristotle, who included humankind within the animal realm,[62] the subsequent usage of the term reflects a diversity of concurrent meanings and epistemologies depending on historical, social and national contexts.[63] In the German language sphere, for example, *Anthropologie* today entails a variety of philosophical, cultural and natural historical concepts of human nature and the investigation thereof, specified further for particular areas of research such as forensic anthropology, palaeoanthropology, historical anthropology or cultural anthropology.[64] *Anthropologie* as exclusively natural scientific investigation of human bodies and skeletal remains resulted from processes of epistemological and disciplinary distinction during the second half of the nineteenth century. Before that happened, *Anthropologie* embodied a variety of meanings, signifying an area of study undertaken by scholars who investigated different kinds of questions related to human nature.[65] The departments of the humanities at German universities, such as history, linguistics and geography, as Ryding has argued "had been flexible and undifferentiated enough in the eighteenth century to include ethnological topics."[66]

As I have illustrated above, historians arguing for a non-racist anthropological tradition in Germany have used the terms "humanist" or "humanitarian" in conjunction with, or as analogues to, "liberal". For example, regarding German-language cultural anthropology or *Ethnologie*, Henry Glenn Penny and Matti Bunzl have argued that German ethnology combined the humanist with the positivist approach to studying hu-

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[60] Uwe Hoßfeld, *Geschichte der biologischen Anthropologie: Von den Anfängen bis in die Nachkriegszeit* (Stuttgart: Franz Steiner Verlag, 2005), 30n1; Anja Laukötter, *Von der 'Kultur' zur 'Rasse' – vom Objekt zum Körper? Völkerkundemuseen und ihre Wissenschaften zu Beginn des 20. Jahrhunderts* (Bielefeld: Transcript Verlag, 2007), 38; Volker Schurig, "Konkurrierende Begründungen einer Sonderstellung der Anthropologie im System der Biowissenschaften," in *Physische Anthropologie – Biologie des Menschen*, ed. Michael Kaasch, Joachim Kaasch and Nicolaas A. Rupke (Berlin: Verlag für Wissenschaft und Bildung, 2007), 29.

[61] Hoßfeld, *Geschichte der biologischen Anthropologie*, 53.

[62] Ibid., 30; Thomas Theye, *Ethnologie und Photographie im deutschsprachigen Raum: Studien zum biographischen und wissenschaftsgeschichtlichen Kontext ethnographischer und anthropologischer Photographien (1839-1884)* (Frankfurt a. M.: Peter Lang, 2004), 36.

[63] Hoßfeld, *Geschichte der biologischen Anthropologie*, 35; Schurig, "Sonderstellung der Anthropologie," 33–34.

[64] Theye, *Ethnologie und Photographie*, 36–37.

[65] Frank William Peter Dougherty, "Buffons Bedeutung für die Entwicklung des anthropologischen Denkens im Deutschland der zweiten Hälfte des 18. Jahrhunderts," in *Die Natur des Menschen: Probleme der Physischen Anthropologie und Rassenkunde (1750-1850)*, ed. Gunter Mann, Jost Benedum and Werner F. Kümmel (Stuttgart: Gustav Fischer Verlag, 1990), 221; Hoßfeld, *Geschichte der biologischen Anthropologie*, 56.

[66] James Ryding, "Alternatives in Nineteenth-Century German Ethnology: A Case Study in the Sociology of Science," *Sociologus* 25 Supplement (1975): 3–4.

manity.[67] Accordingly, anthropologists were guided by a "broadly humanist agenda" that attempted to "document the plurality and historical specificity of cultures."[68] They followed a "cosmopolitan heritage"[69] in a Humboldtian tradition of scientific travel and interest based on specifically German intellectual commitments.[70] Firstly, they emphasised the collection of material information about all existing human cultures following their positivist, natural scientific methodology of inductive empiricism.[71] Secondly, they embraced Herderian historicism, which placed these cultures in their specific historical context, thus stressing culture as a flexible, mutable entity.[72] And thirdly, they were committed to *Bildung,* comprised of humanist education in the Ancient classics.

Even if such Humboldtian universalistic interest in all peoples was "primarily empirical, descriptive and factual before ... resort[ing] to any wider theoretical conclusions,"[73] it became less valued in the German scholarly world in the early nineteenth century through "the institutionalization of a Europocentric orientation."[74] Scholars began to exclude non-Europeans from their anthropological enquiries; linguistic studies, for instance, now focussed on Indo-European languages, showing little interest in non-European philology. And *Anthropologie* was increasingly separated from its epistemological association with the more philosophical branches of inquiry into the human kind when, as Andre Gingrich has stated, "philosophy lost its leading academic role, to history in the humanities ... and to biology in the natural sciences."[75]

In his etymological exploration of the term, Vito R. Giustiniani has stated that humanism denotes "whatever is characteristic of human beings."[76] As "the meaning of humanism has so many shades that to analyze all of them is hardly feasible,"[77] its meanings needs further contextualisation in order to understand the argument for a German

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[67] Penny and Bunzl, "Introduction: Rethinking German Anthropology," 12–13.

[68] Ibid., 1.

[69] Ibid., 2.

[70] Ibid., 9, 16.

[71] Ibid., 12–13.

[72] Ibid., 12.

[73] Andre Gingrich, "The German-Speaking Countries," in *One Discipline, Four Ways: British, German, French, and American Anthropology*, ed. Fredrik Barth, Andre Gingrich, Robert Parkin and Sydel Silverman (Chicago: University of Chicago Press, 2005), 68.

[74] Ryding, "Alternatives German Ethnology," 3–4.

[75] Gingrich, "German-Speaking Countries," 75.

[76] Vito R. Giustiniani, "Homo, Humanus, and the Meanings of 'Humanism'," *Journal of the History of Ideas* 46, no.2 (April-June 1885): 168.

[77] Ibid., 167.

"humanist tradition" in the anthropological area of research. Humanism signifies two substantial parallel meanings. On the one hand, it refers to "literary humanism"[78] in the scholarly world that was based on the knowledge of classical antiquity; on the other hand, it concerns a general "philosophy of man."[79]

Humanismus as the "study of classical antiquity"[80] was central to European university scholarship of the nineteenth century.[81] Although the term lost its Classical Latin notions of benevolence and learnedness,[82] the latter remained a significant component in the German humanist tradition of studying human nature. As Giustiniani has further elucidated, the German term *Humanismus* in the early nineteenth century referred to the teaching of classical Latin and Greek texts at German high schools (*humanistische Gymnasien*), deriving from the teaching of classical Latin and Greek texts at medieval Italian universities. As a result, towards the end of the nineteenth century, "classical education" in Germany (one of the prerequisites of *Bildung*) entailed the study and interpretation of predominantly Greek classic texts.[83]

According to Andrew Zimmerman this "humanist project of interpreting textual monuments of European history had for centuries served Europeans as a privileged mode of understanding what it meant to be human and as a hegemonic ideology and civic identity."[84] Thus classical European texts were regarded as the sole source for the knowledge about human nature. This historicist approach to human nature, however, defined only those civilisations as worthy of recognition which had produced textual documents or monuments. As Zimmerman has stated, humanist historicists were interested in *Bildung* as self-knowledge[85] and self-cultivation.[86] Consequently, all that was worth knowing about the human was exclusively based on European text and history, which interpreted the European as the equivalent to what was meant by "human". Humanist study thus operated within "the paradox of non-Europeans,"[87] that is, while it

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[78] Ibid., 175.
[79] Ibid., 174.
[80] Ibid., 171.
[81] Zimmerman, *Anthropology and Antihumanism*, 2.
[82] Giustiniani, "The Meanings of 'Humanism'," 169.
[83] Ibid., 172.
[84] Zimmerman, *Anthropology and Antihumanism*, 1.
[85] Ibid., 2.
[86] Ibid., 4.
[87] Ibid., 2.

defined all peoples of the world as human it concurrently denied non-Europeans full humanity. This paradox signifies the double bind of such "emphatic humanism:"[88] The "other," encountered through colonial exploration and imperialism, both served to define the European self by means of its exclusion and threatened the European self through mere existence.[89]

As Zimmerman has convincingly argued, the German anthropological disciplines *Anthropologie* and *Ethnologie* were established in the mid- to late nineteenth century in a decidedly "antihumanist" challenge to the universities' exclusive humanist and philosophical tradition. Building on Giustiniani, the historian has emphasised the introspective exclusion of non-Europeans by the German humanist-historicist tradition that defined learning about the human as European self-knowledge. Therefore, Germany's early nineteenth century "humanist project"[90] was self-referential with scholarly regard for European culture only.[91] As a consequence, the universities' *Geisteswissenschaften* (the Humanities) exclusively studied the European Ancients' world of thought, predominantly based on the Ancient Greek texts.[92] Zimmerman has exemplified this "Europocentrism of the universities"[93] by the historicist-empiricist approach to the study of human culture introduced by Leopold von Ranke (1795-1886), whose determinist schemes of progressive history put European civilisation at the centre of human development and made the exclusion of non-Europeans canonical in German history writing. Defining only written records as historical facts worthy of inspection, Rankian empiricism equated human culture with European civilisation, which had risen and distanced itself from its originally natural or uncivilised stage through the historical processes documented by its written documents.[94] Thus all cultures without such form of historical narrative were excluded from the study of humanity.[95] By definition, non-European peoples then had remained in the natural stage of "eternal stagnation."[96] Regarding non-European history as non-existent, Rankian historicism thus rendered non-European peoples irrelevant for

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[88] Ibid., 3–4.
[89] Ibid., 3.
[90] Ibid., 1.
[91] Ibid., 39–40.
[92] Ibid., 38–61; Giustiniani, "Meanings of 'Humanism'," 171–73.
[93] Ryding, "Alternatives German Ethnology," 5. See also Zimmerman, *Anthropology and Antihumanism*, 38–61.
[94] Zimmerman, *Anthropology and Antihumanism*, 41–43.
[95] Ibid.; Ryding, "Alternatives German Ethnology," 2–3.
[96] Zimmerman, *Anthropology and Antihumanism*, 42.

the study of humanity. Consequently, as Zimmerman has termed it, "the paradox of non-Europeans for the European human sciences … was that they were human yet could not be acknowledged as possessing full 'humanity'."[97] Their investigation belonged to the natural sphere, dealt with by natural historians and natural scientists but not the humanities. At the same time, the humanist and historicist traditions fundamentally rejected on epistemological grounds the natural scientific approach to questions about human (that is Europeans') nature.[98]

German *Anthropologie* and *Ethnologie*, however, "functioned as a new antihumanist worldview"[99] since they fundamentally challenged the humanist tradition of interpreting the European self. While Germany's humanist establishment explicitly excluded non-Europeans from humanity through their self-conscious identification of the European as exclusive subject and object of study, this exclusion clashed with a Buffonian empiricist "new anthropological perspective"[100] that, during the second half of the eighteenth century, concurrently influenced the diverse scholarship on humanity in the German sphere.[101] Researchers investigating humanity's physical and cultural diversity increasingly sought to rely on empirical observation rather than philosophical-transcendental deliberation[102] – even though scholars of the moral, psychological and philosophical (or even "metaphysical"[103]) nature of the European as the quintessence of the human continued to refer to their knowledge sphere as *Anthropologie*.[104]

By the mid-nineteenth century, European human anatomists, physicians and comparative anatomists frequently used the term to describe their work, amalgamating their methods for the investigation of human diversity on what was seen as an objective, natural scientific basis. For example, comparisons of physiological and morphological fea-

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[97] Ibid., 2.

[98] Ibid., 42, 43; Ryding, "Alternatives German Ethnology," 11–12.

[99] Zimmerman, *Anthropology and Antihumanism*, 1.

[100] Dougherty, "Buffons Bedeutung," 221.

[101] Hoßfeld, *Geschichte der biologischen Anthropologie*, 56. As Dougherty has noted, Buffon's *Histoire Naturelle* (translated to German from 1750-1775) was an important source for anthropological work in Germany, especially his definition of basic scientific terminology and the development of scientific models. Dougherty, "Buffons Bedeutung," 221–22.

[102] Dougherty, "Buffons Bedeutung," 225, 234–41; Hoßfeld, *Geschichte der biologischen Anthropologie*, 56.

[103] Winfried Henke and Hartmut Rothe, "Zur Entwicklung der Paläoanthropologie im 20. Jahrhundert," in *Anthropologie nach Haeckel*, ed. Dirk Preuß, Uwe Hoßfeld and Olaf Breidbach (Stuttgart: Franz Steiner Verlag, 2006), 46.

[104] Hoßfeld, *Geschichte der biologischen Anthropologie*, 32–34.

tures in apes and humans, undertaken to determine truly human features, were also used for the classification of human races. Or, in the medical sphere, the method of anatomical-medical dissections, traditionally undertaken to differentiate the pathological from the healthy body, was extended to the anatomical and skeletal investigation for racial classification. Further, anthropometry acquired a new meaning – from a technical method for measuring human bodies in order to determine the effects of disease to a physical anthropological tool for the investigation and determination of race and genetic racial relations.[105]

Rejected by the universities' *Geisteswissenschaften*,[106] early practitioners of physical anthropology (and ethnology) denounced the humanist-historicist exclusion of non-Europeans from the enquiry into humanity.[107] However, as Zimmerman has also argued, similar to the historicists they divided humanity into two realms of existence and investigation. On the one hand, the investigation of *Kulturvölker* (civilised or cultured peoples as the products of historical progress) was based on their historical textual sources. German anthropologists deemed these written texts subjective and therefore unsuited for their chosen methodological approach of the *Naturwissenschaften*.[108] *Naturvölker* (natural or primitive peoples), on the other hand, were regarded as "fundamentally separate from history, narrative, evolution, and even time."[109] Accordingly, their alleged a-historic existence, presumed uncompromised by "unnatural" influences, rendered them into the essential object of the natural scientific investigation of humanity. While to ethnologists *Naturvölker* represented the natural state of human culture, their physical anthropological investigation promised to unveil the purely physical characteristics of the human kind and its variations.[110] Through the concept of *Naturvölker* and *Kulturvölker* anthropologists occupied the space created by the universities' humanist focus on the European self. They thereby "create[d] a counterhumanism"[111] that established *Ethnol-*

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[105] Ibid., 55–56. See also John Gascoigne, *Joseph Banks and the English Enlightenment: Useful Knowledge and Polite Culture* (Cambridge: Cambridge University Press, 1994), 130; Frank Spencer, "Anthropometry," in Spencer, *History of Physical Anthropology*, 81–82.

[106] Ryding, "Alternatives German Ethnology," 11–12; Zimmerman, *Anthropology and Antihumanism*, 2 and Chapter 2.

[107] Andrew Zimmerman, "Adventures in the Skin Trade: German Anthropology and Colonial Corporeality," in *Worldly Provincialism: German Anthropology in the Age of Empire*, ed. Henry Glenn Penny and Matti Bunzl (Ann Arbor: University of Michigan Press, 2003), 158.

[108] Zimmerman, *Anthropology and Antihumanism*, 38, 42–43.

[109] Ibid., 51.

[110] See also Gingrich, "German Speaking Countries," 73, 86.

[111] Zimmerman, *Anthropology and Antihumanism*, 52.

ogie and *Anthropologie* as natural scientific disciplines in scientific associations that remained outside of the university realm during the second half of the nineteenth century. As Zimmerman has argued, German anthropology established itself as a decidedly antihumanist, anti-elitist natural scientific community. In certain aspects, for example in its organisational proceedings, it was liberal but "while anthropology's expansion of the scope of humanistic studies represents a democratization of the human sciences, its replacement of hermeneutic notions of understanding and interpretive empathy with models of objective observation borrowed from the natural sciences devalued the human both as an enquirer and as a subject of enquiry."[112]

With regard to the historiographical debate about the (dis-)continuity of racism in *Anthropologie*, Zimmerman has maintained that "liberal" cannot be regarded as the same as "anti- or non-racist." Accordingly, the distinction between an early Virchowian, non-racist, non-Darwinian and liberal approach to the study of humanity and a racist, Darwinian Nazi *Anthropologie* is not justified: "Not only does this scheme propose a misleading opposition between liberalism on the one hand and racism and imperialism on the other, it also ignores the practices of anthropology, as if the discipline were a branch of speculative philosophy." Turning non-Europeans into mere bodies of evidence was a "defining feature" both theoretically and practically, and it included the hierarchical racialising evaluation of different human groups.[113]

1.3 Preliminary remarks on *Anthropologie*'s dealings with Australian Aboriginal skeletal remains

The diverging historiographical perspectives on German physical anthropology provide the interpretative framework for my investigation of the intellectual and practical processes by which German physical anthropologists created knowledge about Australian Aborigines and, on that basis, about humanity. Much of the framework for interpreting Australian Aboriginal remains had been established in the late eighteenth century by Johann Friedrich Blumenbach who had access to such remains from Joseph Banks, the main science patron of the early Australian colony. From the 1860s onwards, a growing number of such Australian specimens arrived in Germany, coincidental (in both senses of the word) not only with the consolidation of German settler communities in Australia

[112] Ibid., 11.
[113] Zimmerman, "Skin Trade," 158.

but also with the publication of Darwin's theory of evolution. This simultaneity is reflected in the investigations of Australian Aboriginal bones and skulls – in the way they were interpreted and discussed as evidence both for and against Darwinian evolutionary schemes. As I have outlined above, both sides of the historiographical divide have agreed that the first generation of German physical anthropologists were, in the majority, critical in the rejection of Darwinian theory, especially regarding its application to humankind. There exists disagreement, however, about what this meant with regard to their theorising about race.

The appropriation and investigation of Australian Aboriginal human remains by Europeans was part of the larger history of physical anthropology during the nineteenth century, which was closely linked to colonialism. While Zimmerman has emphasised the close relationship between German colonialism and physical anthropology, he has also pointed out that "such relations do not, of course, require a colonial context."[114] They certainly did not require a national colonial context, as German anthropologists were able to obtain Australian Aboriginal skeletal remains and other body parts in the non-German colonial sphere. (It might be added that to Australia's indigenous peoples German settlers probably represented a colonising force as much as did their British counterparts.)

Utilising these skeletal remains for their theorising on race and human evolution, German physical anthropologists joined their British (and other European) scientists in their quest to unveil the mysteries of humanity's nature, origin and diversity. In this regard, German and British anthropologists had similar objectives, but they operated under different circumstances. One of the main political differences was, of course, that Germany was not the coloniser of Australian lands and peoples; therefore, access to the skeletal "resources" was limited. For the first century of Britain's claim to the Australian continent, Germany did not even exist as a political entity but entailed a variety of conglomerates of German kingdoms and principalities deriving from the dissolution of the Holy Roman Empire. Accordingly, German natural historians were forced to look elsewhere for their pursuits, resulting, for example, in their involvement in the British Empire's explorations of the globe (such as Georg and Johann Reinhold Forster's participation in Cook's second world circumnavigation). These individual involvements tied en-

[114] Ibid., 178.

during links between German and British natural historians during the late Enlightenment era.

Another historic difference concerns the development of physical anthropology as a scientific discipline in Germany, also to a degree related to Germany's political disunity and lack of a centralised state. For a variety of reasons, which I shall explore below, physical anthropological research became insignificant in the German-speaking sphere after Blumenbach's death in 1840.[115] Until the early 1860s, the Blumenbach-Banks cooperation and Blumenbach's (nevertheless enduring) craniological race classification remained a one-off, and even after the national and local branches of a German anthropological association were eventually founded in 1869/70, many German naturalists with an interest in anthropological endeavours still followed them as a side pursuit.[116] As I shall investigate in more detail in Chapter 4, the only space to present and share their work (highly eclectic in methodology, sources and scope) were the annual meetings of the Gesellschaft Deutscher Naturforscher und Ärzte which, in turn, was formed as a unifying organisation for German researchers in the German states of political disparity. Therefore, the more systematic acquisition and investigation of Aboriginal skeletal remains only began with the establishment of *Anthropologie* as a (more or less defined) scientific discipline in its own right. At this point in time, German-Australian ties had been formed through the links that German settlers sought to maintain to their native country at the other end of the world. Like their British counterparts they often had an interest in the new sciences of humanity and aspired to be acknowledged in the scientist spheres of their homelands. Both the institutionalisation of *Anthropologie* as a discipline and the increased presence of Germans in Australia enabled German anthropologists to establish and maintain a network of material and intellectual exchange between Germany and the Australian colonies. This provided them with a source for Australian Aboriginal skeletal remains that they did not have access to before.

As I shall demonstrate in the following chapters, theorising about race and human evolution did not begin in Germany with the establishment of *Anthropologie*; neither did perceptions and interpretations of "the Australian race" evolve through their physical anthropological enquiries. When German physical anthropologists began to system-

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[115] Ursula Zängl-Kumpf, *Hermann Schaaffhausen (1816-1893). Die Entwicklung einer neuen physischen Anthropologie im 19. Jahrhundert* (Frankfurt a. M. R. G. Fischer, 1990), 33.

[116] Massin, "From Virchow to Fischer," 86.

atically measure Australian Aboriginal human remains there already existed specific notions about their physical, cultural, moral and intellectual characteristics, all of which were ingrained in a European scientist's general worldview. I shall further argue in Chapters 5 to 8, that Darwinists and non-Darwinians in accordance to their worldview drew different conclusions. It will also become obvious that early German physical anthropologists who sought to separate race from culture, morality and intellect, failed to adhere to their aspiration of cautious objectivity. Most of the time, if subtly, they fell back on sources beyond the physical anthropological field in order to make sense of their (often ambivalent) findings.[117]

My research thus endorses Zimmerman's argument for *Anthropologie*'s antihumanist approach to non-Europeans whose "bodies represented a kind of direct access to objective humanity."[118] Removing their "flesh [which] represented a form of subjectivity that anthropologists rejected from their studies,"[119] they rendered them into scientific objects of value as evidence – regardless of their own position on Darwinism.

This antihumanist approach contributed to German physical anthropologists' perception of Australian Aborigines as a devalued lower standing race. The interpretation of Australian Aborigines as a primitive or "lower race" in Germany, however, reaches further back than the second half of the nineteenth century. Apart from reiterating notions of Australia's original inhabitants conveyed by British colonial sources, German naturalists and early practitioners of physical anthropological investigations drew on general ideas about race and human evolution that were developed during the Enlightenment era.

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[117] See also Schurig, "Sonderstellung der Anthropologie," 34.
[118] Zimmerman, "Skin Trade," 166.
[119] Ibid., 167.

2 Enlightenment concepts of race and human evolution

The etymology of the term "race" in its various European forms (for example the Italian *razza*, French *race* and German *Race* or *Rasse*) remains uncertain.[1] Historically, its use for describing human groupings entailed a meaning far less defined than its nineteenth-century designation of distinct biological traits to "foreign" peoples. As Bronwen Douglas has astutely noted, it was a "slippery word"[2] until at least the late eighteenth century when the "naturalized scientific concept of race"[3] began to emerge in Germany with the philosophical and anthropological works about human diversity by Immanuel Kant (1724-1804), Gottfried Herder (1744-1803), Georg Forster (1854-1894) and Blumenbach.[4] Before then, "race" encompassed a variety of "pre-scientific" meanings. Apart from its zoological application to the breeding of domestic animals, it was, for example, used to denote human individual or family lineage, usually relating to noble descent but not necessarily connoting inheritable physical characteristics. It was also used to describe social collectives, for example the political group of "the English race" or the religiously affiliated members of "the Christian race". While another broad meaning of the term referred to "the human race," denoting humankind in general, "*race*/race were minor words in French and English before the late eighteenth century while their German equivalent *Race* or *Rasse* was a recent borrowing from French and rarely used."[5]

According to Uwe Hoßfeld, "actual race ideologies ... were totally alien to the scholars of the eighteenth century," such as Kant or Blumenbach, who "strictly stuck to

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[1] Antje Sommer, "Entstehung und Entfaltung des Rassebegriffs," in *Geschichtliche Grundbegriffe. Historisches Lexikon zur politisch-sozialen Sprache in Deutschland*, ed. Otto Brunner, Werner Conze and Reinhart Koselleck (Stuttgart: Klett-Cotta, 1984), 137; Bronwen Douglas, "Climate to Crania: Science and the Racialization of Human Difference," in *Foreign Bodies: Oceania and the Sciences of Race 1750-1940*, ed. Bronwen Douglas and Chris Ballard (Canberra: ANU Press, 2008), 34.

[2] Douglas, "Climate to Crania," 34.

[3] Bronwen Douglas and Chris Ballard, preface to *Foreign Bodies: Oceania and the Sciences of Race 1750-1940*, ed. Bronwen Douglas and Chris Ballard (Canberra: ANU Press, 2008), xii. See also Robert Bernasconi, "Who Invented the Concept of Race? Kant's Role in the Enlightenment Construction of Race," in *Race*, ed. Robert Bernasconi (Malden, MA: Blackwell, 2001), 11–36.

[4] Douglas, "Foreign Bodies in Oceania," in *Foreign Bodies: Oceania and the Sciences of Race 1750–1940*, ed. Bronwen Douglas and Chris Ballard (Canberra: ANU Press, 2008), 5.

[5] Douglas, "Climate to Crania," 34; Sommer, "Entstehung des Rassenbegriffs," 137–39, 141.

the empirical data material and avoided in their interpretations worldview and moral questions. In their work's skull depictions and skull orderings no conscious hierachisation or even racism can be detected."[6] Bronwen Douglas, in contrast, has pointed out that "the biologization of race was preceded by significant extension of its older genealogical referents as some writers extrapolated the term to label extensive populations."[7] While the term "race" thus gradually acquired a more biologistic meaning through its usage for the identification of more distinct, larger groups of populations, a number of different categorisations of human diversity existed concurrently.

Scholars of the history of racial thought have distinguished between two phases in the investigation and classification of humanity, roughly demarcated by the beginning of the nineteenth century. Accordingly, the study of human diversity became a racist scientific endeavour at the end of the eighteenth century. As Nancy Stepan has termed it in her renown study about *The Idea of Race in Science* in the British context, "people were preoccupied by race"[8] from the beginning of the 1800s onwards, resulting from "black slavery in the colonies of Europe in the New World and the emergence of the modern, biological and human sciences."[9] Similarly, Robert Bernasconi and others have argued that the "scientific concept of race"[10] emerged at the end of the Enlightenment era. Indeed, the "German invention of race"[11] has appropriately been posited – a view that has been formed on the basis of critical analyses of the elaborations about human nature and diversity by Kant and his contemporary Blumenbach. The celebrated German philosopher began to elaborate on a definition of *Racen* that combined Buffon's species rule with the inevitable inheritance of an organism's parental characteristics, delineating human races along skin colouration as "manifesting biologically original and

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[6] Uwe Hoßfeld, "Kopf, Schädel und Rassenkunde," in *Schädelkult. Kopf und Schädel in der Kulturgeschichte des Menschen*, ed. Alfred Wieczorek and Wilfried Rosendahl (Mannheim: Schnell & Steiner, 2012), 310.

[7] Douglas, "Climate to Crania," 35. See also Robert Bernasconi and Tommy L. Lott, introduction to *The Idea of Race* (Indianapolis, IN: Hackett Publishing Company, 2000), vii–xviii.

[8] Nancy Stepan, *The Idea of Race in Science. Great Britain 1800-1960* (Oxford: MacMillan in assoc. w. St. Anthony's College, 1982), x.

[9] Ibid.

[10] Bernasconi, "Who Invented the Concept." See also Robert Bernasconi, "Kant and Blumenbach's Polyps: A Neglected Chapter in the History of the Concept of Race," in *The German Invention of Race*, ed. Sara Eigen and Mark Larrimore (New York: State University of New York Press, 2006), 73–90; Bernasconi and Lott, introduction to *The Idea of Race*.

[11] Sara Eigen and Mark Larrimore, eds., *The German Invention of Race* (New York: State University of New York Press, 2006).

distinct classes."[12] The German "father of physical anthropology" introduced a craniologically represented division of humanity into (eventually) five races that has – at least with regard to its broad racial division and terminology – survived to this day. Both Kant's and Blumenbach's ideas about human difference, however, were developed from and/or in opposition to already existing notions about race and human species development.

Although Blumenbach was the first to accumulate and use a series of human skulls for the purposes of identifying and explaining human diversity, attempts to systematise human diversity were no novelty by the end of the Enlightenment era. Europeans were aware of physical and cultural diversity at least since the beginning of their exploration of the world in the fifteenth century. The large amount of travel literature about the world's foreign lands reflected how they experienced the variability of human groups hitherto unknown to them. By the end of the seventeenth century, contemporaneous "scholars attempted to organize the mass of information now available to them and to sort the different peoples into a few groupings."[13]

I shall in this chapter summarise relevant developments in the histories of racial thought and theories of humanity's origin, or evolution, in continental Europe and Germany from the seventeenth to the early nineteenth century.[14] The ideas of European Enlightenment naturalists about humanity were built on the basis of their zoological, biological and natural philosophical enquiries, which in turn were strongly aligned with their worldviews. Accordingly, I shall illustrate each naturalist's ideas about the origin, nature, development and diversification of organic life in order to then place their respective hypotheses about human diversity within that particular intellectual framework – including, where applicable, their incorporation of Australia's inhabitants into their theoretical framework.

The first section of this chapter elucidates relevant pre-scientific ideas about race and human evolution put forward by early European naturalists. I shall begin with the

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[12] Emmanuel Chukwudi Eze, "The Color of Reason: The Idea of 'Race' in Kant's Anthropology," in *Postcolonial African Philosophy. A Critical Reader*, ed. Emmanuel Chukwudi Eze (Cambridge, MA: Blackwell Publishers, 1997), 115.

[13] Bernasconi, "Who Invented the Concept," 12.

[14] Unless stated otherwise, I use terms such as "evolution", "development" and "transformation" interchangeably as a generic term for processes of biological change. "Evolution" thus does not exclusively imply Darwinian processes of or ideas about evolution. I also use historically contemporary terminology, such as "preformation", "unfolding" etc., in relation to their specific contexts.

geographically based division of humanity by the French physician and traveller Francois Bernier (1625-1688) and the classification of humans with apes in one primate family by the Swedish botanist and zoologist Carolus Linnaeus (1707-1778). I shall then investigate the species rule devised by the French naturalist Georges-Louis Leclerc, Comte de Buffon (1707-1788) who as early as 1749 referred to Australia's indigenous inhabitants as examples for his hypotheses on human nature and diversification. In the final section, I shall turn to Kant's scientific concept of race, its links with his philosophy of human progress and his references to Australian Aborigines. Even though they would rarely refer to his ideas, it seems that mid- to late-nineteenth-century physical anthropologists in Germany took Kant's hierarchical notions of race for granted, including his assumptions about Australian Aborigines.

2.1 Pre-scientific concepts of race

Francois Bernier's *espèces ou races*

In 1684, the French physician and traveller Francois Bernier (1625-1688) argued that the world was inhabited by "mainly four or five species or races of men whose difference is so notable that it can justifiably serve as the basis for a new division of the Earth."[15] One race lived in Europe, North Africa and the western parts of Asia, the second in southern Africa and the third in East and North Asia. While the "Laplanders" represented the fourth, Bernier was undecided whether to class "the Hottentots" and the inhabitants of the Americas as respectively distinct races.[16]

Even more important than his novel division of humanity into only four to five large groups is that Bernier was the first to refer to *espèces ou races* for the classification of humans. Furthermore, in addition to the hitherto more common division by skin colouration, he based their distinction on additional physical criteria such as body shape, facial features, nose and eye form.[17] Whereas Hoßfeld has called Bernier's classi-

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[15] [François Bernier], "Nouvelle Division de la Terre, par les differentes Especes ou Races d'hommes qui l'habitent, envoyée par un fameux Voyageur à M l'Abbé de ***** à peu prés en ces termes," *Journal des Sçavans pour l'Année 1684*, no. 12 (24 April 1684): 133. I have used the English translation by Douglas, "Climate to Crania," 48.

[16] Sommer, "Entstehung des Rassenbegriffs," 142; Bernasconi, "Who Invented the Concept," 12; Uwe Hoßfeld, *Geschichte der biologischen Anthropologie: Von den Anfängen bis in die Nachkriegszeit.* (Stuttgart: Franz Steiner Verlag, 2005), 56.

[17] Sommer, "Entstehung des Rassenbegriffs," 142; Bernasconi, "Who Invented the Concept," 13. See also Bernasconi and Lott, introduction to "François Bernier, 'A New Division of the Earth'," in *The Idea of*

fication the "decisive impetus for 'physical' anthropology,"[18] Douglas has stated that, although Blumenbach implicitly credited Bernier for introducing the first classification of human varieties, his actual influence on later attempts to classify human diversity was limited.[19] Nonetheless, his usage of the French term *race* for the purpose of classifying human groups remains historically significant, especially with regard to his interchangeable use of the terms *race* and *espèce* at a time when the terms "nation," "tribe," "race," "species" or "variety" were indistinguishably used to describe human populations.[20] This demonstrates that they denoted rather "unspecified group denominations"[21] and had not yet acquired the more precise, classificatory or scientifically defined meanings of the nineteenth century.[22] It also indicates that, before the mid-eighteenth century, very little attention was paid to physical differences as primary racial marker.[23]

Carolus Linnaeus's *primates*

The systematic racial classification of humanity based on physical and cultural characteristics began with the work of the Swedish botanist and zoologist Carolus Linnaeus (1707-1778),[24] who is frequently referred to as "the father of taxonomy." In his major work *Systema Naturæ* (1735-1768) – through which he devised the binominal nomenclature still used in botany and zoology today – Linnaeus ordered all living and inert phenomena into three kingdoms (minerals, plants and animals), which he further divided into classes, orders, genera and species.[25] Linnaeus's taxonomy presented a system of natural theology, allowing for an Enlightenment explanation of natural diversity and its

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Race, ed. Robert Bernasconi and Tommy L. Lott (Indianapolis, IN: Hackett Publishing Company, 2000), 1.

[18] Hoßfeld, *Geschichte der biologischen Anthropologie*, 56.

[19] Douglas, "Climate to Crania," 48, 92n51.

[20] Ibid., 34.

[21] Sommer, "Entstehung des Rassenbegriffs," 142.

[22] Ibid.; Bernasconi, "Who Invented the Concept," 14.

[23] Urs Bitterli, *Die 'Wilden' und die 'Zivilisierten': Grundzüge einer Geistes- und Kulturgeschichte der europäisch-überseeischen Begegnung* (Munich: C. H. Beck, 2004), 332.

[24] Gunnar Broberg, "Homo Sapiens. Linnaeus's Classification of Man," in *Linnaeus. The Man and his Work*, ed. Tore Frängsmyr (Berkeley: University of California Press, 1983), 157.

[25] See e.g. Bernasconi, "Who Invented the Concept," 15; Hoßfeld, *Geschichte der biologischen Anthropologie*, 58–59; Stephen Jay Gould, *The Mismeasure of Man* (New York: Norton, 1996), 404–6; Peter J. Bowler, *Theories of Human Evolution. A Century of Debate, 1844–1944* (Baltimore: John Hopkins University Press, 1986), 61 and Sommer, "Entstehung des Rassenbegriffs," 145.

causes that nevertheless remained within the biblical account of creation.[26] Accordingly, God had designed a fixed number of distinct species in the living world, each of which was divinely adapted to its respective environment.[27] Therefore, the appearance of new species was beyond the bounds of possibility (although Linnaeus eventually accepted the appearance of new species as hybrids that mixed the characteristics of both parent species).[28] In the rationalising spirit of the Age of Reason, Linnaeus believed God had created the world according to logical principles, endowing humankind with the intellectual capabilities to decipher the divine pattern of his creation.[29] This pattern, however, was not comprehensively represented by the then prevalent classificatory tradition of the Great Chain of Being, which ordered all of God's creations in a straight line from the simplest to the most complex form. It distinguished humans as essentially separate from and elevated above all animals. Instead, in Linnaeus's view, it was the rational human's (indeed Linnaeus's) divine undertaking to discover and represent God's pattern.[30] Linnaeus sought to fulfil his task by creating a classificatory system that was based on the observation of "visible resemblances between species."[31] To him, the basic physical characters were, for example, the shape of petals and reproductive parts of plants. Such empirically demonstrable physical similarities in the Linnaean system indicated different species of one genus, whose relationships appear taxonomical rather than hierarchical.[32] However, as I shall illustrate below, this was not so much the case for Linnaeus's classification of human varieties.

By classing humans with apes, Linnaeus departed from the notion of humankind's special position in the Great Chain of Being.[33] While this classification generally followed his method of ordering along the lines of physical similarities, it underwent several alterations throughout the many editions of *Systema Naturæ*. According to the first edition, published in 1735, humans belonged to the first class of four-footed animals or *Quadrupedia*. Among these animals, *Anthropomorpha* (human-like forms) included

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[26] Bowler, *Evolution*, 67.
[27] Ibid.; Hoßfeld, *Geschichte der biologischen Anthropologie*, 58n18.
[28] Bowler, *Evolution*, 50, 69–70.
[29] Ibid., 50, 67.
[30] Ibid., 52–53, 63, 67.
[31] Ibid., 68.
[32] Ibid., 68–69; Bitterli, *Die Wilden und Zivilisierten*, 217.
[33] Broberg, "Linnaeus's Classification of Man," 157.

Homo (humans), *Simia* (apes) and *Bradypus* (sloths).[34] As Douglas has noted, it was Linnaeus's "failure to isolate man from the rest of creation and from the anthropoid apes in particular [which] threatened the dogma of the singularity of man and outraged conventional opinions."[35] Namely, it marked the departure from the religious juxtaposing perception of the human as the image of God, and the ape as the epitome of the devil during the Medieval Period.[36]

To Linnaeus, however, the classing of humans with apes did not present a problem, neither with regard to the Christian concept of divine creation nor to the assumption of humankind's moral and intellectual superiority to animals.[37] He defined *Homo* as *nosce te ipsum*[38] (knowing himself) and thereby clarified that there was a scientifically "unquantifiable side of man"[39] concerning the virtue of intelligence, which made the human essentially different from all other animals. Nor did the human's physical approximation to apes necessarily imply to Linnaeus any genealogical or evolutionary relations between the two.[40] Rather, it simply resulted from his natural theological and methodological approach to classification; apes and humans must be classed together, he argued, because there were no significant observable physical differences between them.[41]

In 1735, in the first edition of *Systema Naturæ*, Linnaeus divided the species *Homo* into four elements based on similarities in skin shade and geographical location: *Europaeus albescens* (white Europeans), *Americanus rubescens* (red Americans), *Asiaticus fuscus* (brown Asians) and *Africanus nigrescens* (black Africans).[42] In the second edition, published in 1740, he additionally labelled these subdivisions as *homo variat* (hu-

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[34] Caroli Linnæi, *Systema naturæ, sive regna tria naturæ proposita per classes, ordines, genera & species* (Leiden: Theodor Haak, 1735), 10.

[35] Douglas, "Climate to Crania," 36. The differentiation of *Anthropomorpha* based on the anthropoids' separate fingers and nails goes back to John Ray's classification of animals in 1693. Broberg, "Linnaeus's Classification of Man," 164, 168–69.

[36] Volker Schurig, "Konkurrierende Begründungen einer Sonderstellung der Anthropologie im System der Biowissenschaften," in *Physische Anthropologie – Biologie des Menschen,* ed. Michael Kaasch, Joachim Kaasch and Nicolaas A. Rupke (Berlin: Verlag für Wissenschaft und Bildung, 2007), 30.

[37] Bowler, *Evolution*, 51; Stepan, *Idea of Race*, 7. On Linnaeus's positioning of man above the animal due to human intellect and the reception of his man-ape classing see Broberg, "Linnaeus's Classification of Man," 170–75.

[38] Linnæi, *Systema Naturæ* (1735), 10.

[39] Broberg, "Linnaeus's Classification of Man," 172.

[40] Bowler, *Evolution*, 51, 69; Arthur O. Lovejoy, *The Great Chain of Being. A Study of the History of an Idea* (New York: Harper & Row Publishers, 1965), 234, 361n16.

[41] Stepan, *Idea of Race*, 7; Broberg, "Linnaeus's Classification of Man," 167.

[42] Linnæi, *Systema Naturæ* (1735), 10.

man varieties).[43] Eventually, by the tenth edition of 1758/9, in response to some of the criticism that his labelling and classing had received, Linnaeus significantly altered several aspects of his *Homo* classification. Abandoning the *Quadrupedia* criteria, he replaced it with that of *Mammalia* (mammals) and, acknowledging that by definition neither humans nor sloths nor bats could in fact be "human-like," he redefined his previous *Anthropomorpha* into *Primates.*[44]

Although *Homo* as a species remained the pinnacle of the primates, Linnaeus now distinguished two different sorts. Existing on the boundary to apes, *Homo Troglodytes* or *Homo nocturnus* (cave-dwelling man) constituted the first class.[45] He defined the second class *Homo sapiens* or *diurnus,*[46] now doubly as "wise" or "knowing man" by the reiteration of the dictum *nosce te ipsum* and the label *sapiens*.[47] Furthermore, Linnaeus's four human variations were now additionally defined according to cultural and geographical markers (*varians cultura, loco*) and their reportedly physical appearances and temperamental, intellectual and moral characteristics.[48] Accordingly, he defined Americans as choleric, upright, capable of invention and ruled by habit and Europeans as sanguine, muscular and governed by law or custom. Linnaeus's pompous arrogant Asians were melancholic, stiff and ruled by belief, while he saw Africans as cunning, phlegmatic and governed by caprice.[49] As Stephen Gould has noted, by this reference to

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[43] Sommer, "Entstehung des Rassenbegriffs," 145.

[44] Broberg, "Linnaeus's Classification of Man," 175.

[45] Caroli Linnæi, *Systema naturæ, per regna tria naturæ, secundum classes, ordines, genera, species, cum characteribus, differentiis, synonymis, locis*. Vol 1. 10th rev. ed. (Holmiæ: Laurentii Salvii, 1758), 24. Linnaeus also named it "Homo sylvestris Orang Outang" and "Kakulacko" or cockroach, which was a denigrating term used until the late nineteenth century for humans with achromia ("albinism"). For more detail on Homo Troglodytes see Broberg, "Linnaeus's Classification of Man," 176–93.

[46] Linnæi, *Systema Naturæ* (1758), 20.

[47] Broberg, "Linnaeus's Classification of Man," 176.

[48] Linnæi, *Systema Naturæ* (1758), 20. He defined two more human varieties: "wild men" (*Homo Sapiens Ferus*) referring to cases of abandoned children found in the woods (such as "Peter the Wild Boy") and *Homo Sapiens Monstrosus*, fabulous creatures and unusually shaped humans. Meijer has identified these as "Mountaineers" (uniformly shaped mountaineers with one leg shorter than the other), mythical "Patagonian giants," "Hottentots," presumed naturally beardless Americans, Canadians and Chinese whose heads appeared deformed by artificial means. Miriam Claude Meijer, *Race and Aesthetics in the Anthropology of Petrus Camper (1722-1789)* (Amsterdam: Rodopi, 1999), 157. See also Bitterli, *Die Wilden und Zivilisierten*, 333; Hoßfeld, *Geschichte der biologischen Anthropologie*, 59 and Douglas, "Climate to Crania," 36.

[49] Linnæi, *Systema Naturæ* (1758), 20–22; Bernasconi, "Who Invented the Concept," 15; Gould, *Mismeasure of Man*, 402–5; Sommer, "Entstehung des Rassenbegriffs," 145; Cressida Fforde, *Collecting the Dead: Archaeology and the Reburial Issue* (London: Duckworth, 2004), 7 and Bitterli, *Die Wilden und Zivilisierten,* 332.

the Ancients' and medieval humours, Linnaeus clearly abandoned his empirical approach and "bowed to classical taxonomic theories rather than his own observations."[50]

Compared to the large amount of information he gathered for the systematisation of plants and animals, Linnaeus merely summarised the classification of humanity.[51] His "rough illustration"[52] of human races nonetheless presents a significant event in the history of racial thought – not least because Blumenbach based his taxonomy on Linnaeus's model. While his taxonomy, as it were, reduced the human to being part of the animal kingdom, it also introduced non-physical criteria to the identification of human variation that evaluated differences in morality and culture. As Robert Bernasconi has concluded, Linnaeus "certainly contributed to what would subsequently become race thinking"[53] by linking physical with cultural and social elements. He thereby created character descriptions for the *Homo sapiens* varieties that were "clearly derived in large part from negative stereotypes"[54] about non-Europeans already existent in his times.[55]

Comte de Buffon's *espèces*

Linnaeus's contemporary, the French naturalist Georges-Louis Leclerc, Comte de Buffon (1707-1788), was the first to define species within a concept of fertile sexual reproduction.[56] On the one hand, as Douglas has stated, he thereby "transformed the previously abstract category *espèces* ... by insisting on its 'real existence' and material historical continuity"[57] and redefined Linnaeus's "genus" into his own "species."[58] On the other hand, Buffon did not define "races", types, breeds or varieties because, to him, these groupings presented merely inter-fertile sub-categories that could vary to a certain extent within their respective species type.[59]

Arguing within the concept of the Great Chain of Being, Buffon insisted that the earth's phenomena differed only gradually from the highest organised life form down to

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[50] Gould, *Mismeasure of Man*, 404.

[51] Bitterli, *Die Wilden und Zivilisierten*, 332.

[52] Ibid., 214.

[53] Bernasconi, "Who Invented the Concept," 15.

[54] Ibid.

[55] Gould has also commented on Linnaeus's "conventional racist ranking." Gould, *Mismeasure of Man*, 405. See also Sommer, "Entstehung des Rassenbegriffs," 145.

[56] Bowler, *Evolution*, 76; Bernasconi, "Who Invented the Concept," 16; John S. Wilkins, *Species. A History of the Idea* (Berkeley: University of California Press, 2009), 77.

[57] Douglas, "Climate to Crania," 36, 58–59.

[58] Bowler, *Evolution*, 78; Wilkins, *Species*, 78.

[59] Bernasconi, "Who Invented the Concept," 16.

the lowest, inanimate matter. All living creatures thus essentially represented intermediates between other forms, rendering futile any attempt to systematically classify them.[60] Buffon "favour[ed] 'facts' and 'induction' over 'system'"[61] and sharply criticised the Linnaean system as arbitrarily artificial, relating to neither nature nor reality.[62] Rather than simply classify, he aimed at the description, understanding and explanation of life's phenomena.[63] The result was the publication of his widely read encyclopaedic *Histoire Naturelle.*[64]

In contrast to Linnaeus, Buffon was critical of the concept of heavenly designed creation; in his view, the generation of life could not be explained by divine powers.[65] Allowing for a larger timeframe for the world's geological existence than the biblical creation account of 6000 years, he regarded Genesis as symbolic rather than a real historic event.[66] Instead, he suggested a materialistic alternative, already popular at the time, of spontaneous generation through the invigorating arrangement of a mass of disorganised particles.[67] Buffon argued that the earth underwent a series of distinct temperature stages in the process of cooling down, during which several instances of spontaneous generation occurred throughout long periods of time. During each cooling down phase, the earth was inhabited by a set of species that were specifically adapted to its current temperature. No longer suited to a changing environment due to the continuing temperature decrease, these species eventually vanished. Consequently, through the processes of spontaneous generation a new set of species, innately adapted to the cooler temperatures, replaced them.[68] Thus, each ancestral form of a species had no parent organisms.

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[60] Wilkins, *Species*, 75.

[61] Douglas, "Climate to Crania," 99.

[62] Bernasconi, "Who Invented the Concept," 16–17; Bowler, *Evolution*, 76; Bitterli, *Die Wilden und Zivilisierten,* 337; Douglas, "Climate to Crania," 36; Wilkins, *Species*, 75.

[63] Frank William Peter Dougherty, "Buffons Bedeutung für die Entwicklung des anthropologischen Denkens im Deutschland der zweiten Hälfte des 18. Jahrhunderts," in *Die Natur des Menschen: Probleme der Physischen Anthropologie und Rassenkunde (1750-1850)*, ed. Gunter Mann, Jost Benedum and Werner F. Kümmel (Stuttgart: Gustav Fischer Verlag, 1990), 229.

[64] Bernasconi, "Who Invented the Concept," 16; Meijer, *Race and Aesthetics*, 78.

[65] Bowler, *Evolution*, 75–77, 80–81; Meijer, *Race and Aesthetics*, 153.

[66] Meijer, *Race and Aesthetics*, 66.

[67] Bowler, *Evolution*, 80.

[68] Ibid., 79; Meijer, *Race and Aesthetics*, 66.

Peter J. Bowler has pointed out that, although Buffon was "hostile"[69] to the idea of divinely designed creation, he linked his mechanist model to the concept of a predetermined pattern that prohibited the chaotic emergence of species.[70] Accordingly, an inherent non-material "internal mould" secured the perpetual regeneration of the distinct characteristics of fixed species by organising the parental organic particles to the respective and specific embryonic form of their offspring.[71] Buffon's concept of species, however, changed throughout his life, rendering his proclaimed fixity of species contradictory to his concept of fluent continuity.[72] In the early volumes of *Histoire Naturelle* he insisted on the fixity of species whose relations were physical but did not suggest any sort of genetic or evolutionary connection. But, by 1766, Buffon had changed his view, now regarding physically similar species as derived from an original common ancestral form. Due to their migration to different environments ensuing generations had changed or, in Buffon's terminology, "degenerated." This concept, according to Bowler, has wrongly been interpreted as a precursor to Darwin's concept of evolution since Buffon's theory was not a developmental scheme in which one species evolved from another. Rather, it presented an "early account for organic change"[73] that was limited by the specific internal mould.[74] Provided the "degenerated" organism or variety returned to its original climatic environment, its changes in form were not permanent but reversible.[75]

Buffon included the natural history of the human species in the third volume of his eminent work *Histoire Naturelle*, published in 1749, where he explained the nature and causes for human differences and similarities in the essay "Variétés dans l'espèce humaine" ("Of the Varieties of the Human Species"[76]). Like Linnaeus, Buffon saw humans as part of the animal kingdom, but he rejected outright their being classed with apes.[77] Although he accepted that both presented upright walking bipeds,[78] he closely related intelligence and the capacity for speech as phenomena that made humans

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[69] Bowler, *Evolution*, 75.

[70] Ibid., 75–76, 80–81.

[71] Ibid., 77; Wilkins, *Species*, 76.

[72] Wilkins, *Species*, 77.

[73] Bowler, *Evolution*, 19–20, 75.

[74] Ibid., 77–81.

[75] Wilkins, *Species*, 77.

[76] William Smellie, *Natural History General and Particular by the Count of Buffon* (London: Strahan and Cadell, 1871), 57–207. I would like to sincerely thank Francis Moran (New Jersey City University) for providing me with pdf-files of the relevant parts of his transcription.

[77] Bowler, *Evolution*, 51.

[78] Meijer, *Race and Aesthetics*, 126–27.

unique.[79] Accordingly, as they lacked reason and were thus incapable of speaking, apes could never be considered human.[80]

Additionally, Buffon's species rule discredited the alleged occurrence of human-ape procreation. Buffon defined animal species by their capacity for the sexual reproduction of fertile offspring that over generations produced the same type of organism.[81] Applied to humanity, this interfertility rule not only rebuffed then frequently reiterated reports about the production of offspring between African women and apes,[82] but also meant that all human varieties, by their ability to interbreed and produce fertile progeny, belonged to the same species.[83] In accordance with his concept of serial spontaneous generations, even of higher organisms, the original human species was part of the most recent stage of life on earth.[84] Buffon believed that in the Asian and northern latitudes extraordinarily-sized humans and quadrupedal animals emerged simultaneously. Over many generations, their descendants deviated from their original ancestral form as they migrated to new geographical locations with changed environments. Modern humans thus retained their monogenetic origin, but they degenerated into smaller variations of their ancestral form. In response to different climates, foods and ways of life they slowly developed their respective racial traits.[85] Similar to Linnaeus, Buffon identified these human races on the basis of skin colouration. But, unlike Linnaeus, he also offered external causes for variations in skin shade. Most importantly, the climate with its specific air temperatures in different geographical locations caused different skin colours – that is to say, the hotter the climate, the darker a race's skin became.[86]

This explanation of different skin colouration entailed consequences for the argument relating to the physical nature of the original humans, the kind of physical change they underwent and the original geographical location of specific human races. It premised a white-skinned ancestral species that was generated spontaneously in temperate

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[79] Douglas, "Climate to Crania," 36; Bowler, *Evolution*, 51.

[80] Meijer, *Race and Aesthetics*, 135–36.

[81] Wilkins, *Species*, 76–77.

[82] Meijer, *Race and Aesthetics*, 124–25.

[83] Bernasconi, "Who Invented the Concept," 19; Douglas, "Climate to Crania," 58–60; Sommer, "Entstehung des Rassenbegriffs," 146; Meijer, *Race and Aesthetics*, 80.

[84] Bowler, *Evolution*, 57, 80; Meijer, *Race and Aesthetics*, 66.

[85] Bernasconi, "Who Invented the Concept," 16; Douglas, "Climate to Crania," 36–37; Meijer, *Race and Aesthetics*, 78; Dougherty, "Buffons Bedeutung," 228.

[86] Douglas, "Climate to Crania," 36; Hoßfeld, *Geschichte der biologischen Anthropologie*, 60; Bitterli, *Die Wilden und Zivilisierten*, 349–50.

zones. Its subsequent generations then remained white, except for those that emigrated to warmer regions and thereby acquired darker skins. This gradual transition from light to dark skin was linked to Buffon's racial evaluation. He asserted, for example, the superiority of Europeans in beauty, whiteness and physique to the extent that he claimed only the "white race" was truly human.[87]

According to Douglas, "notwithstanding his presumption of an overarching human division into 'the white race' and 'the race of the blacks,' his vaunting of 'the most white,' [and] his absolute denigration of Negroes,"[88] Buffon's concept of gradual change at the same time meant that human physical differences "dissolved into overlapping 'varieties' and 'nuances'."[89] In this respect, Buffon was consistent in refraining from defining a distinct number of human varieties, although many succeeding naturalists, such as Blumenbach and Darwin, read him as having devised six human races.[90] James Bindon has shown that Buffon, to the contrary, "never classified humans into six races,"[91] but used the term "race" in various undetermined ways. Bernasconi, too, has put emphasis on Buffon's inconsistent and undefined uses of the terms "types," "breeds" or "races" for the human kind. He thus "demonstrated no clear commitment to the terminology of race, still less an interest in clarifying its theoretical status."[92] Similarly, Douglas has convincingly argued, that Buffon was not overly concerned with this kind of systematic classification and rather tried to tackle the "conundrum of unity in diversity"[93] posed by humanity's obvious variability. On the one hand, he insisted on the unity of *l'espèce humaine* (the human species) and, on the other hand, he catalogued the ambiguous in-

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[87] Sommer, "Entstehung des Rassenbegriffs," 147; Douglas, "Climate to Crania," 61; Bronwen Douglas, "'Novus Orbis Australis': Oceania in the Science of Race, 1750-1850," in *Foreign Bodies: Oceania and the Sciences of Race 1750-1940*, ed. Bronwen Douglas and Chris Ballard (Canberra: ANU Press, 2008), 102 and Meijer, *Race and Aesthetics*, 83.

[88] Douglas, "Novus Orbis Australis," 102.

[89] Ibid.; Douglas, "Climate to Crania," 36.

[90] Douglas, "Novus Orbis Australis", 101.

[91] James Bindon, "Darwin's Borrowed Allegory and the Apocryphal; Six Races of Buffon." http://anthropology.ua.edu/blogs/bindon/2015/02/17/darwins-allegory-and-the-apocryphal-six-races-of-buffon/. Bernasconi has noted that Ashley Montagu in his fundamental work on *The Concept of Race* also referred to Buffon's "six groups of man." Bernasconi, "Who Invented the Concept," 17. Hoßfeld recently has listed six Buffonian races (Laplanders, Mongolians Southasians, Europeans, Ethiopians and Americans). Hoßfeld, *Geschichte der biologischen Anthropologie*, 61.

[92] Bernasconi, "Who Invented the Concept," 16.

[93] Douglas, "Climate to Crania," 44.

formation on human differences by describing the nuances of transitional kinds, varieties, nations or *les espèces d'hommes* (races of humans).[94]

A pivotal reason for Buffon's resistance to defining anything beyond *espèces* lies in his belief that the physical degenerations from the original human form were not permanent; in other words, racial traits were (at least theoretically) reversible to their original ancestral appearance.[95] For example, in his 1749 essay on human diversity, he suggested that Africans living in colder climates would, possibly, turn white (again) in their eighth to twelfth generation.[96] And in 1766, in an essay on the "degeneration of animals," he explained the reversion to the internal mould, which preserved the original, specific human characteristics as inherent core or germ in each human variety.[97] Accordingly, even those characteristics that eventually turned into inheritable racial traits, as a result of exposure to the environment and racial intermixture over many generations, remained essentially external and artificial.[98] Buffon still expected different human forms to revert to the "original traits, primitive height and natural [white] colour"[99] if they were exposed to the respective climatic conditions or intermixed continuously with white races for a sufficient period of time. Racial mixing, he argued, had reversing effects in a much quicker sequence.[100]

As Douglas has noted, "it was the multiplicity of actual human 'differences' which most impressed Buffon,"[101] leading him to describe all sorts of human populations based on contemporary travellers' accounts. In contrast to Bernier and Linnaeus, who assigned their human races to certain continents, Buffon's causal link between climate, latitude and skin colour also linked human populations that lived on distant continents. To argue for the external causes of physical difference he referred to the inhabitants of

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[94] Douglas, "Novus Orbis Australis", 101; Douglas, "Climate to Crania," 36–37, 44.

[95] Douglas, "Climate to Crania, 37, 39; Sommer, "Entstehung des Rassenbegriffs," 146; Stepan, *Idea of Race*, 36; Bitterli, *Die Wilden und Zivilisierten*, 327; Bowler, *Evolution*, 79.

[96] Georges-Louis Leclerc, Comte de Buffon, "Variétés dans l'espèce humaine," in *Histoire Naturelle générale et particulière, avec la description du Cabinet du Roy* Vol 3 (Paris: L'Imprimerie Royale, 1749), 523–24.

[97] Georges-Louis Leclerc, Comte de Buffon, "De la dégénération des animaux," in *Histoire Naturelle générale et particulière, avec la description du Cabinet du Roy* Vol 14 (Paris: L'Imprimerie Royale, 1766), 313.

[98] Ibid., 311.

[99] Ibid., 313.

[100] Ibid. See also Douglas, "Climate to Crania," 61; Douglas, "Novus Orbis Australis," 102; Hoßfeld, *Geschichte der biologischen Anthropologie*, 61n29; Meijer, *Race and Aesthetics*, 83, 169.

[101] Douglas, "Novus Orbis Australis," 102.

Southeast Africa and the Australian continent, essentially finding they presented *les mêmes espèces d'hommes* (the same human races):

> In New Holland, which is not so hot a climate, the natives are less black, and very similar to the Hottentots. Do not these Negroes and Hottentots, who live so remote from the other people distinguished by that appellation, prove that their colour depends on the heat of the climate? No communication can ever be supposed to have taken place between Africa and this southern continent; and yet we find there the same species of men because the same circumstances concur in producing the same degree of heat.[102]

For this argument, Buffon drew on the sole available literary source on Australia's inhabitants at the time, the British world circumnavigator William Dampier's (1652-1715) travel narrative *A New Voyage Round the World*, published in 1699. Buffon paraphrased Dampier's notorious (and still famous and frequently cited) verdict by describing the New Hollanders as the "possibly most miserable people of all humans who most closely approached the animals."[103] As they also informed Kant's and, more significantly, Blumenbach's views about Australian Aborigines, I shall return below to Dampier's "harsh words about the people of New Holland"[104] who allegedly lacked any sign of material or moral culture.[105] As Douglas has stated with regard to Buffon's New Holland "Negroes," the French naturalist made "an early statement of a commonplace nexus drawn by Europeans between lifestyle, material desires, and alleged lack of perfectibility, very often to the detriment of Aboriginal Australians."[106] Buffon, nevertheless, saw in New Hollanders only one example among many others, showing that in Oceania there were a multitude of "degenerated" human appearances within the one *espèce humaine*.[107]

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[102] This is the English translation by Smellie, *Natural History of Buffon*, 198. Buffon's original passage reads as follows: "Dans la nouvelle Hollande où l'ardeur du climat n'est pas si grande, parce que cette terre commence à s'éloigner de l'équateur, on retrouve des peuples moins noirs & assez semblables aux Hottentots; ces Nègres & ces Hottentots que l'on trouve sous la même latitude, à une si grande distance des autres Nègres & des autres Hottentots, ne prouvent-ils pas que leur couleur ne dépend que de l'ardeur du climat? car on ne peut pas soupçonner qu'il y ait jamais eu de communication de l'Afrique à ce continent austral, & cependant on y retrouve les mêmes espèces d'hommes parce qu'on y trouve les circonstances qui peuvent occasionner les mêmes degrés de chaleur." Buffon, "Variétés dans l'espèce humaine," 520–21. See also Meijer, *Race and Aesthetics*, 78.

[103] Buffon, "Variétés dans l'espèce humaine," 408.

[104] Douglas, "Novus Orbis Australis," 101–2.

[105] Refer to the next part of this chapter on Kant's scientific concept of race and, in detail, Chapter 3 on Blumenbach's *Neuholländer*.

[106] Douglas, "Novus Orbis Australis," 101–2.

[107] Ibid., 102; Meijer, *Race and Aesthetics*, 80.

Buffon's *Histoire Naturelle* strongly influenced German scholars' views on the nature of humanity because it quasi-scientifically defined the species concept based on observation and contextualisation. Methodologically, physical phenomena became thereby explicable as effects of general natural laws that had little to do with transcendental explanations of humanity. Accordingly, Buffon's species rule was readily accepted by natural scientists concerned with anthropological questions, such as Kant and Blumenbach, because it enabled them to define the human kind and its variability, both taxonomically and as an experimentally testable phenomenon.[108]

2.2 Immanuel Kant's scientific concept of race

The turn towards a more "scientific" definition and explanation of human diversity occurred at the end of the European Enlightenment era through Kant's philosophical thought and Blumenbach's physical anthropological work. Both published their initial deliberations independently in 1775 in defence of their belief in humankind's monogenetic origin, which they shared with most of their German contemporaries.[109] Arguing against the rise of polygenism they, like Buffon, became nevertheless caught up in and tried to escape from the "conundrum of unity in diversity."[110] Kant, for example, strongly asserted humanity's monogenetic origin, arguing that "the greatest end of human destiny"[111] – civilisation – was achievable only if humankind had originated from one couple. Kant and Blumenbach are widely regarded as the most significant contributors to "the German invention of race"[112] because they provided the methodological and argumentative foundation for the transformation of a collection of hitherto blurry and am-

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[108] Dougherty, "Buffons Bedeutung," 222–29.

[109] John H. Zammito, "Policing Polygeneticism in Germany, 1775: (Kames,) Kant and Blumenbach," in Eigen and Larrimore, *The German Invention of Race*, 35; Bernasconi, "Unfamiliar Source of Racism," 155. Unless stated otherwise, I refer to the *Akademie Ausgabe Kant's Gesammelte Schriften* published in electronic form at korpora.org. http://korpora.zim.uni-due.de/Kant/. With the exception of *Immanuel Kants Physische Geographie*, which to my knowledge has not yet been translated in full and his notes on the "character of race", which are part of the "Reflexionen zur Anthropologie" in the 15th volume of the *Akademie Ausgabe*, I cite recent published English translations of Kant's work. References in square brackets denote the German orginal.

[110] Douglas, "Climate to Crania," 44. See also Gudrun Hentges, *Schattenseiten der Aufklärung. Die Darstellung von Juden und 'Wilden' in philosophischen Schriften des 18. und 19. Jahrhunderts* (Schwalbach: Wochenschauverlag, 1999), 211.

[111] Immanuel Kant, "Conjectural Beginning of Human History," in *Toward Perpetual Peace and Other Writings on Politics, Peace, and History*, ed. Pauline Kleingeld, trans. David L. Colclasure (New Haven: Yale University Press, 2006), 25, 29 [Immanuel Kant, "Muthmaßlicher Anfang der Menschengeschichte," in *Akademie Ausgabe Kant's Gesammelte Schriften* 8 (1786), 110, 115].

[112] Eigen and Larrimore, *German Invention of Race.*

biguous ideas about race into a more biological and determinist concept. Both reflected on and subsequently incorporated each other's ideas into their own theories.[113]

I shall deal with Blumenbach's work in the next chapter; in this section I shall illustrate Kant's race concept, which has gained him the reputation as "founder of the modern notion of race."[114] His introduction of necessarily hereditary racial traits to the enquiry into human difference presents a turning point in the scientific differentiation between (Buffonian) species and races. Kant's philosophical-anthropological contribution to the emerging hierarchical, scientific concept of race fundamentally informed the basic assumptions about race of mid- to late-nineteenth-century physical anthropologists – even if they did not explicitly refer to his general or anthropological theorising. The Kantian definition of race on the basis of the inheritability of fixed physical and mental characteristics, however, undeniably presented one of the main premises for their craniological and osteological investigations and conclusions.

First, however, a few words on my approach to Kantian race theory within the current debate among philosophers and historians regarding the significance of hierarchical notions of races for the evaluation of the philosopher's grander themes.[115] It is beyond the scope of this thesis to discuss Kant's general cosmopolitan philosophy. Notwithstanding, based on my own reading of Kant's texts on race, I agree with scholars such as Robert Bernasconi who has stated "in spite of Kant's avowed cosmopolitanism, … one also finds within his philosophy expressions of virulent and theoretically based racism, at a time when scientific racism was still in its infancy."[116] Indeed, Kant's ideas cannot be fully comprehended without taking into account his conviction about the inequality of races. As Jon M. Mikkelsen (who has recently published the most current English translations of Kant's major works about race) has clearly stated, "there can be no doubt about the fact that Kant was not only deeply concerned with the analysis of the concept of race but that he gave expression to views both in print and in his private notebooks that are clearly racist not only in tone but also in spirit, if not, necessarily, in ideological

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[113] On Kant's and Blumenbach's intellectual connection see Bernasconi, "Kant and Blumenbach's Polyps," 73; Bernasconi, "Unfamiliar Source of Racism," 147; Zammito, "Policing Polygeneticism," 35–36; Timothy Lenoir, *Strategy of Life. Teleology and Mechanics in Nineteenth-Century German Biology* (Chicago: University of Chicago Press, 1982), passim (especially Chapter 1 "Vital Materialism"); Douglas, "Climate to Crania," 37–40; Bernasconi, "Who Invented the Concept."

[114] Hentges, *Schattenseiten der Aufklärung*, 209.

[115] See e.g. Bernasconi, "Unfamiliar Source of Racism"; Stuart Elden and Eduardo Mendieta, *Reading Kant's Geography* (New York: State University of New York Press, 2011).

[116] Bernasconi, "Unfamiliar Source of Racism."

intent."[117] Bernasconi, Mikkelsen and others (such as Emmanuel Chukwudi Eze, Wulf D. Hund, Stuart Mills and Gudrun Hentges) have offered persuasive analyses of Kant's hierarchical deliberations on human difference. They have shown that Kant's racism strongly qualifies his cosmopolitan philosophy, arguing that it attributes civilisation exclusively to ideas of progress, perfectibility and moral of his own white race while denigrating, to different degrees, all others.[118] Therefore, a dichotomous relationship between Kantian cosmopolitanism and race theory does not exist. Quite the opposite: Kant's exclusionist definition of human progress (and indeed fully developed humanness) resolve the apparent antagonism between, on the one side, his declaration of human unity and equality and, on the other, his deterministic theory of inheritable race inequality that excludes all non-whites from achieving true civilisation.

In order to contextualise his concept of permanent race formation, Kant's ideas about the adequate investigation of living phenomena by the principle of purposiveness and his philosophy of civilisation need to be taken into account. Based on his major anthropological texts, I shall therefore demonstrate how Kant construed his hierarchical race theory on the basis of his germ theory and his philosophy of human progress. Both were strongly embedded in his aesthetically, culturally and morally grounded preference for his white race – and his equally strong disdain for non-whites.[119]

Kant's *Menschenracen*

Kant differentiated between the natural and the construed spheres of human knowledge. On the one side, the human mind construed the, basically Linnaean, artificial *Schuleintheilung*[120] (scholastic division) with the aim to recognise, order and label different classes of organisms according to their observable physical similarities. On the other

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[117] Jon M. Mikkelsen, "Translator's Introduction," in *Kant and the Concept of Race. Late Eighteenth-Century Writings*, trans., ed. Jon M. Mikkelsen (New York: State University of New York Press, 2013), 3.

[118] Bernasconi, "Unfamiliar Source of Racism"; Mikkelsen, *Kant Concept of Race*; Eze, "The Color of Reason"; Charles W. Mills, "Kant's Untermenschen," in *Race and Racism in Modern Philosophy*, ed. Andrew Valls (New York: Cornell University Press, 2005), 169–93; Wulf. D. Hund, "'It must come from Europe'. The Racisms of Immanuel Kant," in *Racisms Made in Germany*, ed. Wulf D. Hund, Christian Koller and Moshe Zimmermann (Berlin: LIT-Verlag, 2011), 69–98; Hentges, *Schattenseiten der Aufklärung*. See also Todd Hedrick, "Race, Difference, and Anthropology in Kant's Cosmopolitanism," *Journal of the History of Philosophy* 46, no. 2 (April 2008): 245–68.

[119] Hund, "Racisms of Kant," 80.

[120] Immanuel Kant, "Of the Different Human Races (1777)," in Mikkelsen, *Kant Concept of Race*, 59 [Immanuel Kant, "Von den verschiedenen Racen der Menschen, zur Ankündigung der Vorlesungen der Physischen Geographie im Sommerhalbjahr 1775," in *Akademie Ausgabe Kant's Gesammelte Schriften* 2 (1775), 429].

side, the *Natursystem* or *Natureintheilung* (natural system or division) operated on the basis of universal natural laws, which were derivable by human reason through observation.[121] Kant thought that the human mind was limited to understanding the mechanical means and linear causal principles underlying physical and chemical phenomena. Living phenomena, however, resulted from complex interdependences of causes and effects; that is to say, they were both cause and effect in one. Firstly, an organism generated and maintained itself as a living thing; and secondly, each of its parts was essential in relation to its own and its species' existence.[122] Therefore, the nature and reasons for life remained beyond human comprehension.[123]

Convinced that life and the difference in life forms such as human races were coincidental,[124] Kant construed a theory about the mechanisms of life that identified organisms in a teleological model as "natural product[s] acting from a purpose."[125] The human mind was able to determine nature's living sphere as such *Naturzwecke* or natural purposes.[126] Rather than determining a physical, metaphysical or divine agent, the purposiveness of living bodies followed a formative natural principle. And although true knowledge about this purposive principle remained beyond the capacities of human reason, the regulative concept that determined the nature and existence of living things could be re-constructed. In other words, its effects such as the form and function of body parts could be investigated following the natural scientific approach to the linear relations of causes and effects.[127] German anthropologists, as Andrew Zimmerman has argued, in their rejection of romantic *Naturphilosophie* and academic humanism approached the study of nature "returning to Kant's more secular and rationalist notion of nature and natural science. ... From Kant [they] took an idea of nature as a static and objective system that could be conclusively known by scientists" and his separation of

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[121] Kant, "Von den verschiedenen Racen," 429.

[122] Joan Steigerwald, "Kant's Concept of Natural Purpose and the Reflecting Power of Judgement," *Studies in History and Philosophy of Biological and Biomedical Sciences* 37 (2006): 716–17; Philippe Huneman, "Naturalising Purpose: From Comparative Anatomy to the 'adventure of reason'," *Studies in History and Philosophy of Biological and Biomedical Sciences* 37 (2006): 652.

[123] Lenoir, *Strategy of Life*, 25–26.

[124] Kant, "Von den verschiedenen Racen," 435.

[125] Steigerwald, "Kant's Natural Purpose," 718.

[126] Ibid., 716–17. Timothy Lenoir has termed Kant's teleo-mechanist approach to the origin and formation of natural organisms "vital materialism." Lenoir, *Strategy of Life*, 25–26. For recent criticism of Lenoir's view see John H. Zammito, "The Lenoir Thesis Revisited: Blumenbach and Kant," *Studies in History and Philosophy of Biological and Biomedical Sciences* 43 (2012): 120–32.

[127] Lenoir, *Strategy of Life*, 25, 27–28.

religion from science. They did not agree, however, with "the Kantian notion of science as the a priori deduction of mathematical laws" but regarded anthropology as a truly empiricist science (following the *Naturphilosph* Friedrich Schelling's argument for empirical knowledge of nature).[128]

Thus, even if the purposes of organisms remained beyond comprehension, Kant's principle of purposiveness made the investigation of living phenomena possible: Through comparative anatomy and physiology naturalists were able to determine each body part's purpose for the functioning and survival of both the individual's and its species' entire organism in a particular environment.[129] This was achieved, Kant argued, by nature's ways "to equip her creature through hidden inner provisions for a variety of future circumstances."[130] Present in all organisms, these immaterial generative units directed the formation of organic bodies, enabling them to fulfil their purpose of adapting to their respective environments. Kant distinguished between *Keime* (seeds or germs) that were responsible for the development of specific characteristics, and *natürliche Anlagen* ("natural endowments"[131] or predispositions), which influenced their sizes and proportions. Through their *Auswickelung* ("unfolding" in the broader sense of "development"), which was prompted by an organism's environmental conditions, they eventually actualised the formation of species and races.[132]

As Emmanuel Chukwudi Eze has explained, Kant divided human nature into the "bodily, physical, external" and the "psychological, moral, internal"[133] spheres which were examinable respectively through two complementary sciences, *Physische Geographie* and *Anthropologie*. The former investigated "the human being as a physically given, [while] anthropology studie[d] the human being as a moral agent (or a 'freely acting being')."[134] Consistent with this approach, Kant's first essay on human races appeared as an announcement for his lecture on "physical geography" at the Königsberg University

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[128] Andrew Zimmerman, *Anthropology and Antihumanism in Imperial Germany* (Chicago: University of Chicago Press, 2001), 63

[129] Steigerwald, "Kant's Natural Purpose," 716.

[130] Kant, "Of the Different Human Races (1777)," 64 [Kant, "Von den verschiedenen Racen," 434].

[131] Ibid.

[132] Kant, "Von den verschiedenen Racen," 434. On Kant's theory about germs and predispositions relating to human races see also the cited works by Bernasconi, Hedrick and Hentges. See also Alix A. Cohen, "Kant on Epigenesis, Monogenesis, and Human Nature: The Biological Premises of Anthropology," *Studies in History and Philosophy of Biological and Biomedical Sciences* 37 (2006): 681–83.

[133] Eze, "Color of Reason," 105.

[134] Ibid., 106.

in 1775, with which Kant "introduced anthropology as a branch of study to the German universities."[135]

Similar to Buffon, Kant assumed that only the natural system truly represented nature's divisions of organisms because it reflected their actual "lines of descent … according to reproductive relationships."[136] Therefore, he declared "all humans everywhere on the earth belong to the same natural species, because they universally produce fertile children with one another, even if we find great dissimilarities in their form."[137] In contrast to Buffon, however, to whom the classification of human races presented no pressing concern, Kant aimed at scientifically clarifying the category "race" and classifying humans accordingly.[138] As Bernasconi has stated, "Kant was obsessed with racial diversity,"[139] in particular with humans of dark skin shade, namely Africans.[140] As shall become apparent in the course of the following pages, although Kant's *Physische Geographie* purported to relate primarily to the bodily sphere of human difference, its theme was at the same time intricately linked to his philosophical-anthropological notion of racial inequalities and hierarchies.

While Kant relied on Buffon's species rule to assert human monogenesis, his concept of fixed races entailed a mechanism that ensured the perpetuation of race characteristics rather than Buffonian reversibility to the original.[141] He additionally introduced laws of inheritability, both to explain human difference and to distinguish "genuine races"[142] from other kinds of variation.[143] Firstly, given that procreation occurred within the same race, its traits necessarily perpetuated not only in the next few generations but infinitely, even after migration to a different climate. Secondly, Kant introduced the

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[135] Ibid., 104. See also Zammito, "Policing Polygeneticism," 36. The *Akademie Ausgabe* provides the rewritten, altered version of the lecture announcement, published in 1777 as a public philosophy essay. Zammito has commented on the significance of these alterations for Kant's position towards taxonomy. Zammito, "Policing Polygeneticism," 40–43. Mikkelsen has analysed the changes in more detail. Mikkelsen, introduction to Kant, "Of the Different Human Races (1777)," in Mikkelsen, *Kant Concept of Race,* 55–59. I refer to the 1777 essay published in the *Akademie Ausgabe* and Milkkelsen's translation.

[136] Kant, "Of the Different Human Races (1777)," 59 [Kant, "Von den verschiedenen Racen," 429]. This differentiation of two spheres of classification related to Kant's fundamental distinction between natural description (*Naturbeschreibung*) and natural history (*Naturgeschichte*).

[137] Ibid., 60 [429]. See also Hentges, *Schattenseiten der Aufklärung*, 210–11.

[138] Zammito, "Policing Polygeneticism," 40.

[139] Bernasconi, "Unfamiliar Source of Racism," 161.

[140] Ibid., 155, 161.

[141] Cohen, "Kant on Epigenesis," 681.

[142] Kant, "Of the Different Human Races (1777)," 63 [Kant, "Von den verschiedenen Racen," 434].

[143] Kant, "Von den verschiedenen Racen," 442. See also Douglas, "Climate to Crania," 59 and Hentges; *Schattenseiten der Aufklärung*, 216.

concept of race-mixing, according to which parents that belonged to two different races inevitably produced fertile "half-breed offspring"[144] that presented an equal, necessarily inheritable mix of their parents' race characteristics.[145] Based on these laws, Kant distinguished *Racen* from other variations, none of which fulfilled both of his two heritability imperatives. While *Spielarten* (variations) perpetuated their racial traits, they did not produce hybrids; the characteristics of *Varietäten* (varieties) did not necessarily persist through procreation; and those of a *Schlag* (regional breed or special stock) created hybrid offspring whose blended characteristics did not perpetuate when their subsequent generations moved to different environments.[146]

Kant explained human "deviations" by attributing both the physical and mental diversification of humanity to purposive processes. Accordingly, an original human stock possessed, through its multitude of germs and natural endowments, the potential to generate all the physical characteristics and degrees of intellectual capacity that its future diversifying generations needed in order to cope with "every climate and any condition of the land." The climate (that is, the degree of exposure to the sun and air temperature) most importantly initiated hidden dispositions to "be ... either developed or held back" for the perfect adjustment to the developing races' respective new environments.[147] Once each of Kant's races had over many generations fully adapted to its environmental conditions, all formative forces were eternally "stifled."[148] The environment's formative effects were therefore limited to the initial phases of race formation; henceforth, the environment could only superficially influence the physical appearances of individuals but not those that had "take[n] root"[149] in a permanent race. Thus – unlike Buffonian internal moulds, germs and the reversible environmental impact on race formation – Kant's germs and predispositions produced fixed races on which the environment had little impact.[150] For example, Kant's "Kalmuck" race adapted to the environment of the northern polar regions by developing physical characteristics that protected them from the cold,

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[144] Kant, "Of the Different Human Races (1777)," 60 [Kant, "Von den verschiedenen Racen," 430]. Kant also called mixed-race varieties *Halbschlächtige*, *Blendlinge* or *Mittelschlag*.

[145] See also Bernasconi, "Unfamiliar Source of Racism," 146.

[146] Kant, "Von den verschiedenen Racen," 430. See also Immanuel Kant, "Über den Gebrauch teleologischer Principien in der Philosophie," in *Akademie Ausgabe Kant's Gesammelte Schriften* 8 (1788), 164; Bernasconi, "Unfamiliar Source of Racism," 156; Douglas, "Climate to Crania," 40.

[147] Kant, "Of the Different Human Races (1777)," 65 [Kant, "Von den verschiedenen Racen," 435].

[148] Ibid., 70 [442].

[149] Ibid., 66 [437].

[150] Douglas, "Climate to Crania," 59; Bernasconi, "Who Invented the Concept," 23; Hentges, *Schattenseiten der Aufklärung*, 213, 216.

dry climate of their environment. That is why, according to Kant, they exhibited short body height and limbs, their growth of body hair was limited to the head, they had flat faces with "bulging, elevated area[s]" under their "half-closed and blinking eyes."[151] The "Kalmuckish" face shape had in a long series of procreations in the same climate "take[n] root" as "an enduring race."[152]

According to John H. Zammito, who has reconstructed the 1775 version of "Von den verschiedenen Racen" and compared it to that of 1777, Kant initially referred to a variety of physical features as racial markers, such as facial characteristics and stature. By 1777, however, in acknowledgement that "it alone held prospect of sustaining his theory of hybridity,"[153] he limited his race criteria to skin colouration as the most visible of all human differences. Accordingly, different skin colours developed through the unfolding or inhibition of certain germs during the process of race formation with the natural purpose of adaptation to the environment.[154] Once permanently manifested, a race's particular skin colour perpetuated itself infinitely in subsequent generations even after they migrated to other climates. Through this mechanism Kant could explain a startling inconsistency in previously proposed environmental explanations of skin colour differences; namely, the well-known fact that, for example, Europeans did not turn dark in the tropics.[155]

Combining his hereditarian principles with Linnaeus's skin colour classification, Kant designated four human races. In 1775, he delineated "(1) the race of whites; (2) the Negro race; (3) the Hunnish race (Mongolish or Kalmuckish); and (4) the Hinduish or Hindustanish, race."[156] At this point in time, Kant regarded Native Americans as a not fully established part of his Hunnish race – as Hentges has noted, this classification was ambiguous when he argued for the fixity of his four races while at the same time elabo-

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[151] Kant, "Of the Different Human Races (1777)," 66 [Kant, "Von den verschiedenen Racen," 436].

[152] Ibid.

[153] Zammito, "Policing Polygeneticism," 42, 51n41.

[154] Cohen, "Kant on Epigenesis," 683.

[155] Bernasconi, "Unfamiliar Source of Racism," 155, 156; Immanuel Kant, *Immanuel Kants Physische Geographie*, in *Akademie Ausgabe Kant's Gesammelte Schriften* 9 (1802), 313.

[156] Kant, "Of the Different Human Races (1775)," 47 [Kant, "Von den verschiedenen Racen," 432]. The white race comprised of Europeans and fair-skinned populations living in the African and South east Asian proximity of the Mediterranean Seas and western Asians. Blacks inhabited Africa, including its northern hemisphere areas, and New Guinea in the Southern Seas, Huns populated East Asia and Kant's Hindus lived on the Indian subcontinent. On Kantian race taxonomy see also, e.g., Hentges, *Schattenseiten der Aufklärung*, 212; Wulf D. Hund, "Die Körper der Bilder der Rassen. Wissenschaftliche Leichenschändung und rassistische Entfremdung," in *Entfremdete Körper. Rassismus als Leichenschändung*, ed. Wulf. D. Hund (Bielefeld: Transcript, 2009), 33.

rating on half-developed races that were still in the making.[157] Two years later, however, Native Americans took the place of the Mongolians.[158] From now on, Kant's races comprised of "noble blond" Northern Europeans, "copper red" Americans, "black" Senegambians and "olive-yellow" Indians.[159] To prove both their reality as "genuine races" and the validity of his hybridisation principle (that is, the production of "half-breeds"), Kant also delineated the results of "mixed matings." Accordingly, their parent races "le[ft] their mark invariably" in the "yellow mestizo," the "black Carib," and the brown "mulattoes," all of whom passed on their blended skin colours but did not constitute new races.[160] It was this principle that led to the eviction of the Mongolians from his race chart because they, as Kant had read, did not comply with his hybridisation criteria when mixing with Russian populations.[161] In another instance, Kant envisioned a quasi-laboratory breeding experiment. Unsure whether South Sea Islanders' skin of "mahogany timber colour" resulted from environmental influences or represented a racial characteristic, he imagined the removal of a couple from their country to the European climate, surmising their child would "reveal, without ambiguity," their "natural" skin colour.[162]

The philosopher further explained the differentiation into white, black, yellow and red skin shades during adaptive processes to a race's particular climatic and atmospheric environment by a variety of chemistry-inspired theories. In 1775/1777, he believed the capacity to transport atmospheric iron particles, acids and other substances in the blood determined skin colouration.[163] The more of those substances needed to be transported in the blood, the more their particular hue shone through a race's skin. It did not escape Kant's attention, though, that the same climatic conditions in distant parts of the world had produced different skin colours. He therefore additionally argued with the "juice

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[157] Hentges, *Schattenseiten der Aufklärung*, 216.

[158] Kant, "Von den verschiedenen Racen," 433. See e.g. Zammito, "Policing Polygeneticism," 42; Mikkelsen, introduction to Kant, "Of the Different Human Races (1775)," 57.

[159] Kant, "Of the Different Human Races (1777)," 69–70 [Kant, "Von den verschiedenen Racen," 441].

[160] Ibid., 63 [433–34]. Kant repeated these criteria in 1785, adding that "no one has yet investigated the interbreeding of Indians with Negroes." Immanuel Kant, "Determination of the Concept of a Human Race (1785)," in Mikkelsen, *Kant Concept of Race*, 132 [Immanuel Kant, "Bestimmung des Begriffs einer Menschenrasse," in *Akademie Ausgabe Kant's Gesammelte Schriften* 8 (1785), 95]. On Kantian "results" of "race mixing" see e.g. Zammito, "Policing Polygeneticism," 41–42; Hentges, *Schattenseiten der Aufklärung*, 212–14 or Bitterli, *Die Wilden und Zivilisierten*, 346.

[161] Zammito, "Policing Polygeneticism," 42.

[162] Kant, "Determination Human Race," 130 [Kant, "Bestimmung des Begriffs Menschenrasse," 92].

[163] On Kant's Interpretation of juice, iron and phlogiston theories see Hentges, *Schattenseiten der Aufklärung*, 213–19 and, swiftly, Eze, "Color of Reason," 118.

theory," according to which different kinds of blood components turned iron into different colours. He suggested, for example, that the olive-yellow skin of his Indian race was jaundiced, caused by dry heat and basic-bilious juices in its blood.[164] The American race, as descendants of the Kalmucks, had moved south and thus been forced to adjust to varying degrees of "acidic air"[165] and iron particles in the different atmospheres on the vast American continent.[166] Americans therefore presented a variety of "red-brown"[167] skin shades, ranging between "reddish iron rust colour in the colder regions of this part of the world" and the "dark copper colour in the hotter regions."[168]

In 1785, Kant explained skin colour additionally by the "phlogiston theory." This chemical theory, already out-dated at the time, attributed the colour of natural bodies to the accumulation of hypothetical phlogiston particles through the combustion of substances.[169] In humans, Kant argued, the more phlogiston a race's blood contained and the less the blood was able to "dephlogisticize itself,"[170] the darker its skin became. Kant suggested, for example, that sea salt-laden air penetrated the skin of Americans, neutralising phlogiston and turning their "red" skin into a permanent feature of the race.[171] Unlike that of all other races, the blood of Kant's white race was not contaminated with colouring substances. Its clean "tender white skin"[172] resulted either from the "perfect mixing of juices"[173] in which iron residues could not persist, or from the lungs' capacity to completely dephlogisticize the white race's blood.

Kant's "Negro race," in contrast, was black because it was contaminated to the highest degree with blackening substances. It had emerged in the hot, humid and tissue growth stimulating African climate, resulting in "spongy" skin, "a thick turned up nose"

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[164] Kant, "Von den verschiedenen Racen," 438, 439.

[165] Kant, "Of the Different Human Races (1777)," 66 [Kant, "Von den verschiedenen Racen," 437].

[166] Kant, "Von den verschiedenen Racen," 437 and Kant, "Bestimmung des Begriffs Menschenrasse," 103–4.

[167] Kant, "Of the Different Human Races (1777)," 66 [Kant, "Von den verschiedenen Racen," 437].

[168] Ibid. See also Kant, "Bestimmung des Begriffs Menschenrasse," 104.

[169] Hentges, *Schattenseiten der Aufklärung*, 215–6.

[170] Kant, "Determination Human Race," 133 [Kant, "Bestimmung des Begriffs Menschenrasse," 103].

[171] Immanuel Kant, "Der Charakter der Rasse," Handschriftlicher Nachlaß Anthropologie. Reflexionen zur Anthropologie. Zweite Hälfte. Zweiter Theil. Die anthropologische Characteristik, in *Akademie Ausgabe Kant's Gesammelte Schriften* 15, 601, 599.

[172] Kant, "Of the Different Human Races (1777)," 69 [Kant, "Von den verschiedenen Racen," 441].

[173] Ibid. See also Eze, "Color of Reason," 118.

and "thick, fatty lips"[174] – Kant identified the latter as "sausage lips" (*Wurstlippen*). Increased grease production reduced the head hair of Africans to "wool" and, albeit insufficiently, prevented the skin from "the harmful absorption of the foul humidity" of the African environment.[175] "All Negroes stink,"[176] Kant repeatedly remarked, initially because of their transpiration of phosphorous acid due to a heightened level of iron particles in their blood, which also accounted for their black skin. Later, Kant proposed that Africans breathed phlogiston-rich air emanating from the forests and swamps he thought they lived in. Because they were incapable of removing it from their organism through breathing, Africans had to rely on their skin for the removal of the phlogiston from their bodies.[177] The insufficient removal of phlogiston was thus responsible not only for their skin's darkness through an overload of the substance in the capillaries, but also for "the strong smell of the Negroes, which cannot be avoided by means of any degree of cleanliness."[178]

Kant's conspicuous disdain for Africans clearly shows that his delineation of human races was no innocent endeavour of merely ordering and explaining the diversity of humanity by means of observation. Indeed, as Bernasconi has suggested, the great German armchair philosopher Kant (who had no first-hand experience with non-whites) "deliberately chose his sources in order to develop a most unflattering picture of the Blacks."[179] In other words, Kant based his classification on the derogative claims made by pro-slavery authors although he was well aware of their bias against Africans (and Native Americans whom he located at the very bottom of his race hierarchy).[180] Similarly, Eze has pointed out how contemporaneous Euro-centric travel literature "provided, or served to validate, Kant's worst characterizations of non-European 'races' and cultures."[181] And, as Wulf D. Hund has rightly stated, "Kant's hierarchy of the human races was underpinned culturally. Although skin colour was supposed to be hereditary, it constituted the outward projection of both inward deficiencies and the lack of ability for the

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[174] Kant, "Of the Different Human Races (1777)," 67 [Kant, "Von den verschiedenen Racen," 438]. See also Hentges, *Schattenseiten der Aufklärung*, 214–17; Hund, "Racisms of Kant," 75.

[175] Kant, "Of the Different Human Races (1777)," 67 [Kant, "Von den verschiedenen Racen," 438].

[176] Ibid.

[177] Kant, "Bestimmung des Begriffs Menschenrace," 103. See also Kant, "Der Charakter der Rasse," 599.

[178] Kant, "Determination Human Race," 139 [Kant, "Bestimmung des Begriffs Menschenrace," 103].

[179] Bernasconi, "Unfamiliar Source of Racism," 148–49.

[180] Ibid., 149.

[181] Eze, "Color of Reason," 128–29.

perfection of humanity."[182] In this sense, it will become clear below that to Kant human skin colours presented not only the most visible differences but also signified the races' different stages in the process towards truly human, or white, civilisation.

To be human or to be not quite human

"Humanity is at its greatest perfection in the race of the whites. The yellow Indians do have a meagre talent. The Negroes are far below them and at the lowest point are a part of the American peoples."[183] As this statement demonstrates, Kant linked skin colour to his assessment on progress towards the "perfection" of the highest state of civilisation. Race, in Kantian terms, thus was both a permanent physical condition and a specific social, cultural, intellectual and moral state of being. As Eze has shown in relation to Kant's definition of personhood, the destiny (or *Naturzweck*) of humankind in the philosopher's view was progress towards the civilisation stage of his white race.[184] Differentiating the human species from irrational animals, he argued that only humans were endowed with reason and self-consciousness. That meant humans exclusively had the capacity to form and exert a will onto nature and its phenomena for the satisfaction of human needs.[185] Furthermore, to Kant, human nature extended beyond intelligence and reason to morality or, as Eze has termed it, "the capacity to posit oneself as a moral agent"[186] through self-improvement.[187] Thus, transforming the Rousseauean idea of the human natural state into a state of human morality, Kant posited that it was the wilful cultivation of mental and moral "high capacities that were specific to humans."[188] However, Kant ascribed the capacity to cultivate morality and thus achieve real humanness exclusively to a certain part of humankind, namely Europeans.[189]

My comparative reading of his writings about the development of humanity and human difference also reveals this pivotal connection in Kantian race theory, between

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[182] Hund, "Racisms of Kant," 71. See also Hentges, *Schattenseiten der Aufklärung*, 217–19.

[183] Immanuel Kant, *Physical Geography*, trans. Emmanuel Chukwudi Eze and Katherine M. Faul, in *Race and the Enlightenment. A Reader*, ed. Emmanuel Chukwudi Eze (Cambridge, MA: Blackwell Publishers, 1997), 63 and Kant, *Immanuel Kants Physische Geographie*, 316. See also Hentges's remarks on Kant's negative references to inhabitants of hot climatic regions and his benevolent appreciation of those living in temperate zones. Hentges, *Schattenseiten der Aufklärung*, 217–18.

[184] Eze, "Color of Reason," 112.

[185] Ibid., 106.

[186] Ibid., 112.

[187] Ibid., 107.

[188] Ibid., 111.

[189] Hund, "Körper Bilder Rassen," 33.

physical characterisations and intellectual-moral evaluation in the context of human progress. I shall analyse this connection by relating some of Kant's writings about anthropology and physical geography to his dualistic characterisation of morality and other virtues of human civilisation on the one side, and the animal state on the other. The terminology Kant used in his 1786 essay "Muthmaßlicher Anfang der Menschengeschichte" ("Conjectural Beginning of Human History")[190] to define the human (and not quite human) state is based on the dichotomies between progress and stagnation, discipline and the surrender to passions and indulgence, industriousness and idleness. He used the same classifications for his hierarchical characterisations of human races. It will become clear that by civilisation Kant meant "white civilisation", and with the truly human state he meant that of his white race only. Therefore, in both Kant's philosophy of progress and his race theory, non-whites were not only non-civilised but, as Eze has also convincingly argued, "not properly (i.e. essentially) human."[191]

In his physical geography lectures about human difference Kant described how human races had developed from a whitish original population that lived in Eurasia's "most fortunate mixture of the influences of the colder and hotter regions."[192] Like Buffon, he located these regions in the vicinity of his own abode (between the 31st and 52nd degrees in latitude), extending them a few degrees to the north and south of the Frenchman's benevolent habitat (40th-50th). Provided with the entire range of germs and endowments, this original race was best equipped to migrate and adapt to all sorts of environments.[193] The ancestors of the white race, Kant surmised, had remained in these beneficial latitudes, retaining physical characteristics most similar to those of its original inhabitants.[194] In addition to being "more beautiful," these people were "more industrious, more humorous, more disciplined in [their] passions, more reasonable than any

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[190] Kant, "Muthmaßlicher Anfang der Menschengeschichte" and Kant, "Conjectural Beginning Human History."

[191] Eze, "Colour of Rason," 124.

[192] Kant, "Of the Different Human Races (1777)," 69 [Kant, "Von den verschiedenen Racen," 440–41]. See also Bernasconi, "Unfamiliar Source of Racism," 156.

[193] Kant, "Von den verschiedenen Racen," 441. See also Hentges, *Schattenseiten der Aufklärung*, 211, 213; Zammito, "Policing Polygeneticism," 42–43; Cohen, "Kant on Epigenesis," 683–84.

[194] Kant, "Von den verschiedenen Racen," 441.

other sort of human in the world."[195] Indeed, Kant proclaimed that his German homelands produced the "perhaps highest and most beautiful people of the continent."[196]

With even more passionate praise Kant lectured to his students about his (and their) own race as having "all the impulses of nature in affects and passions, all talents, all dispositions to culture and civilisation and can as readily obey as govern."[197] Thus, by nature, both the best physical characteristics and "all culture had begun in the north east"[198] with "the only ones who always advance to perfection."[199] It was the white race that, in order to guarantee "continual progress of the human kind,"[200] legitimately dominated, colonised and instructed all others living in savage states.[201]

In Kant's view, the "yellow Indians" with their "meagre talent"[202] approached civilisation the most. Although they were sufficiently self-disciplined to be "even-tempered" artisans, they could not achieve the intellectual level necessary for understanding science or experiencing enlightenment. Remaining eternal "students," easily governed but not governors themselves, they knew nothing of law, freedom, civilised morals or virtue.[203]

Kant's "Negroes", were capable of a degree of civilisation, if only by force and to the limited extent of "acquir[ing] the culture of slaves."[204] Claiming that "the Negro springs up well adapted to his climate," Kant suggested Africa's "humid warmth" caused not only the germs for strong growth of facial features to unfold, but also rendered Africans in general physically "strong, fleshy, nimble." Notwithstanding, the African's mental adaptation to "the ample care of his motherland" meant that, despite its physical disposition for work, the race had unfolded no such impulses beyond what was necessary for survival. That was why Kant's "Negroes" were inherently "lazy, soft and

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[195] Kant, *Immanuel Kants Physische Geographie*, 317.

[196] Ibid., 311. As Hentges has shown, Kant drew up a racial hierarchy within his white race too, with Germans, French and British at the top position for their achievements and capacities for civilisation. Hentges, *Schattenseiten der Aufklärung*, 217, 220–22.

[197] Immanuel Kant, "Entwürfe zu dem Colleg – über Anthropologie aus den 70er und 80er Jahren," in *Akademie Ausgabe Kant's Gesammelte Schriften* 15, 878.

[198] Ibid., 880.

[199] Ibid., 878.

[200] Ibid., 789.

[201] Hund, "Racisms of Kant."

[202] Kant, *Immanuel Kants Physische Geographie*, 316.

[203] Kant, "Entwürfe Colleg über Anthropologie," 877.

[204] Ibid., 877, 878.

dallying [*tändelnd*]."[205] Just like black skin, this limited inclination to work, in Kant's view, represented a permanent inherited inner disposition that did not alter in a different environment; it was inevitably ingrained in the African nature.[206] Adding to the misery was their lack of discipline, causing a multitude of unwelcome effects. As Kant wrote in his lecture notes, being "passionate and full of affect"[207] combined with a lack of restraint made them "vain, surrendering to pleasures."[208] Africans mentally remained "children, ... unable to govern themselves"[209] or their passions. While they thus could "never become genuinely civilised,"[210] their physical strength was at least brought to civilised (and civilising) use through the disciplinary force of white man's culture.[211] That is why, Kant noted, Africans were more suitable for slave work than the inhabitants of the Americas.[212]

In Kant's estimation, Americans were "at the lowest point"[213] of perfection because their temperament pointed to an overall weakness in body and phlegm in mind. In 1775, he professed that their "half-extinguished life power"[214] caused them to "suffer a lack of faculty and endurance." Therefore "red slaves" were useless for hard work even if subjected to "coercive measures."[215] Americans were "without affect and passion apart from revenge,"[216] existing in a state of "lazy independence"[217] rather than the disciplined, reasoned freedom of the white race. Due to their general carelessness, Kant stated, Americans "do not speak, love nothing, do not provide for the future."[218] In 1788, Kant reiterated the American race's alleged incapacity for labour. This time, however, they were not only incapable of hard physical work but also "too indifferent for diligent" activity. Thus, "despite the proximity of example and ample encouragement" by

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[205] Kant, "Of the Different Human Races (1777)," 67 [Kant, "Von den verschiedenen Racen," 438].
[206] Kant, "Gebrauch teleologischer Prinzipien," 174n.
[207] Kant, "Entwürfe Colleg über Anthropologie," 877.
[208] Ibid.
[209] Ibid.
[210] Ibid., 878.
[211] Bernasconi, "Unfamiliar Source of Racism," 161.
[212] Kant, "Of the Different Human Races (1777)," 333n3 [Kant, "Von den verschiedenen Racen," 438n].
[213] Kant, *Immanuel Kants Physische Geographie*, 316.
[214] Kant, "Of the Different Human Races (1777)," 67 [Kant, "Von den verschiedenen Racen," 438].
[215] Ibid., 333n3 [438n].
[216] Kant, "Entwürfe Colleg über Anthropologie," 878.
[217] Ibid.
[218] Ibid.

their European conquerors and colonisers, they were "incapable of any culture."[219] "Brute, savage, barbarian,"[220] Kant concluded, the American race remained "far below the Negro who undoubtedly holds the lowest of all remaining levels that we have designated as racial differences."[221]

In his ascription of different "temperaments" to his human races Kant used the same or very similar terminology as in his account on the beginnings of humanity. Based on his thesis that human cognition was limited to the investigation of living nature, Kant deliberately framed this account as speculative reasoning.[222] Rather than with human origins, his account concerned itself with humankind as an existing, genealogically unified life form within his philosophy of staged progression towards perfection and civilisation. Essentially, true humanness eventuated after the species emerged from the irrational animal state "into the state of freedom" under "the guardianship of nature."[223] In a first step, animal nature was governed by irrational instinct but overcome by exercising free will and choice. This articulation of human reason produced appetites and desires, which prompted the human being to act consciously against natural animal drives and inclinations[224] – as Kant termed it, the human reason created the "occasion to do injury to the voice of nature."[225] In the next step, humans wilfully exercised discipline over the natural drive to immediately satisfy their animal desires (for example, by covering the genitalia with the literal biblical fig leaf in restraint of the urgent satisfaction of sexual desire). According to Kant, this act of control presented the ultimate feat of progressing towards human civilisation. The transformation of impulsive, merely physical allure into abstract notions of beauty and love, he claimed, constituted essentially the civilised, human creature of morality and respect. This self-acquired freedom,

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[219] Immanuel Kant, "On the Use of Teleological Principles in Philosophy (1788)," in Mikkelsen, *Kant Concept of Race*, 186 [Kant, "Gebrauch teleologischer Prinzipien," 176]. On the alleged incapacity of Native Americans to acquire civilisation see also Kant, "Entwürfe Colleg Anthropologie," 878 and Bernasconi, "Unfamiliar Source of Racism," 148.

[220] Kant, "Entwürfe Colleg über Anthropologie," 771.

[221] Kant, "Use of Teleological Principles," 186 [Kant, "Gebrauch teleologischer Prinzipien," 176].

[222] Kant, "Muthmaßlicher Anfang der Menschengeschichte," 110. See also Eze, "Color of Reason," 124, 129–31.

[223] Kant, "Conjectural Beginning Human History," 29 [Kant, "Muthmaßlicher Anfang der Menschengeschichte," 115]. For more detail on Kant's argumentative combination of the Linnaean skin colour system with Rousseau's concept of perfectibility and Adam Smith's and other Scottish philosophers' staged social development see Hund, "Körper Bilder Rassen," 33.

[224] Kant, "Muthmaßlicher Anfang der Menschengeschichte," 111–12.

[225] Kant, "Conjectural Beginning Human History," 26 [Kant, "Muthmaßlicher Anfang der Menschengeschichte," 112].

however, annihilated the carefreeness of the animal state. In the third step, the human therefore made plans in conscious foresight of future needs.[226] Concurrently recognising that humankind was not only nature's purpose (*Zweck der Natur*) but also its master, the human creature eventually perceived and dominated the natural world according to its needs and intentions.[227]

As stated by Kant, once the human creature fulfilled these prerequisites of rationality, civilisation was founded over several cultural stages, beginning with conflict over land use and possession.[228] That meant sedentary farmers, merchants and artisans proceeded towards civilisation by agreeing to unite and live in villages for the protection of the land they appropriated from those who had not progressed to their own advanced life style; namely, "wild hunters or hordes of roving herdsmen."[229] In these first villages the division of labour, the production of real and perceived necessities of life, the development of art, craftsmanship and economic exchange followed, all of which shaped the culture of increasing civilisation. Finally, these societies agreed on a civic constitution as a collective means for lawful government that ended individual, non-civilised practices of revenge and violence. Kant envisioned the migration of these "cultured colonists" to spread civilisation across the world – a situation, he was sure, initiated inequality among humanity.[230] In 1797, he deemed reprehensible the violent colonisation of "a people that [held] no prospect of a civil union"[231] – even if "these human beings (savages)" such as "the American Indians, the Hottentots, and the inhabitants of New Holland"[232] lived in a land that would otherwise have remained in the state of a "vacuum," abhorrent to nature, "so that the end of creation would have been frustrated."[233] Notwithstanding Kant's criticism of, for example, the British colonisation of Australia, this acknowledgedly contemptible dynamic presented one necessary or inevitable side of the dialectics of civilisation and progress.

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[226] Kant, "Muthmaßlicher Anfang der Menschengeschichte," 113.

[227] Ibid., 114.

[228] Ibid., 118.

[229] Kant, "Conjectural Beginning Human History," 33 [Kant, "Muthmaßlicher Anfang der Menschengeschichte," 119].

[230] Ibid.

[231] Immanuel Kant, *The Metaphysics of Morals,* trans., ed. Mary Gregor (Cambridge: Cambridge University Press, 1996), (65) [Immanuel Kant, *Die Metaphysik der Sitten*, in *Akademie Ausgabe Kant's Gesammelte Schriften* 6 (1797), 266].

[232] Ibid. See also Bernasconi, "Unfamiliar Source of Racism," 153.

[233] Kant, *Metaphysics of Morals*, (65) [Kant, *Die Metaphysik der Sitten*, 266].

The civilised state of reason thus entailed free will, consciousness and the bearing of responsibility for human action, ways of life and history. Nevertheless, human reason struggled constantly with its ever-lingering animal nature.[234] The wish to be free of both the toilsome existence of civilisation and its unknown dangers and fears, claimed Kant, invoked an irrational longing for the return to a paradisiacal animal existence of "brutishness and naiveté."[235] He saw the civilised human as still yearning for an easy, simple-minded and lazy life of "pure enjoyment,"[236] dreaming and dawdling away his existence.[237] Although reason prohibited a return to the pleasures of the animal state, the promise of a "carefree life of idle daydreaming or a life frittered away with childish game"[238] lured so many seafarers to travel to the South Seas. I shall soon return to Kant's notion of a *vertändelnden* (dawdling away) animal life style with regard to his judgement about non-Europeans.

In summary, in 1786, Kant construed the animal or non-human state as driven by irrational instinct, uncontrolled desires, pleasurable ignorance and indolence. The pivotal element to becoming and being human in Kant's philosophy was reason, and the fundamental tools to overcome unreasonable animal nature were discipline and self-restraint. Further, civilisation and freedom were achieved in societies governed by institutionalised law, property rights, economical exchange and labour. Kant's was a Eurocentric idea of civilisation, not quite achieved or even achievable by all human races. He used above characterisations of the human and the non-human roughly a decade before the publication of his hypothetical account of the development of humanity; namely for the description and definition of human races. In other words, his physical geographic theses about human diversity conveyed the same dichotomous wording for the civilised or savage, reasonable or ignorantly carefree/careless states and stages of human life and development. On the one side, his white race exclusively presented, embodied, achieved and maintained the ultimate *Naturzweck* of human existence; and on the other, non-Europeans lacked most or even all the virtues of civilised humanity.[239]

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[234] Kant, "Muthmaßlicher Anfang der Menschengeschichte," 115. See also Cohen, "Kant on Epigenesis," 685.

[235] Kant, "Conjectural Beginning Human History," 29 [Kant, "Muthmaßlicher Anfang der Menschengeschichte," 115].

[236] Ibid., 35 [122].

[237] Kant, "Muthmaßlicher Anfang der Menschengeschichte," 114–15.

[238] Kant, "Conjectural Beginning Human History," 35 [Kant, "Muthmaßlicher Anfang der Menschengeschichte," 122].

[239] See also Hund, "Racisms of Immanuel Kant," 70, 77–78, 87.

If his white race was the only one to reach civilisation, all other races were capable of achieving only lower stages of civilisation, if at all. While Kant described white Europeans (or Germans) as the pinnacle of humanity, he left behind non-whites whose alleged stagnation in the development towards civilisation was signified by their skin colour. It was caused by the insufficient or inhibited development of their germs and endowments, resulting in a lack of the morals, intellectual achievements and capacities found in his white race. His definition of the "Hindus" demonstrates, for example, the amalgamation of (self-)discipline, labour and culture into the philosophy of white progress. It could be argued that, although they had begun to cultivate themselves, they remained mentally and morally in a slightly animal-like state. The "Negroes" had, in contrast, remained in a state of affect and passion, lazy and unable to progress beyond a servant's stage. Kant's American race, finally, fulfilled not even the prerequisites to overcome the intellectual or moral animal state. They were not only careless, unloving, lazy and unfree but also had no passion that, in the civilising act of exercising restraint, could have been disciplined – apart from revenge, which in turn signified that Americans never reached the civilised agreement of collective law and its enforcement.

From his entanglement of the notion of progress with that of racial hierarchisation emanates the view – convincingly put forward by scholars such as Bernasconi, Eze, Mikkelsen, Hund and Hentges – that Kant's various writings on race reveal an immanently discriminatory view on humanity. These authors have insisted that, to speak with Bernasconi, the great philosopher Kant played a significant "role in the development of the scientific concept of race with its power to legitimate prejudices against racial mixing and against non-Whites generally."[240] Accordingly, it appears justified to assume that for Kant there existed humans that were "slaves by nature and so not human in the full sense" because they "did not possess all the talents and dispositions."[241] In other words, Kant excluded non-white races from questions of free will and reason because he deemed them limited or unable to proceed towards humanity's civilised destiny.[242] According to Hund, Kantian race theory therefore presents a "transformation of social, religious and cultural patterns of discrimination … into a scientific taxonomy. Kant

[240] Bernasconi, "Unfamiliar Source of Racism," 161–62.
[241] Ibid., 152.
[242] Hentges, *Schattenseiten der Aufklärung*, 219.

plays a significant part in this process and, in addition, gives philosophical sanction to it."[243]

Kant's Neuholländer

What, then, did Kant know and think of Australia's inhabitants? He first referred to the geographical region of what we know as Australia in 1756 when he wrote about his "theory of the winds." At the time, Europeans knew neither of the geographical extent of the still largely hypothetical *Terra Australis (incognita)* – the (unknown) South Land – nor whether it even was a continent. Kant accordingly referred to the "southern lands [*Australländern*] of which we only know New Holland's coast"[244] where "an extensive Southern Land [*Australlandes*]"[245] could be surmised. In his lectures on physical geography, Kant included New Guinea into "the extraordinarily wide-spread lands of the unknown southern land [*Australlandes*]."[246] In general, he thought "Australia [*Australien*] comprise[d] of mostly very extensive islands."[247]

Although he did not name his sources, Kant probably knew this from the early Dutch reports about the Australian northern coast.[248] Also, most likely, particularly important was the travel narrative published by William Dampier (1651-1715) to whom the land appeared to be "a long series of reefs and shoals behind which lay sandhills and barren country."[249] In 1688 and 1699, the then widely accepted "authority on the South Seas"[250] had stayed for several months respectively near the north-eastern shores of the, in his opinion unfavourable, southern continent. Through Dampier's account the inhabitants of Australia first came to Europe's attention.[251] In contrast to his usually "fairly

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[243] Hund, "Racisms of Kant," 78.

[244] Immanuel Kant, "M. Immanuel Kants neue Anmerkungen zur Erläuterung der Theorie der Winde, wodurch er zugleich zu seinen Vorlesungen einladet," in *Akademie Ausgabe Kant's Gesammelte Schriften* 1 (1756), 500.

[245] Ibid., 501. See also Kant, "Reflexionen zur physischen Geographie," 560.

[246] Kant, "Reflexionen zur physischen Geographie," 560.

[247] Kant, *Immanuel Kants Physische Geographie*, 237.

[248] See e.g. N. A. Loos, "Aboriginal-Dutch Relations in North Queensland, 1606-1756," *Queensland Heritage*, 3 no. 1 (1974): 3–8.

[249] J. Bach, Dampier, William (1651-1715)," in *Australian Dictionary of Biography* Vol 1 (Melbourne University Press, 1966).

[250] Ibid.

[251] Ibid.; Bronwen Douglas, "Seaborne Ethnography and the Natural History of Man," *Journal of Pacific History* 38, no. 1 (June 2003): 7.

evenhanded assessments"[252] and comparisons of the diversity of humans encountered throughout his travels, Dampier in 1866 perceived New Hollanders as materially and physically poorly-equipped. He described them, famously, as "the miserablest Peoples in the World" who possessed neither technology nor culture. Had their human shape not demonstrated otherwise, this apparent lack of culture made them "differ little from brutes," wrote Dampier. Their bodies and faces appeared to him appalling: "long-visaged," with "great heads, round foreheads, and great brows," "great bottle-noses, pretty full lips, and wide mouths" these people struck him as being "of a very unpleasing aspect, having no one graceful feature in their faces."[253] Nearly a decade later, Dampier, in Bronwen Douglas's words, "damned Aboriginal appearance even more," describing them as being of "the most unpleasant Looks and the worst Features of any People that ever [he] saw."[254] As Douglas has pointed out, he thereby "evoked the most negative analogy available"[255] at the time by associating them with Africans: "Their hair is black, short, and curled like that of the Negroes" and "the colour of their skins, both of their faces and the rest of their body, is coal-black like that of the Negroes of Guinea."[256]

Until the publication of the accounts from Cook's first exploration of the South Pacific, around eighty years later, Dampier's descriptions of and judgements about New

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[252] Douglas, "Novis Orbis Australis," 101; Bronwen Douglas, "Terra Australis to Oceania. Racial Geography in the 'Fifth Part of the World'," *Journal of Pacific History* 45, no. 2 (September 2010): 200.

[253] William Dampier, *A New Voyage Round the World* Vol 1 (London: James Knapton, 1699), 464. Dampier wrote under the heading "The poor winking people of New Holland": "The Inhabitants of this Country are the miserablest People in the World. The Hodmadods of Monomatapa, though a nasty People, yet for Wealth are Gentlemen to these; who have no Houses, and skin Garments, Sheep, Poultry, and Fruits of the Earth, Ostrich Eggs, &c., as the Hodmadods have: And, setting aside their human Shape, they differ but little from Brutes. They are tall, strait bodied, and thin, with small long Limbs. They have great Heads, round Foreheads, and great Brows. Their Eye-lids are always half closed to keep the Flies out of their Eyes; they being so troublesome here, that no fanning will keep them from coming to ones Face; and without the assistance of both Hands to keep them off, they will creep into ones Nostrils; and Mouth too, if the Lips are not shut very close. So that from their Infancy being thus annoyed with these Insects, they do never open their Eyes, as other People: And therefore they cannot see far; unless they hold up their Heads, as if they were looking at somewhat over them. They have great Bottle Noses, pretty full Lips, and wide Mouths. The two fore-teeth of their upper Jaw are wanting in all of them, Men and Women, Old and Young; whether they draw them out, I know not: Neither have they any Beards. They are long visaged, and of a very unpleasing aspect; having no one graceful Feature in their Faces. Their Hair is black, short, and curl'd, like that of the Negroes; and not long and lank like the common Indians. The colour of their Skins, both of their Faces and the rest of their Body, is coal black, like that of the Negroes of Guinea.") For more on Dampier's consideration of Australian Aborigines and "Negroes" see Douglas, "Terra Australis to Oceania," 200–1.

[254] William Dampier, *A Voyage to New-Holland, &c. in the Year 1699* (1703), 44 quoted in Douglas, "Seaborne Ethnography," 7n21.

[255] Douglas, "Seaborne Ethnography," 7.

[256] Dampier, *Voyage Round the World*, 464.

Hollanders remained the predominant source, and a potent one, for European natural historians. For the next hundred or so years, they in the majority just reiterated his verdict:[257] Buffon replicated Dampier's tone when he described Australian Aborigines as "natural savages without industry"[258] who "were probably the most miserablest people of the world, and those of all humans who approximate the brute most closely;"[259] and Cook replicated Dampier's view of the miserablest people but prominently added they were also a lot happier than Europeans. Furthermore, as I shall show in more detail in the next chapter, Blumenbach drew widely on Dampier's descriptions; and so did Kant.

In 1775 and 1777, in his delineation of human races linked to his physical geography lectures, the inhabitants of New Holland are absent. A vivid reader of travel narratives, which he used extensively in his philosophical writing, Kant was probably knowledgeable of Hawkesworth's recently published narrative of James Cook's first voyage to the South Seas. Its German translation was published in 1774, but Kant rarely directly mentioned Cook's voyages.[260] However, in *Immanuel Kants Physische Geographie*, a compilation of his lectures on physical geography over many decades, a number of references to the *Neuholländer* can be found: "In New Holland, which is nearly as big as Europe, there are very savage inhabitants, who will not even accept toys or red fabric, as do other savages." As a "nation of the southern hemisphere" they existed "on the lowest stage of humankind," concerned with "nothing except for the most sensual enjoyment [*sinnlichsten Genusse*]."[261] Viewed in light of Kant's trajectory to true humanity – from a carefree, lazy animal state to civilisation, which suppressed the yearning for a former life in "pure enjoyment [*reine Genuß*]"[262] – the New Hollanders (and all other inhabitants of the *Australländer,* that is the South Pacific region) might, in Eze's diction, not quite have attained the "properly (i.e. essentially) human"[263] stage.

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[257] Douglas, "Seaborne Ethnography," 8.

[258] Georges-Louis Leclerc, Comte de Buffon, *Histoire Naturelle générale et particulière, avec la description du Cabinet du Roy* Vol 3 (Paris: L'Imprimerie Royale, 1749), 219–20. On Buffon's reliance on Dampier's descriptions see also Douglas, "Seaborne Ethnography," 8, 13; Fforde, *Collecting the Dead*, 10.

[259] Buffon, *Histoire Naturelle* Vol 3 (1749), 408–9.

[260] Brian Richardson, *Longitude and Empire. How Captain Cook's Voyages Changed the World* (Vancouver: University of British Colombia Press, 2005), 124.

[261] Kant, *Immanuel Kants Physische Geographie*, 230.

[262] Kant, "Conjectural Beginning Human History," 35 [Kant, "Muthmaßlicher Anfang der Menschengeschichte," 122].

[263] Eze, "Colour of Rason," 115, 124.

According to Kant, the New Hollanders "have half-closed eyes and cannot see far, without bringing the head towards the back. They get accustomed to it because of the many mosquitoes, that always fly into their eyes."[264] Here, Kant obviously drew on Dampier, who had himself experienced Australian flies "so troublesome here, that no fanning will keep them from coming to ones Face; and without the assistance of both Hands to keep them off, they will creep into ones Nostrils; and Mouth too, if the Lips are not shut very close." Therefore, Dampier noted, the New Hollanders' "Eye-lids are always half closed to keep the Flies out of their Eyes" and "from their Infancy being thus annoyed with these Insects, they do never open their Eyes, as other People: And therefore they cannot see far; unless they hold up their Heads, as if they were looking at somewhat over them."[265] Summarising the "natural peculiarities" of the "land of the Papuas" Kant named Dampier as the discoverer of New Holland, whose inhabitants were "black and have woolly hair like the Negroes and are nearly as ugly, cannot quite open their eyes, are as miserable as a nation can be on earth."[266] In his discussion of physical changes that humans cause themselves Kant referred to the New Hollanders' aesthetic preferences of putting "wooden pegs"[267] through their septum as a beautifying means.

He thus reiterated Dampier's association of New Hollanders with allegedly ugly black Africans. Additionally, he transformed Dampier's description of their (possibly appropriate and quite wilful) management of irritating flies into a natural physical feature, implying they were possibly physically unable to open their eyes. With regard to his sense of ugliness, it can be noted that Kant believed that taste was indeed a malleable thing (thus sociologically explicable) which changed with exposure to others' opinions: "Taste, I understand, is a judgement about that, which in general pleases the senses. The perfection or imperfection of a thing that moves our senses. From the deviances of taste among humans you can see that a lot is based on prejudices among us."[268] With an exclamation mark he added: "To what extent may not other people's judgement of our taste alter as the times change!"[269]

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[264] Kant, *Immanuel Kants Physische Geographie*, 315.
[265] Dampier, *Voyage Round the World*, 464.
[266] Kant, *Immanuel Kants Physische Geographie*, 393.
[267] Ibid., 318.
[268] Ibid., 319.
[269] Ibid., 320.

Kant did not apply that insight to the judgment he passed on Africans or Australian Aborigines, whose very existence he found somewhat questionable: In 1790, discussing the "teleological judgment of nature" in his philosophy of natural purposes, Kant surmised it might be difficult to see the purposiveness of the entire human species; even more so this was "a question which, if one thinks about the New Hollanders or the Fuegians, might not be so easy to answer."[270] But even though there might be little reason for their existence, they should not be treated as if they had no civil rights. Seven years later, New Hollanders appeared again as example for "savages" in his philosophical writing; this time in repudiation of the forceful colonisation of foreign peoples and their lands. Even if executed with "supposedly good intentions," such as bringing civilisation to the uncivilised, the colonisers' violent means caused a "stain of injustice" never to be cleansed. Kant admonished in particular the British colonisation of New Holland's "shepherds or hunters" despite their reasons appearing justifiable, such as removing "corrupt human beings" from "one's own country" to "another part of the world (such as New Holland)."[271] Although New Hollanders were "savages" without a "prospect of a civil union" they, according to Kant, should not be forced into "a rightful condition."[272]

In summary, Kant's view of New Hollanders can be regarded as the reiteration and consolidation of already existing notions of Aboriginal savagery that were conveyed through British travel narratives. While Australia's indigenous inhabitants did not play a significant role in Kant's philosophy, they served as examples for uncivilised "savage" races. Kant uncritically replicated Dampier's negative comments and, although his deliberations on race did not refer at all to New Hollanders, he presumably subsumed them under the dark-skinned, woolly-haired "Negroes" inhabiting the South Pacific regions or *Australländer*.

Anthropologists of the nineteenth century in Germany (and elsewhere) took hierarchical notions of race such as Kant's for granted even though they would rarely refer directly to Kant. As German historians of anthropology have acknowledged in the early

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[270] Immanuel Kant, *Critique of the Power of Judgment*, The Cambridge Edition of the Works of Immanuel Kant (Cambridge: Cambridge University Press, 2000), 250.

[271] Kant, *Metaphysics of Morals*, (117) [Kant, *Metaphysik der Sitten*, 353]. See also Bernasconi, "Unfamiliar Source of Racism," 153.

[272] Kant, *Metaphysics of Morals*, (65) [Kant, *Metaphysik der Sitten*, 266].

twentieth century, Kant was among the first to establish a scientific theory of race that contributed to the acceptance of "race" as a scientific fact.[273]

[273] Bernasconi, "Who invented the Concept," 15, 31 n20 and n21. Bernasconi refers to Walter Scheidt in the 1920s and Wilhelm A. Mühlmann (1948).

3 Johann Friedrich Blumenbach's *Neuholländer*

The famous professor of medicine at the Göttingen University, Johann Friedrich Blumenbach (1752-1840), is regarded as the German "father of physical anthropology"[1] and the "most influential theorist of human variety of his day."[2] His training as a physician in Jena and Göttingen, the contemporaneous German centre of academic research,[3] emphasised the inclusion of the human in the studies of comparative anatomy and natural history.[4] This was an approach to scholarly enquiry that he maintained throughout his life.[5] As John Gascoigne has pointed out, Blumenbach regarded his work as "anthropological researches"[6] forming an integral part of natural history[7] and resulting in his doctoral thesis *De Generis Humani Varietate Nativa* (On the Natural Variety of

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[1] Peter J. Kitson, "Coleridge and the 'Orang Utang Hypothesis': Romantic Theories of Race," in *Samuel Taylor Coleridge and the Sciences of Life*, ed. Nicholas Roe (Oxford: Oxford University Press, 2003), 103; Norbert Klatt, "Klytia und die 'schöne Georgianerin' – Eine Anmerkung zu Blumenbachs Rassentypologie," in *Kleine Beiträge zur Blumenbach-Forschung 1*, ed. Norbert Klatt (Göttingen: Norbert Klatt Verlag, 2008), 70; Tim Fulford, *Romantic Indians. Native Americans, British Literature and Transatlantic Culture 1756-1830* (Oxford: Oxford University Press, 2006.), 92; Tim Fulford, "Theorizing Golgatha: Coleridge, Race Theory, and the Skull Beneath the Skin," in *Samuel Taylor Coleridge and the Sciences of Life*, ed. Nicholas Roe (Oxford: Oxford University Press, 2003), 125; Stephen Jay Gould, *The Mismeasure of Man* (New York: Norton, 1996), 401; Gudrun Hentges, *Schattenseiten der Aufklärung. Die Darstellung von Juden und 'Wilden' in philosophischen Schriften des 18. und 19. Jahrhunderts* (Schwalbach: Wochenschauverlag, 1999), 171.

[2] Kitson, "Romantic Theories of Race," 103; Klatt, "Blumenbachs Rassentypologie," 70.

[3] Urs Bitterli, *Die 'Wilden' und die 'Zivilisierten': Grundzüge einer Geistes- und Kulturgeschichte der europäisch-überseeischen Begegnung* (Munich: C. H. Beck, 2004), 257. On Göttingen University as innovative research hub of the German Enlightenment see John Gascoigne, "The German Enlightenment and the Pacific," in *The Anthropology of the Enlightenment*, ed. Larry Wolff and Marco Cipolloni (Stanford: Stanford University Press, 2007), 141–71.

[4] John Gascoigne, "Blumenbach, Banks, and the Beginnings of Anthropology at Göttingen," in *Göttingen and the Development of the Natural Sciences*, ed. Nicolaas Rupke (Göttingen: Wallstein, 2002), 93; John H. Zammito, "Policing Polygeneticism in Germany, 1775: (Kames,) Kant and Blumenbach," in *The German Invention of Race*, ed. Sara Eigen and Mark Larrimore (New York: State University of New York Press, 2006.), 44; Fulford, "Theorizing Golgotha," 119; Norbert Klatt, "[Einleitung]," in *The Correspondence of Johann Friedrich Blumenbach Vol. 2: 1783-1785 Letters 231-391*, ed. Frank William Peter Dougherty and Norbert Klatt (Göttingen: Norbert Klatt Verlag, 2007), xi.

[5] Gascoigne, "Beginnings of Anthropology," 93.

[6] Ibid., 91; Gascoigne, *Joseph Banks and the English Enlightenment: Useful Knowledge and Polite Culture* (Cambridge: Cambridge University Press, 1994), 154.

[7] Johann Friedrich Blumenbach to Joseph Banks, 1 May 1795 (Letter 903), in *The Correspondence of Johann Friedrich Blumenbach. Volume IV: 1791-1795 Letters 645–965* ed. Frank William Peter Dougherty (Göttingen: Norbert Klatt Verlag, 2012), 395. See also Gascoigne, "Beginnings of Anthropology," 93; Fulford, "Theorizing Golgotha," 119; Klatt, "[Einleitung]," xi.

Mankind).[8] Initially delineating four human varieties in the first published edition of *De Generis* in 1776, Blumenbach by 1795, in its third edition, declared a system of five human varieties – labelled Caucasian, Mongolian, Ethiopian, American and Malay – which many still regard as valid to our day. As Tim Fulford has put it, Blumenbach constructed his famous and influential race theory increasingly "on the fragile dome of the indigenous skull,"[9] using these as hard facts to supplement his traditional sources of information such as travel literature.

One of the most important alterations of Blumenbach's theory was the creation of a fifth variety based on the information gathered during the explorations of the Southern Pacific by James Cook.[10] This refinement reflects the confusion natural historians faced following the ongoing exploration and colonisation of regions and peoples hitherto unknown to Europeans, calling for the constant reconsideration of racial typologies.[11] Blumenbach's later acknowledgment of the necessity to add a fifth variety to his taxonomy due to the *Endeavour* voyagers' encounters with South Sea peoples is an example of such attempts to consign them to "their proper place."[12] As the fifth variety, consisting of two elements represented by the Tahitian and the New Hollander, was already inherent in Blumenbach's original doctoral thesis on four human varieties, its eventual distinction presents a consequent step in Blumenbach's theorising. Then, by the publication of the second edition of *De Generis* in 1781, Blumenbach's differentiation between two elements gained momentum through evidence based on skin colouration.

Between 1776 and 1830, Blumenbach published manifold editions of his three main publications on human nature – his doctoral thesis *De Generis Humani Varietate Nativa*, the *Handbuch der Naturgeschichte* (Manual of Natural History) and the *Beyträge zur Naturgeschichte* (Contributions to Natural History) – all of which document his

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[8] Zammito, "Policing Poligeneticism," 43.

[9] Fulford, "Theorizing Golgatha," 119.

[10] Bronwen Douglas, "'Novus Orbis Australis': Oceania in the Science of Race, 1750-1850," in *Foreign Bodies: Oceania and the Sciences of Race 1750-1940*, ed. Bronwen Douglas and Chris Ballard (Canberra: ANU Press, 2008), 106.

[11] See for example Fulford, *Romantic Indians*, 91; Fulford, "Theorizing Golgatha," 123–24; Paul Turnbull, "Enlightenment Anthropology and the Ancestral Remains of Australian Aboriginal People," in *Voyages and Beaches. Pacific Encounters, 1769-1840*, ed. Alex Calder, Jonathan Lamb and Bridget Orir (Hawaii: University of Hawaii Press, 1999), 207; Gascoigne, *Banks and English Enlightenment*, 149; Johann Friedrich Blumenbach, "On the Natural Variety of Mankind ed.1775," in *The Anthropological Treatises of Johann Friedrich Blumenbach*, trans., ed. Thomas Bendyshe (London: Longmann, Green, etc., 1865), 150.

[12] Introductory Letter to Joseph Banks in Blumenbach, "Natural Variety of Mankind (1775)," 149–50; Fulford, *Romantic Indians*, 92.

alterations to their respective previous editions.[13] These volumes therefore reflect Blumenbach's constant revision of his ideas on humankind and its diversity, including the addition or omission of arguments and evidence. The main taxonomical change occurred in 1779, in the first edition of his popular science *Handbuch der Naturgeschichte*, when he added a fifth human variety ("Australasians and Polynesians") to his original four-fold system outlined in his 1775 dissertation.[14] By then, Blumenbach had started to acquire human skulls as evidential representations of his human varieties but had not yet received those of his fifth variety.

In this chapter I shall consider the developments in Blumenbach's hypothesising on humanity that included the acquisition, investigation, classification and incorporation of his first "very rare skull of a New Hollander"[15] into his theory about humanity. Blumenbach's racial categorisation of the *Neuholländer* (or his attempts to do so conclusively) did not begin in 1793 with the acquisition of this skull. It began nearly twenty years earlier, in 1775, when he defended his doctoral thesis, where Blumenbach referred to the *Neuholländer* in three instances: first as example in his discussion on artificial skin colouration, second in his exploration of race skulls, and third in his deliberations on the formation of the facial expressions in different races.

The astonishing fact about Blumenbach's initial consideration of the inhabitants of the Australian continent is that he constructed a sequence of South Sea "national heads" from the "Otaheitan" (Tahitian) to the New Hollander nearly a decade before he began to assemble human skulls. How then, did Blumenbach in 1775 construe his cranial ge-

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[13] Blumenbach published three editions of *De Generis Humani Varietate Nativa*. The first edition was published in 1776 in Latin, as were the second (1781) and third editions (1795). The 1775 and 1795 editions were translated to English in 1865, by Thomas Bendyshe, *The Anthropological Treatises of Johann Friedrich Blumenbach* (London: Longmann, Green, etc., 1865). For reasons of practicality I refer to Bendyshe's translations unless indicated otherwise. Blumenbach's *Handbuch der Naturgeschichte* was first published in 1779 with eleven further editions (1782, 1788, 1791, 1797,1799, 1803, 1807, 1814, 1821, 1825, and 1830). The *Beyträge zur Naturgeschichte* (1st ed. 1790, 2nd ed. 1806) are composed of two parts, of which the first addresses human varieties. All of these publications, incl. Bendyshe's, have been digitised and are available on the website of the Göttinger Digitalisierungszentrum at the University of Göttingen (http://gdz.sub.unigoettingen.de/dms/colbrowse/?tx_goobit3_search%5Bextquery%5Dismets%3A1&DC=blumenbachiana). Unless indicated otherwise, I have consulted these online digitised versions of Blumenbach's and Bendyshe's work.

[14] Until recently, scholars have referred to the second edition of his dissertation, published in 1781, as Blumenbach's first reference to five, instead of four, human varieties. As Norbert Klatt has pointed out, this error originated in Bendyshe's translation and has since been carried on. Klatt, "[Einleitung]," xi incl. n43.

[15] Johann Friedrich Blumenbach, "On the Natural Variety of Mankind 3rd ed.1795," in *The Anthropological Treatises of Johann Friedrich Blumenbach*, trans., ed. Thomas Bendyshe (London: Longmann, Green, etc., 1865), 239.

ography across the Pacific Ocean, and on what empirical basis? I argue that Blumenbach delineated imagined skulls implicitly along skin colours, based on the information he gathered from contemporaneous travel narratives. In particular, on the basis of his own already established skin colour palette, he reversed James Cook's passage during the *Endeavour* journey from the southern tips of the American to the African continent. I shall therefore first illustrate Blumenbach's approach to the study of humanity and his four-fold taxonomy of the human kind when he published his dissertation in 1775, based on his ideas about skin colouration and the investigation of human skulls as classification criteria. I shall then examine how Blumenbach's sources, William Dampier and the *Endeavour* voyagers, described New Hollanders and analyse how Blumenbach interpreted these sources with view to his inclusion of New Hollander skulls in his discussion of South Sea Islander heads.

In the second part of this chapter I shall demonstrate that Blumenbach in future publications and based on his previously implicit skin colour classification, additionally construed a dichotomy of wild, or "fierce and savage" New Hollanders and appealing *Otaheitans*. He did so by combining Reinhold Forster's bias against the darker populations of the South Seas with his own evaluation of racial physiognomy and temperament. I shall further show how Blumenbach, changing his methodology, gradually replaced this juxtaposition with a racial distinction within his Malayan variety, namely a "black race" represented by the *Neuholländer* and a "brown race" embodied by the *Otaheitans*.

3.1 Imagined *Neuholländer* skulls in the South Seas

Four Human Varieties

One of Blumenbach's main concerns was the question about the origin of human diversity: "Are men, and have the men of all times and of every race been of one and the same, or clearly of more than one species?" Arguing against the latter "insufficiently considered opinion," he accused polygeneticists of methodological ignorance.[16] The appropriate method to determine the significance of differences between human groups, Blumenbach suggested, was comparative anatomical investigation combined with the

[16] Johann Friedrich Blumenbach, "On the Natural Variety of Mankind, ed.1775," in *The Anthropological Treatises of Johann Friedrich Blumenbach*, trans., ed. Thomas Bendyshe (London: Longmann, Green, etc., 1865), 97–98.

study of reliable travel literature.[17] Such evidence, he maintained, clearly pointed to the "unity of the human species and for its mere varieties"[18] whose similarities mattered more than their differences.[19]

In Blumenbach's view, skin colour was the most notable difference between humans, which resulted from environmental impacts and habit, not only regarding a variety but also among its individual members.[20] Ethiopians, for example, were generally black but could under certain circumstances change to a lighter, more brownish skin tone. Americans, usually "copper-coloured," had been observed to be "almost as white as Europeans"[21] when they were living close to the Pacific Ocean. Depending on the degree of sun and wind exposure, skin colour thus underwent "insensible and indefinable transition from the pure white skin of the German lady through the yellow, the red, and the dark nations, to the Ethiopian of the very deepest black."[22] It could also change through "diverse unions"[23] between members of different varieties resulting in their offspring's blended colourations.

Skin colouration thus was "an adventitious and easily changeable thing [that] can never constitute a diversity of species."[24] It could, however, be used as a marker for different human varieties even though the transition from one to another colour was essentially indeterminable. Building on Linnaeus, Blumenbach grouped four human varieties according to geographical distribution and outer appearance.[25] But he extended the "first and most important" variety geographically to Northwest Asia, Northern America and North Africa because their populations, apart from all their apparent differences, "as a whole … seem[ed] to agree in many things with ourselves," the Europeans. From this

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[17] Zammito, "Policing Poligeneticism," 46–47.

[18] Blumenbach, "Natural Variety of Mankind (1775)," 98.

[19] Nancy Stepan, *The Idea of Race in Science. Great Britain 1800-1960* (Oxford: MacMillan in assoc. w. St. Anthony's College, 1982), 9–10.

[20] Blumenbach, "Natural Variety of Mankind (1775)," 105–9.

[21] Ibid., 107.

[22] Ibid.

[23] Ibid., 110–11.

[24] Ibid., 113.

[25] Blumenbach, however, did not agree with Linnaeus's classification of humans in one class with primates. He separated them explicitly from the animal kingdom by assigning them the exclusive category of two-handers (*Bimana*). See Turnbull, "Anthropology and Ancestral Remains," 213; Cressida Fforde, *Collecting the Dead: Archaeology and the Reburial Issue* (London: Duckworth, 2004), 13; Stepan, *Idea of Race*, 9.

"primitive,"[26] that is original and white, variety all others had deviated following their migration and subsequent exposure to differing environments in their respective geographical locations. Different climatic conditions exerted the most effective transformative power on human bodies, modifying skin colouration and influencing their way of life. Eventually, the three other varieties emerged through long stretches of time presenting a number of characteristics peculiar to them that, nevertheless, changed gradually – from variety to variety and within each variety.[27] With the exception of those peoples already included in the first, the other varieties were allocated to the remaining continents. Accordingly, the second variety, whose peoples presented a "dark colour, snub noses" and "stiff hair," was allocated to the South Eastern parts of Asia "together with the islands, and the greater part of those countries which are now called Australian" – including New Holland and its population. The inhabitants of the third variety lived in Africa, and those belonging to the fourth were found on the American continents.[28]

Having thus reorganised Linnaeus's racial taxonomy, Blumenbach went on to explore possible physical manifestations that were seen to be distinctive of each variety.[29] He discussed characteristics such as skin colouration, hair texture, eye form, physiognomy and head form as valid criteria for the distinction of nations and varieties, but he disqualified individual or pathological traits, "monstrosities" and myths conveyed by the exaggerations of too imaginative travellers.[30]

The head too was a malleable thing, but only during its infant years, until it became "perfectly solidified"[31] to protect the brain. The softness of infant bones made it possible to intentionally (or unintentionally) interfere with the natural shape of the head. Germans, for example, had wide heads with flat backs because it was their custom to lay their infants to sleep on their backs[32] while the Americans had "wonderful ways"[33] of wilfully and permanently shaping their children's heads. These cultural practices, per-

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[26] Blumenbach, "Natural Variety of Mankind (1775)," 99. See also Turnbull, "Anthropology and Ancestral Remains," 213.

[27] Blumenbach, "Natural Variety of Mankind (1775)," 98–100. See also Turnbull, "Anthropology and Ancestral Remains," 213–14.

[28] Blumenbach, "Natural Variety of Mankind (1775)," 99. See also e.g. Douglas, "Novus Orbis Australis," 107; Klatt, "[Einleitung]," 2.

[29] Fforde, *Collecting the Dead*, 9.

[30] Blumenbach, "Natural Variety of Mankind (1775)," 101, 121.

[31] Ibid., 114.

[32] Ibid., 115.

[33] Ibid., 120.

formed over generations, resulted in the similarity of cranial forms within a nation or people: "For a considerable period of time singular shapes of the head have belonged to particular nations, and peculiar skulls have been shaped out, in some of them certainly by artificial means."[34] Blumenbach pointed out that the Ancient Greek physician Hippocrates had even observed that, after the Scythians "had applied artificial means for a very long period in shaping their heads, at last a kind of natural degeneration had taken place, so that ... their skulls grew up to be elongated of their own accord."[35] It then appeared feasible to Blumenbach, not only to "consider how far [peculiar skulls] constitute different varieties of the human race"[36] but also to examine the idea of cranial characteristics "which in the progress of time become hereditary and constant, although they may have owed their first origin to adventitious causes."[37]

Listing all sorts of reports on differently shaped heads in all four of his varieties, he cautioned that it was "unfair ... to draw conclusions as to the conformation of a whole race from one or two specimens." This was apparent from the very disparate descriptions of "Calmuck" skulls in his first variety. Additionally, considering the descriptions of dog-like skull shapes found in Northern Americans (also of the first variety), he thought "too little of the history of that country and its inhabitants" was known "to be able to add the cause of that singular conformation"[38] to his deliberations. Thus the "innumerable and simultaneous external and adventitious causes"[39] for different national head shapes could only be determined on the basis of sufficient cranial evidence, which eliminated erroneous descriptions of travellers and unrepresentative "monstrosities". Further, national head shapes could only be explained through comprehensive knowledge of the cultural practices and living conditions (or "the mode of life" and "art") of a variety or people.[40]

Blumenbach, on the one hand, insisted that most of the permanent skull modifications were caused by the environment and human manipulation; therefore, they had to come into effect anew with each of a people's new born in order to present itself as a national peculiarity. On the other hand, he acknowledged at least the possibility of the

[34] Ibid., 114.
[35] Ibid., 116.
[36] Ibid., 114.
[37] Ibid., 116.
[38] Ibid., 117.
[39] Ibid., 114.
[40] Ibid., 121.

(eventual) heredity of such traits in human skulls, stating that he "should very willingly admit the position of Hippocrates, that with the progress of time art may degenerate into a second nature."[41] Blumenbach thus did not entirely dismiss the possibility of hereditary skull characteristics, but in general, as John H. Zammito has stated, in 1775 they "were not matters of natural endowment."[42] Whether hereditary or not, "the head and its conformations"[43] were indicative enough to be used as grouping criteria within his skin colour-based taxonomy although Blumenbach "had no clear criterion for variety, and indeed insisted repeatedly on the fluidity and arbitrariness of such classification schemes."[44] Observing this fluidity not only in relation to skin colouration but also the very concept of human varieties, he "relativized his findings so substantially as to lead one to question whether he had a firm theory of 'race' in 1775."[45]

Notwithstanding, he categorised humanity according to the physical traits he attributed to "different nations" in his doctoral thesis, including the New Hollanders and their skulls. He did so on the basis of information that he gathered from the published records of James Cook's first voyage to the South Seas on board the *Endeavour*.

New Hollanders in the *Endeavour* voyage narratives

Europe's Enlightenment exploration of the world fostered natural historians' empirically based interest in the diversity of mankind. Seeking to understand the differences and similarities between ever-increasing numbers of newly encountered peoples, their attempts to order, classify and compare rendered the indigenous inhabitants of Europe's colonies into objects of scientific enquiry.[46] As John Gascoigne has stated, "the fact that the Pacific was, in European terms, largely virgin territory made it a particularly important instance of the capacity of enlightened thinking to make comprehensible a major section of the globe."[47] As a consequence, the Pacific Ocean during the late eighteenth century became an important ground on which European Enlightenment discourse on what it meant to be human was played out.[48] Europe's armchair natural historians pre-

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[41] Ibid., 121.
[42] Zammito, "Policing Polygeneticism," 48.
[43] Blumenbach, "Natural Variety of Mankind (1775)," 114.
[44] Zammito, "Policing Polygeneticism," 48.
[45] Ibid.
[46] Bitterli, *Die Wilden und Zivilisierten*, 355.
[47] Gascoigne, "German Enlightenment," 149.
[48] Ibid., 142.

dominantly relied on the travel literature published by the more adventurous world travellers,[49] whose information on South Pacific inhabitants' bodies and cultures – collected throughout the European (especially James Cook's) exploratory journeys to the Pacific Ocean – provided the main sources for naturalists' enquiries into the nature of humankind.[50]

In 1775, when he wrote his doctoral dissertation on "the human body and its members,"[51] Blumenbach had a small number of sources on New Hollanders at hand. They consisted of the published accounts from two British visits to Australian shores: William Dampier's *A New Voyage Round the World*[52] (first published in 1697), John Hawkesworth's "embellished narrative"[53] of James Cook's first exploration of the South Seas (1768-1771), *An Account of the Voyages Undertaken by the Order of His Present Majesty for Making Discoveries in the Southern Hemisphere* (published in 1773) and the chronicle of the same journey by Sydney Parkinson, *A Journal of a Voyage to the South Seas in His Majesty's Ship, the Endeavour* (edited and published posthumously also in 1773).[54]

As I have illustrated previously, Dampier's description of Australian Aborigines living on the northwestern coastline of the Southern Continent provided the only source of information on the New Hollanders until the return of James Cook (1728-1779) to Britain around seventy years later. Europeans learned more about New Holland following the exploration of the Australian eastern shores by Cook and his companions on board the *Endeavour* in 1770. The voyage's participants, that is Cook's knowledgeable companion, the gentleman naturalist Joseph Banks (1743-1820) and Banks's draughts-

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[49] On the significance of travel literature for the British Empire's Enlightenment natural history and the science of man see John Gascoigne, "The Royal Society, Natural History and the Peoples of the 'New World(s)', 1660-1800," *British Journal for the History of Science* 42, no. 4 (2009): 539–62.

[50] Douglas, "Novus Orbis Australis," 99, 106; Bronwen Douglas, "Seaborne Ethnography and the Natural History of Man," *Journal of Pacific History* 38, no. 1 (June 2003): 12.

[51] Blumenbach, "Natural Variety of Mankind (1775)," 129.

[52] William Dampier, *A New Voyage Round the World* (London: James Knapton, 1699).

[53] Douglas, "Seaborne Ethnography," 8.

[54] The National Library of Australia has published an online-edition (http://southseas.nla.gov.au/) of the journals of Cook's first voyage: James Cook, *James Cook's Journal of Remarkable Occurrences aboard His Majesty's Bark Endeavour, 1768-1771*, Transcription by the National Library of Australia, Manuscript 1; Joseph Banks, *The Endeavour Journals of Joseph Banks, 1768-1771*, Transcription by the State Library of New South Wales; Sydney Parkinson, *A Journal of a Voyage to the South Seas, in his Majesty's Ship, The Endeavour* (London: Stanfield Parkinson, 1773); and the official record of the *Endeavour* voyage, John Hawkesworth, *An Account of the Voyages undertaken by the Order of His Present Majesty for Making Discoveries in the Southern Hemisphere ....* 3 vols. (London: Strahan and Cadell, 1773). I refer to these on-line editions and their respective page numbers.

man, Sydney Parkinson (c1745-1771), were the first Britons to encounter, physically investigate and describe New Holland's "Indians"[55] in detail, including some measurements of body height,[56] deliberations on skin colouration, hair structure, facial expression and behaviour. All of their accounts painted a picture quite different to Dampier's, especially with a view to his "Negroe analogy."[57]

In their original journals Cook and Banks strongly repudiated Dampier's disparaging characterisations. Neither of them equated New Hollanders with the despised "Negroes" from Africa and, as Douglas has put it, they "indulged in well-known primitivist nostalgia"[58] regarding the contemporarily common trope of the "noble savage." In contrast, they praised the merits of the happy existence of Australia's "savages'" against the destructive corruption of European civilisation. However, because Cook's and Banks's original chronicles were not published until the late nineteenth century, Blumenbach had to rely on the edited version published by John Hawkesworth (c1715-1773) who transformed their testimony into a single-voice Captain's narrative.[59] I shall, for reasons of practicality and differentiation to his original sources, refer to Hawkesworth as the narrator and thereby identify his views as Blumenbach's source rather than Cook's and Banks's original journals.

According to Hawkesworth, the peoples living on the eastern shores of New Holland must look similar to those encountered by Dampier in the west. Therefore, he thought that Dampier was "in many particulars ... mistaken" in his description of New Holland's inhabitants. His narrator described them as uniformly "well made, clean

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[55] The term "Indians" was commonly used to refer to foreign "natives" in general. Bronwen Douglas, "Terra Australis to Oceania. Racial Geography in the 'Fifth Part of the World'," *Journal of Pacific History* 45, no. 2 (September 2010): 200, 201. Banks used the terms "Indians" and "New Hollanders" when speaking of Australian Aborigines. Banks, *Endeavour Journals*, 215, 311 (http://southseas.nla.gov.au/journals/banks/17700712.html, http://nla.gov.au/nla.cs-ss-jrnl-banks-17700903).

[56] On 10 July 1770, measurements of body height were apparently taken of a number of Australian Aboriginal men. See Cook, *James Cook's Journal*, 264 (http://nla.gov.au/nla.cs-ss-jrnl-cook-17700710); Parkinson, *Voyage to the South Seas,* 146–47; Banks, *Endeavour Journals*, 215 (http://southseas.nla.gov.au/journals/banks/17700712.html).

[57] Douglas, "Seaborne Ethnography," 8.

[58] Ibid., 9.

[59] Ibid., 8, 10. Hawkesworth acknowledged the contribution that Banks's journal made to his unified narrative in his introduction. As we can today learn from their unaltered published accounts, Hawkesworth's unspecified editing and remodelling of both journals into the perspective of one individual (the captain) amalgamated, and distorted, their in some aspects differing observations on the appearance and character of Australian Aborigines. On Hawkesworth's editing and amalgamation of the *Endeavour* journals see Ronald L. Ravneberg, "The Hawkesworth Copy. An Investigation into the Printer's Copy Used for the Preparation of the 1773 Second Edition of John Hawkesworth's Account of Captain Cook's First Voyage," *Bibliographical Society of Australia and New Zealand Bulletin* 26, nos. 3 and 4 (2002): 9–12.

limbed" people with long, straight to curly black hair and "bushy" beards. Their "countenances were not altogether without expression" and, speaking with "remarkably soft and effeminate" voices, Hawkesworth concluded the New Hollanders behaved in a "remarkably vigorous, active, and nimble" manner. In stark contrast to Dampier's unpleasant faces, he attributed to them "features far from being disagreeable."[60] Adding that "their noses [were] not flat, nor … their lips thick,"[61] Hawkesworth at least implicitly rejected the notion of "Negroe" facial features in New Hollanders.[62] Sydney Parkinson's body descriptions matched Hawkesworth's.[63] He, too, proposed no comparisons with Africans although his descriptions of "flattish noses" and "hair black and frizzled"[64] might have easily encouraged him to do so.

Blumenbach had much praise for Hawkesworth's reliability and frequently cited his Captain's observations about South Sea inhabitants.[65] Yet, he made only little use of his and Parkinson's eyewitness reports on the New Hollanders who appeared in his dissertation in merely three instances. Strikingly, Blumenbach made no reference to the skin colour of New Hollanders although, as I shall demonstrate below, his sources were concerned with and speculated repeatedly about their complexion.

Blumenbach's hidden skin colour palette

Given that Blumenbach regarded skin colour as an essentially unreliable characteristic, it seems unsurprising that he did not waste a lot of space with New Hollander skin in his thesis. However, in his elaboration on skin colouration as a cultural rather than physical marker, he listed New Hollanders among "the Turks" and the islanders of Cape Verde as one example among many for the "use of pigments and different kinds of paint,"[66] which had been observed "amongst the most remote and different nations."[67] Notwith-

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[60] Hawkesworth, *Account of the Voyages*, 632–33.

[61] Ibid.

[62] Douglas, "Seaborne Ethnography," 8.

[63] Parkinson described the inhabitants of Botany Bay as "of a very dark colour" and "very lean and raw-boned; their complexion was dark, their hair black and frizzled, their heads unadorned, and the beards of the men bushy." Parkinson, *Voyage to South Seas*, 178 and 179 (27 and 28 April 1770). At Endeavour River in North Queensland he described Aborigines as follows: "The colour of their skin was like that of wood-soot. They had flattish noses, moderate-sized mouths, regular well-set large teeth, tinged with yellow. Most of them had cut off the hair from their heads; but some of them wore their hair, which was curled and bushy, and their beards frizzled." Parkinson, *Voyage to South Seas*, 146–47 (July 1770).

[64] Ibid., 134 (hair), 146–47 (noses).

[65] Blumenbach, "Natural Variety of Mankind (1775)," 122.

[66] Ibid., 128.

[67] Ibid., and n14: "Parkinson, Plate xxvii. The abdomen and the legs distinguished by white bands".

standing, while he did not speculate further on New Hollanders' natural skin colouration, it seems to have crucially informed his cranial taxonomy of South Sea inhabitants.

Blumenbach's second reference to the New Hollanders concerned "peculiar skulls" belonging to "particular nations."[68] To "consider how far they constitute different varieties of the human race"[69] skulls appeared more reliable than skin shade. Delineating the head shapes of the second variety's "dark nations", Blumenbach proposed that the skulls of "New Hollanders make such a transition to the third variety, that we perceive a sensible progress in going from the New Zealanders through the *Otaheitans* to the fourth."[70] In other words, he hypothesised a schematic sequence from Ethiopians to New Hollanders, New Zealanders and *Otaheitans* to Americans. His arrangement of Southern Pacific human skulls in this way is astounding because Blumenbach had no New Hollander skull on which to base his cranial geography, and he did not provide his readers with sources for his statement. In fact, he had none of the mentioned cranial evidence, because in 1775 he had not yet begun to assemble the collection for which he later became famous. Blumenbach received the first human skull in 1778 and started to systematically obtain them only by the mid-1780s.[71] Thus, at this point in time, he had not the slimmest chance to investigate the bony properties of a New Hollander head or even to refer to other naturalists' cranial investigations. Considering that, as Paul Turnbull has clarified, the "commencement of European trafficking in the bodily remains of Aboriginal people"[72] only started shortly after the arrival of the First Fleet in Botany Bay in 1788, it is highly unlikely that any such information from other sources was available. Neither Hawkesworth's nor Parkinson's account provided information on such heads, so that Blumenbach (ignoring even Dampier's description of missing front teeth, heads, foreheads, and eye brows) simply provided no evidence for his claim.

Blumenbach thus knew little about the "adventitious"[73] head shaping the New Hollanders might have practised. How, then, did he conceive of his cranial South Sea Islanders taxonomy? In the following I shall argue, that Blumenbach's cranial geography mirrored, albeit in reverse order, the *Endeavour*'s passage from South America to Aus-

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[68] Ibid., 114.
[69] Ibid.
[70] Ibid., 119.
[71] Klatt, "[Einleitung]," xiii.
[72] Turnbull, "Anthropology and Ancestral Remains," 204.
[73] Blumenbach, "Natural Variety of Mankind (1775)," 119.

tralia, during which the members of the exploration party encountered and subsequently described a diversity of indigenous peoples. At the same time, it corresponded with his transitional skin colour palette from the "pure white skin of the German lady through the yellow, the red, and the dark nations, to the Ethiopian of the very deepest black."[74] Considering that Blumenbach did not – could not – comment on the cranial features that to him indicated the "sensible progress" from Ethiopian to American head shapes, he (albeit covertly) inferred his arrangement of South Seas Islander skulls from Dampier's and the published *Endeavour* journey participants' reports on the skin colouration of the "dark nations" in the Pacific Ocean.

After its departure from the British Isles at the end of August 1768, the *Endeavour* traversed the Atlantic Ocean until it reached Rio de Janeiro in November. Following a short stop-over at Tierra del Fuego on 21 January 1769, its passengers met with diverse inhabitants of the Society Islands group, most prominently Tahitians (Blumenbach's *Otaheitans*) with whom they interacted for several months (April-July 1769). After reaching New Zealand in early October 1769, the *Endeavour* party spent seven months exploring its northern and southern islands before heading towards New Holland on 31 March 1770. They encountered Indigenous locals in April in Botany Bay on the south-east coast, in July near the Endeavour River on the Queensland coast and in August 1770 in the Cape York region at Australia's northern tip.[75] My survey of Parkinson's and Hawkesworth's accounts on the skin colouration of the peoples encountered throughout their passage from Tierra del Fuego to Australia reveals that Blumenbach's cranial geography corresponded to their skin colour descriptions – with the exception of the New Hollander and the New Zealander. Here Blumenbach appears to have applied Hawkesworth's and Dampier's rather than Parkinson's colour estimations to his imagined skulls.

Regarding the inhabitants of Terra del Fuego, Hawkesworth's narrator observed a colour that "resemble[d] that of the rust of iron mixed with oil"[76] – a label easily interpretable towards the "red" or "copper-coloured" skin of Blumenbach's previously classified Americans.[77] Parkinson's and Hawkesworth's reports on Southern Pacific islanders differed in some aspects while they generally agreed on others. For example, the inhab-

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[74] Ibid., 107.

[75] A comprehensive map charting the *Endeavour*'s path is available on the National Library Australia's website (http://southseas.nla.gov.au/journals/maps).

[76] Hawkesworth, *Account of the Voyages*, 56.

[77] Parkinson remained silent about the skin colour of the inhabitants of Terra del Fuego.

itants of the Two Groups Islands, according to Hawkesworth, were "of a brown complexion"[78] which Parkinson in contrast perceived as "almost black."[79] Both, however, described *Otaheitan* skin in lighter shades: Parkinson perceived a "pale brown complexion"[80] and Hawkesworth thought their "natural complexion [was] … clear olive, or Brunette."[81] They also agreed that the Huahine Islanders had fairer skins than the Tahitians: Parkinson related that they were "not of such a dark complexion as those of Otaheite"[82] and Hawkesworth thought their "women were very fair, more so than those of Otaheite."[83]

Regarding the *Endeavour*'s next destinations, New Zealand and New Holland, the accounts of Hawkesworth and Parkinson largely diverged. While, according to the former, New Hollanders appeared darker than New Zealanders, the latter's testimony related the reverse. To Hawkesworth, New Zealanders presented a variety of brown shades, depending on their geographical locations (the Northern and Southern islands).[84] He summarised that "[t]heir colour in general [was] brown; but in few deeper than that of a Spaniard, who has been exposed to the sun; in many not so deep."[85] In contrast to Hawkesworth's range of browns, Parkinson described New Zealanders continuously as "very dark."[86]

Both contradicted Dampier's claim that New Hollander skin was "coal-black like that of the Negroes of Guinea."[87] Hawkesworth's narrator initially described them as "very dark coloured, but not black"[88] but later discovered that they covered their bodies

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[78] Hawkesworth, Account of the Voyages, 77.

[79] Parkinson, Voyage to South Seas, 12.

[80] Ibid., 48.

[81] Blumenbach, "Natural Variety of Mankind (1775)," 110.

[82] Parkinson, Voyage to South Seas, 69.

[83] Hawkesworth, Account of the Voyages, 260.

[84] Ibid., 287 ("his complexion was brown, but not very dark," 8 October 1769, Poverty Bay, Northern Island); 330 ("appeared to be of a browner complexion," 3 November 1769, Bay of Plenty, Northern Island); 356 ("complexions were browner than those of the people we had seen to the southward," 26 November 1769, between Mercury Bay and Bay of Islands, Northern Island).

[85] Ibid., 445.

[86] Parkinson, *Voyage to South Seas*, 102–3 ("of a very dark complexion, and made a mean appearance"), 86 ("natives (who seemed to be of a very dark hue)").

[87] Dampier, *Voyage Round the World*, Chapter 16.

[88] Hawkesworth, *Account of the Voyages*, 488 (South of Botany Bay: "appeared to be of a black, or very dark colour"), 502 (Botany Bay: "very dark coloured, but not black"), 541 (on way to Endeavour River: "of the same complexion with those that we had seen before").

with "dirt and smoke."[89] That was why "[w]ith the dirt they appear[ed] nearly as black as a Negroe"[90] but "their true colour"[91] remained indiscernible for the travellers – even after "wetting [their] fingers and rubbing [their skin] to remove the incrustations.[92] Hence he assumed that "according to our best discoveries, the skin itself is of the colour of wood soot, or what is commonly called a chocolate colour."[93] (What the locals thought of their visitors' investigative methods remains unknown.)

Parkinson initially described their skin like that of New Zealanders as "very dark."[94] After their encounters he described them, repeatedly, simply as "dark"[95] until finally (in analogy to Hawkesworth), New Hollander skin colour appeared to him also "like that of wood soot."[96] A later comment on New Guineans also reveals that Parkinson did not liken New Hollanders to "Negroes," pointing out "these [New Guinean] people were not negroes, as has been reported, but are much like the natives of New Holland."[97] Hawkesworth on the same occasion again referred to the artificiality of New Hollander blackness, reporting that New Guineans were "not quite so dark; this however might perhaps be merely the effect of their not being quite so dirty."[98]

Figure 1 abridges the above illustrated skin colour descriptions, including Dampier's. Presumably, Blumenbach was aware that such descriptions demonstrated nicely the pitfalls of subjectivity in relation to skin colour estimation and comparison. This could be the reason why (as was the case with the *Neuholländer*) he did not identify *Otaheitans'* skin colour but merely listed them as example for his environmentalist argument

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[89] Ibid., 576 (Endeavour River: "We now perceived that the colour of their skin was not so dark as it appeared, what we had taken for their complexion, being the effects of dirt and smoke, in which, we imagined, they contrived to sleep, notwithstanding the heat of the climate, as the only means in their power to keep off the musquitos").

[90] Ibid., 632.

[91] Ibid.

[92] Ibid. Note that this was Banks' story.

[93] Ibid.

[94] Parkinson, *Voyage to South Seas*, 133–34 (Botany Bay: "of a very dark colour").

[95] Ibid. (Botany Bay: "their complexion was dark"), 141–42 (Queensland: "of a dark complexion"), 156–57 (Cape York: "they were much like the people we saw last, being quite naked, and of a dark colour").

[96] Ibid., 146–47.

[97] Ibid., 159–60.

[98] Hawkesworth, *Account of the Voyages,* 655 ("they made much the same appearance as the New Hollanders, being nearly of the same stature, and having their hair short cropped: like them also they were all stark naked, but we thought the colour of their skin was not quite so dark; this however might perhaps be merely the effect of their not being quite so dirty").

for the alterable character of skin colour.[99] His source was Hawkesworth who stated "[i]n those [*Otaheitans*] that are exposed to the wind and sun, it is considerably deepened, but in others that live under shelter, especially the superior class of women, it continues of its native [clear olive, or Brunette] hue."[100]

Figure 2 shows how Blumenbach aligned his imagined South Sea Islander skulls with his existing skin colour palette. A comparison of both figures shows that his cranial arrangement within the skin colour category of the "dark nations" reflects the testimony about the skin colour of the Pacific Island populations of his seafaring witnesses (in reverse order). He placed the skull representing the New Hollanders accordingly next to the Ethiopian because both their skin colours were described in the darkest tones. The New Hollander's skin was described not as, but closest to, the "deepest black"[101] of the Ethiopian.

	Negroes	**New Hollander**	**New Zealander**	**Otaheitans**	**Fuegians**
Dampier 1697	coal-black	coal-black			
Hawkesworth 1773	black	(very dark but not black); wood soot, chocolate;	brown, but not very dark; brown, like Spaniard	clear olive Brunette	rust mixed with oil
Parkinson 1773		(very) dark; wood soot	very dark	pale brown,	

Figure 1 Blumenbach's sources on skin colours in the South Seas (1697, 1773)

Blumenbach skin colour palette	**Ethiopian** deepest black	**2nd Variety's South Sea Islanders** transitionally dark nations			**American** red, copper-coloured
Blumenbach skull sequence	3rd Variety	New Hollander	New Zealander	Otaheitan	4th Variety

Figure 2 Blumenbach's imagined skulls according to skin colours (1775)

[99] Blumenbach, "Natural Variety of Mankind (1775)," 110 ("men of southern regions become whiter when they are less exposed to the effects of the weather and the sun") and 110n5 (referring to Hawkesworth, *Account of the Voyages,* 187).

[100] Hawkesworth, *Account of the Voyages,* Vol 2, 190 (Blumenbach referred to pg. 187).

[101] Blumenbach, "Natural Variety of Mankind (1775)," 107.

In summary, while Dampier likened New Hollanders with "Negroes," Hawkesworth and Parkinson distanced their skin colour and other physical features from those of derogatively labelled Africans. Notwithstanding, both Dampier's descriptions and the *Endeavour* journey witnesses provided Blumenbach with information on the approximation of New Hollanders to the latter. Blumenbach's 1775 series of imagined skulls thus recapitulated, and thereby systematised, the information on skin colour provided by the published *Endeavour* journals. He did so with reference neither to his witnesses nor their skin colour descriptions nor the respective varieties' assigned skin shades. Therefore, although Blumenbach nominally rejected skin colour as a racial marker (due to its transitional and environmentally alterable nature), he at the same time based his cranial, and racial, categorisation upon it. Synthesising the available information about South Sea islander skin colours with his already established skin-colour palette, Blumenbach in 1775 created an imagined cranial sequence of "sensible progress" from the black Ethiopian to very dark New Hollanders, dark to brown New Zealanders, light-brown *Otaheitans* to red Americans.

3.2 *Neuholländer* – savage and dark

Neuholländer – a transitional race

John Gascoigne has stated that Blumenbach's investigation of the Malay variety "made him more cautious about the fixity of his classifications."[102] Similarly, Bronwen Douglas has shown, that the fifth variety presented a "problematic category"[103] in Blumenbach's taxonomy. She has argued that the problem lay in the broad variation of physical characteristics in the populations of the Malayan variety. On the one hand, variation in skin colour illustrated gradual varietal transitions, which was pivotal for Blumenbach's notion of an imperceptible transition between the varieties and his fundamental advocacy for the unity of the human species – despite all apparent differences.[104] On the other hand, this variation pointed to the great difficulty – indeed the impossibility – of conclusively identifying and defining distinctive racial characteristics. That is why "the ten-

[102] Gascoigne, *Banks and English Enlightenment*, 153.
[103] Douglas, "Climate to Crania," 38–39.
[104] Ibid., 40; Douglas, "Novus Orbis Australis," 107; Douglas, "Seaborne Ethnography,"13.

sion between the rival imperatives of human unity, racial diversity, and the taxonomic impulse is an undercurrent in Blumenbach's discussion of the Malay variety."[105]

The inherent tension between gradual transition and racial distinction becomes tangible through Blumenbach's incorporation of New Hollanders into his evolving human taxonomy. By 1795, Blumenbach also increasingly referred to other physical characteristics, such as hair colour and texture, eye colour and dentition as possible racial markers,[106] including information about the *Neuholländer*'s physical characteristics. Whereas he reassured his readers that all of these characteristics varied in individuals as well as in their respective variety, he at the same time considered them as sufficiently distinct to be racial characteristics. The New Hollander served in all of these categories as an example for transitional characteristics between the Malayan and the Ethiopian, not only in the third edition of *De Generis* but also in the *Handbuch* and *Beyträge* editions published after 1795.

Blumenbach named New Hollander's inconclusive, intermediary position most clearly in his delineation of four hair varieties, categorised by colour and texture. While most Pacific Ocean islanders' hair was "black, soft, in locks, thick and exuberant," the Ethiopians' was "black and curly, which is generally compared to the wool of sheep."[107] He based this division on samples of hair in his anthropological collection.[108] However, the classification proved hairy in itself. As Blumenbach noted, each of the defined characteristics was not unique to their respective variety because there were "races of Ethiopians" that had long hair while some "copper-coloured nations again ha[d] curly hair." Such was the case with a strand of New Hollander hair in Blumenbach's possession, which demonstrated the "perfectly the middle place" between Ethiopian curliness and South Sea Islander locks.[109] Its intermediary position between the two varieties testified to the "wonderful difference in opinion" of his witnesses about the properties of New Hollander hair.[110]

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[105] Douglas, "Novus Orbis Australis," 107.
[106] Blumenbach, "Natural Variety of Mankind (1795)," 225 (eyes), 243 (dentition).
[107] Ibid., 224.
[108] Ibid., 159.
[109] Ibid., 225.
[110] Blumenbach, "Natural Variety of Mankind (1795)," 225.

As Douglas has termed it, relating to Blumenbach's 1795 classification, the New Hollanders "embodied the key qualification to Blumenbach's [taxonomical] project."[111] In comparison to 1775, the third edition of *De Generis* in general presents a much more systematic approach in all of his areas of investigation. Not only did he construe more systematic divisions in his anthropological investigations, he also based his argument to a higher degree on his own empirical observation – that is, his anthropological specimens rather than travel reports. As I shall show below, the New Hollander remained a variable component in Blumenbach's racial classification, not quite Malayan but also not Ethiopian. Following the acquisition and investigation of a *Neuholländer* and an *Otaheitan* skull in 1793, he was able to represent each of his newly labelled five varieties by a human skull. Blumenbach also added a new perspective to the investigation of skulls, the *norma verticalis*, on the basis of which he confirmed the intermediate position of this New Hollander skull (and a second one, which he acquired in 1799).

Neuholländer countenance in 1775

As I have shown in the first part of this chapter, the descriptions of New Hollanders available to Blumenbach in 1775 were equivocal, oscillating between Dampier's "Negro analogy" and the *Endeavour* chroniclers' rather benevolent but at times also contradictory descriptions and judgements. I have argued that Blumenbach made selective use of these sources and, from the beginning of his hypothesising, utilised various physical characteristics of the New Hollander as example for his environmentalist hypothesis on the gradual transition of human varieties and their physical traits.

Concurrent with illustrating "sensible progress", Blumenbach's early cranial geography of the Southern Sea Islanders also positioned New Hollanders and *Otaheitans* at opposite ends. He underscored his cranial delineation from a dark-skinned, almost black to a light(er)-skinned element in the South Seas populations by juxtaposition on the basis of his aesthetic and, to some extent, moral judgements. In the following sections I shall first demonstrate how Blumenbach in his dissertation of 1775 and its second edition of 1781 contrasted wild New Hollanders with more appealing *Otaheitans*. He thereby not only disputed his early witnesses' positive descriptions of generally appealing people in Australia, but also as early as 1775 differentiated between the two group-

[111] Douglas, "Seaborne Ethnography," 13.

ings of the South Sea peoples, which twenty years later constituted the "black race" and the "brown one" of his Malayan variety.

The final reference to New Hollanders in Blumenbach's original dissertation occurred in his exploration of "the physiognomy and the peculiar lineaments of the whole countenance in different nations."[112] Like skull shape and skin colour Blumenbach thought of them as environmentally caused. He appears to have also had the impression that the similarities in a variety's physiognomy and countenance, like the skull shape, may have come into effect by transmission from one generation to the next, making them less adaptable to changed environments: "In many they are sufficiently settled, and are such faithful exponents of the climate and mode of life, that even after many generations spent in a foreign climate they can still be recognised."[113] With regard to the South Sea peoples he stated:

> the inhabitants of the Pacific Ocean retain evident examples of persistent physiognomy. Every one, for example, will recognize the fierce and savage countenance of the New-Hollanders and New-Zealanders by looking at the magnificent plates of Parkinson whereas the Otaheitans, on the contrary, looked at as a whole seem to be of a milder disposition, as also the many pictures of them by the same well-known author testify.[114]

Sydney Parkinson was among the few whom Blumenbach trusted to produce "sufficiently faithful and accurately delineated … likenesses of nations."[115] In the above quote, Blumenbach referred to the famous engraving "Two of the Natives of New Holland, Advancing to Combat" (figure 3), published in Parkinson's travel narrative.

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[112] Blumenbach, "Natural Variety of Mankind (1775)," 121.

[113] Ibid.

[114] Ibid., 12. In n1 he referred to Parkinson's plates xvii ("The manner in which the New Zealand Warriors defy their Enemies"), xxiii ("The Heads of six Men, Natives of New Zealand, ornamented According to the Mode of that Country") and xxviii (which does not exist in Parkinson's journal; he meant plate xxvii ("Two of the Natives of New Holland, Advancing to Combat"). In n2 he referred to Parkinson's plate viii ("Heads of divers Natives of the Islands of Otaheite, Huahine, Oheiteroah") as an example for *Otaheitans*.

[115] Blumenbach, "Natural Variety of Mankind (1775)," 121–22.

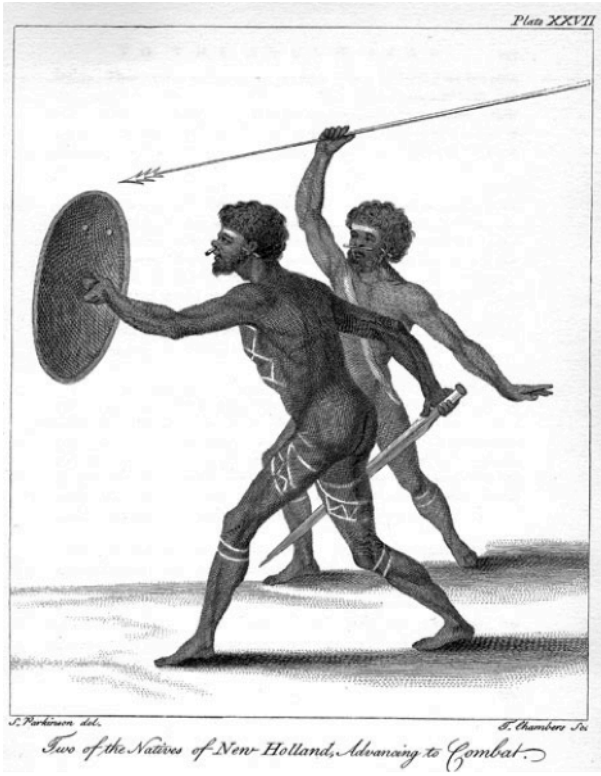

Figure 3 Blumenbach's *Neuholländer* – "fierce and savage countenance" (1775)[116]

It depicted an incident during the initial landing of the *Endeavour* in Botany Bay, on 28 April 1770, when its inhabitants made it very clear that the intruders were not welcome:[117]

> On our approaching the shore, two men, with different kinds of weapons, came out and made toward us. Their countenance bespoke displeasure; they threatened us, and discovered hostile intentions, often crying to us, Warra warra wai. We made signs to them to be peaceable, and threw them some trinkets; but they kept aloof, and dared us to come on shore. We attempted to frighten them by firing off a gun loaded with small shot; but attempted it in vain. One of them repaired to a house immediately, and brought out a shield, of an oval figure, painted white in the middle, with two holes in it to see through, and also a wooden sword, and then they advanced boldly, [see pl. XXVII.] gathering up stones as they came along, which they threw at us.[118]

These attacks did not discourage the *Endeavour* travellers from landing ashore. They were greeted by two lances and responded with the shot of a gun, injuring one of the

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[116] Parkinson, *Voyage to South Seas*, 134 plate xxvii: "Two of the Natives of New Holland, Advancing to Combat."

[117] See also Douglas, "Seaborne Ethnography," 10.

[118] Parkinson, *Voyage to South Seas*, 134.

two warriors.[119] Parkinson's plate thus depicted a specific situation of conflict. He used it to illustrate both the weapons used by the Botany Bay New Hollanders and their fearless approach towards the uninvited explorers. Parkinson referred again to this plate in his description of the peoples living near the Endeavour River in Queensland, whom he regarded as "very merry and facetious." This time he cited the engraving in order to illustrate that "their noses had holes bored in them, through which they drew a piece of white bone about three or five inches long, and two round."[120] It seems therefore, that Parkinson described the "countenance" of these peoples according to the particular situation of the respective encounter but not as a general characteristic of the New Hollander. Similarly, he described a previous encounter with New Zealanders who "made a mean appearance" and "cut a despicable figure" in their canoes but were, nevertheless, "very merry," giving them "several heivos, or cheers."[121]

Neither Parkinson nor Hawkesworth's captain narrator thus provided Blumenbach with general judgements on New Hollanders' national facial savageness. As Douglas has pointed out, "ennobling the two men as 'classical heroes'," the engraving "in no sense demeans Aboriginal people."[122] It seems Blumenbach's perception of Parkinson's athletic and heroic New Hollanders (and New Zealanders) owed more to Dampier's unsympathetic remarks about their "very unpleasing"[123] features. And unlike Parkinson, he turned the depiction of a facial expression in a particular situation into a statement about "the whole countenance"[124] of the New Hollander (and the New Zealander). More importantly for my argument, Blumenbach's interpretation served to contrast the "fierce and savage" looking New Hollanders with the "milder disposition"[125] of *Otaheitans*. Parkinson's *Journal* depicted the latter's "heads" displaying a variety of hairstyles (figure 4) or "in the dress of that country."[126] As shall become evident below, Blumenbach's juxtaposition of the New Hollanders and Tahitians recurred in a different configuration in the second edition of *De Generis*, published in 1781.

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[119] Ibid.

[120] Ibid., 146–47.

[121] Ibid., 102–3.

[122] Douglas, "Seaborne Ethnography," 10. See also Bronwen Douglas, "Voyages, Encounters, and Agency in Oceania: Captain Cook and Indigenous People," *History Compass* 6, no. 3 (2008): 712–20.

[123] Dampier, *Voyage Round the World*, 464.

[124] Blumenbach, "Natural Variety of Mankind (1775)," 121.

[125] Ibid., 123.

[126] See e.g. Parkinson, *Voyage to South Seas*, 23 (plate v), 14 plate iii, 66 (plate ix).

Figure 4 Blumenbach's "milder disposition" of the *Otaheitans*[127]

Neuholländer countenance in 1781

In 1779, Blumenbach introduced a fifth variety to his human taxonomy in the *Handbuch der Naturgeschichte*. Whereas in 1775 New Hollanders had been subsumed under the second variety (among the inhabitants of the "islands, and the greater part of those countries now called Australian"[128]), they now belonged to the separate variety of "Australasians and Polynesians, or the Southlanders of the fifth part of the world." These Southlanders were "mostly black-brown, broad-nosed and strongly haired." Blumenbach assumed that "one could also regard the inhabitants of the Sunda Islands, the Malukus, Philippines etc." as part of the new variety.[129]

Writing for a broad audience of educated specialists as well as amateur "dilettantes," Blumenbach made sure to "avoid … the splendour of citation."[130] This lack of reference was redressed two years later in the second edition of *De Generis* when he had "more accurately investigated the different nations of Eastern Asia and America." In order to present a classification "more constant to nature," he again devised the fifth variety inhabiting the "new southern world," defining "the men throughout [as] being of a

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[127] Parkinson, *Voyage to South Seas*, 26 plate viii: "Heads of divers Natives of the Islands of Otaheite, Huahine, Oheiteroah".

[128] Blumenbach, "Natural Variety of Mankind (1775)," 99.

[129] Johann Friedrich Blumenbach, *Handbuch der Naturgeschichte* (Göttingen: Johann Christian Dieterich, 1779), 64 ("5. Die Australasiaten und Polynesen; oder die Südländer des fünften Welttheils; dazu man auch wol die Bewohner der Sundaischen Inseln, der Molucken, Philippinen u.s.w. zählen könnte. Sie sind meist schwarzbraun, breitnasicht, und starkbehaart").

[130] Ibid., Vorrede. See also Klatt, "[Einleitung]," ii.

very deep brown colour."[131] Blumenbach now pointed to a racial distinction of South Sea inhabitants suggested by Johann Reinhold Forster (1729-1798), that explicitly linked and underlined his earlier implicit skin-colour based skull classification with his judgements about New Hollander physiognomy and temperament.

Both Reinhold and his son Georg Forster (1754-1794) were prominent figures in the German Enlightenment who "did most to implant in Germany an interest in the late eighteenth-century European encounter with the Pacific."[132] They participated as naturalists in Cook's second exploration of the South Pacific (1772-1775) in search of *Terra Australis*, the hypothetical counterbalance to the continents of the northern part of the globe.[133] As Gascoigne has noted, for the Forsters, "the new world of the Pacific offered fertile ground to establish the significance of natural history as a pursuit worthy of the Enlightenment by shining the light of science on the dark corners of the earth."[134] Combining a Linnaean scheme of data collection and classification with a Buffonian perspective that went beyond ordering, they followed an empiricist scientific approach to natural history that aimed at generating utilitarian universal knowledge about its objects of study.[135] "In particular," as Gascoigne has stated, "the Forsters sought to locate humankind firmly in its natural setting and to demonstrate the extent to which human beings were an integral part of their environmental setting."[136] It was an approach that corresponded well with Blumenbach's environmentalist hypotheses on the causes of human difference. During their Pacific voyage, father and son made observations about the peoples and cultures they encountered, which were published shortly after their return to England. In 1777, Georg Forster published *A Voyage Round the World* based on his father's journals and, in the following year, Reinhold Forster published his own *Observations Made During a Voyage Round the World, on Physical Geography, Natural History, and Ethic Philosophy*.[137] These travel accounts provided Blumenbach with new information about the physique and way of living of inhabitants of the Pacific Ocean is-

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[131] Blumenbach, "Natural Variety of Mankind (1775)," 100n4 (Bendyshe's translation of the 1781 edition of *De Generis*; apparently this is the only passage that has been translated from Latin to English); Johann Friedrich Blumenbach, *De Generis Humani Varietate Nativa,* 2nd.ed. (Göttingen: Vandenhoek, 1781), 52.

[132] Gascoigne, "German Enlightenment," 145.

[133] Ibid., 149.

[134] Ibid.

[135] Ibid., 147–49.

[136] Ibid., 147.

[137] Tom Iredale, "Forster, Johann Reinhold (1729-1798)," *Australian Dictionary of Biography*, Vol 1. (1966).

lands. As Douglas has shown, the Forsters' observations and classificatory considerations became pivotal for Blumenbach's twofold conception of the Malayan variety [138] as father and son Forster divided the Southern Pacific peoples into a lighter and a darker group, in varying degrees attaching negative values to the darker peoples.[139]

Reinhold Forster distinguished between "two great varieties." First, the Tahitians, Society Islanders, Marquesans, the inhabitants of the Friendly and Easter Islands and New Zealanders were "*more fair*, *well limbed*, *athletic*, of a *fine size*, and a kind of *benevolent temper*." Second, the South Pacific inhabitants, "confined within the tropics to its most Western parts" (New Caledonia, Tanna and New Hebrides) were "*blacker*, the hair just beginning to become woolly and crisp, the body *more slender and low*, and their temper, if *possible more brisk*, though *somewhat mistrustful*"[140] (emphases added). New Hollanders were not included in his list of darker peoples, probably due to the unfamiliarity of the Forsters with the Australian continent.[141] Nevertheless, Forster distinguished New Caledonians as "totally different from the slender diminutive"[142] New Hollanders.

It is beyond the scope of my thesis to further explore the Forsters' theories on human diversity. It is however enlightening to look at Blumenbach's use of Reinhold Forster's racial distinction between darker and lighter races of the Pacific Ocean, [143] because it provided Blumenbach with empirical evidence that underlined his own New Hollander-*Otaheitan* dichotomy. As Douglas has shown, Forster's bias against dark-skinned Pacific Islanders referred to an "older, deeply anti-Negro conjectural history of inevitable displacement of black-skinned autochthones by more civilized, lighter-skinned immigrants."[144] While Blumenbach refrained from speculating on migratory

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[138] On the Forsters' views about Oceanic peoples or races see in detail Douglas, "Novus Orbis Australis," 107.

[139] Ibid., 103–4.

[140] Reinhold Forster, *Observations Made During a Voyage Around the World, on Physical Geography, Natural History, and Ethic Philosophy* (London: G. Robinson, 1878), 228.

[141] Gascoigne, *Banks and English Enlightenment*, 153; Douglas, "Novus Orbis Australis," 105. Cook did not return to the Australian continent on his second journey.

[142] Forster, *Observations*, 228.

[143] On Forster's racial classification of the inhabitants of Oceania see Bronwen Douglas, "Climate to Crania: Science and the Racialization of Human Difference," in *Foreign Bodies: Oceania and the Sciences of Race 1750-1940*, ed. Bronwen Douglas and Chris Ballard (Canberra: ANU Press, 2008), 102–6. His differentiation of Chinese from South Sea islander faces conformed to his 1779 separation of the latter from the initial second variety.

[144] Douglas, "Novus Orbis Australis,"103. See also Douglas, "Terra Australis to Oceania," 201–2.

patterns, he integrated the Forsters' ideas about Oceanian skin colour variation and temperament to bolster his notion of the transitional character of human varieties.[145]

Delineating his new fifth variety, Blumenbach stated that, according to Reinhold Forster, "those who inhabit the Pacific Archipelago are divided again … into two tribes" and, reciting Forster's populations of the Pacific, he transformed the first into "*men of elegant appearance and mild disposition*, whereas the others … are *blacker*, more curly, and in disposition *more distrustful and ferocious*."[146] My emphases in the above quotes of Forster and Blumenbach show that the latter transformed the former's more cautious phrasing (using terms such as "possibly," "kind of" and "somewhat") into more definite terms. Although New Hollanders were not listed among the South Sea peoples' second tribe, Blumenbach's characterisations clearly reiterated his earlier distinction between New Hollanders and *Otaheitans*.

Blumenbach further enhanced this distinction in his section on physiognomy. In contrast to 1775 he now offered a general description of the facial features of the fifth variety, distinguishing their "strongly pronounced and angular" faces from "Chinese well-formed and flat faces."[147] Although he cautioned that not enough information was available to determine a general rule, such restraint did not apply to his evaluation of *Neuholländer* physiognomy. Omitting his earlier reference to Parkinson's engravings, he restated the "fierce and savage" countenance of the New Hollanders (and New Zealanders) and described *Otaheitans* not only as of a "milder" but also "more human disposition"[148] by adding the Latin term "humaine" to their identification.

While Blumenbach in 1781 thus underscored his physiognomical and temperamental distinction between "fierce and savage" New Hollanders and appealing *Otaheitans*, he omitted his cranial series of the South Sea islanders in the second edition of *De Generis*.[149] The reasons why Blumenbach deleted his imagined human skulls cannot be reconstructed. It is, however, plausible to assume that he might not have been too confident to argue on such insubstantial foundation. After all, Blumenbach aspired to base his hypothesis on empirical evidence.

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[145] Douglas, "Novus Orbis Australis," 103.

[146] Blumenbach, "Natural Variety of Mankind (1775)," 100n4.

[147] Blumenbach, *De Generis* (1781), 93. I would like to sincerely thank Dee Stone and the members of her Latin Translation Club for the help with some translations from Latin to English.

[148] Ibid.

[149] Ibid., 87–88.

Until the publication of the third, most prominent, edition of *De Generis* New Hollanders vanished altogether from his deliberations about the fifth variety. My survey of his publications on human diversity between the second and third edition of *De Generis* reveals that they were subsumed, for example, in the third edition of the *Handbuch* (1788), under the general description of the "Southlanders or Australasians and Polynesians of the fifth part of the world." Accordingly, they were among those "mostly black-brown, broad-nosed, big-mouthed and thickly haired" peoples who presented "strongly pronounced facial traits."[150] In 1795, however, the *Neuholländer* reappeared in Blumenbach's discussion of racial classification.

Blumenbach's five human varieties (1795)

Blumenbach published the third edition of *De Generis* in 1795, declaring his final classification of "Five Principal Varieties of Mankind,"[151] thereby changing his original numerical, mainly geographically based, denomination of human varieties. Naming five human varieties – Caucasian, American, Mongolian, Ethiopian and Malayan – he represented each race by a particular human skull.[152] In this context, he not only relabelled his varieties, but also refined his hypothesis on their deviation from the Caucasian variety by rearranging his earlier cranial geography and the varieties' relations as intermediate and extreme races.

Blumenbach maintained that the primary Caucasian variety remained closest to the original ancestor from which all had deviated under the influence of specific environmental, foremost climatic, conditions.[153] But his novel perspective distinguished two branches of deviation, each entailing an intermediate and an extreme variety: One

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[150] Johann Friedrich Blumenbach, *Handbuch der Naturgeschichte* 3rd ed. (Göttingen: Johann Christian Dieterich, 1788), 61–62. Two years later, he referred to "South Sea Islanders or the inhabitants of the fifth part of the world." Johann Friedrich Blumenbach, *Beyträge zur Naturgeschichte. Erster Theil* (Göttingen: Johann Christian Dieterich, 1790), 83. He repeated the label in the 4th edition of the *Handbuch*. Johann Friedrich Blumenbach, *Handbuch der Naturgeschichte* 4th ed. (Göttingen: Johann Christian Dieterich, 1791), 55.

[151] Blumenbach, "Natural Variety of Mankind (1795)," 264.

[152] Ibid., 264–65. See also Douglas, "Novus Orbis Australis," 107.

[153] On Blumenbach's classificatory method and system in general see Klatt, "Blumenbachs Rassentypologie;" Fulford, *Romantic Indians*, 91–92; Fforde, *Collecting the Dead*, 13–15; Douglas, "Novus Orbis Australis," 107; Kitson, "Romantic Theories of Race," 103; Turnbull, "Anthropology and Ancestral Remains", 212–13; Hanna Franziska Augstein, "From the Land of the Bible to the Caucasus and Beyond. The Shifting Ideas of the Geographical Origin of Mankind," in *Race, Science and Medicine, 1700-1960*, ed. Waltraud Ernst and Bernard Harris (London: Routledge, 1999), 61–62, 64; David N. Livingstone, *Adam's Ancestors: Race, Religion, and the Politics of Human Origins* (Baltimore: Johns Hopkins University Press, 2008), 56. For Blumenbach's hierarchical classification refer to Gould, *Mismeasure of Man*, 69, 401, 407–8.

branch led from the Caucasian via the intermediate American to the extreme Mongolian;[154] the other located the Malayan as intermediary between the original Caucasian and the extreme Ethiopian (figure 5).[155] The Malayan variety (formerly the fifth) thus remained in an intermediate position, but it now joined the first with the third in contrast to its previous position between the third (Ethiopian) and the fourth (American) varieties of 1775 (figure 2). Blumenbach's initial (imagined) cranial geography of the South Sea islanders in 1775, in other words, suggested a more vertical (or circular) connection between all deviated forms of human groups, in contrast to Blumenbach's 1795 proclamation of the more hierarchical model of mediates and extremes.[156]

Mongolian	**American**	**Caucasian**	**Malayan**	**Ethiopian**
Extreme	Intermediate	Original Mediate	Intermediate	Extreme

Figure 5 Blumenbach's cranial race classification[157]

Blumenbach's cranial representation for the Malayan variety, the *Otaheitan* skull, arrived in Göttingen in 1793 together with skull no. 28 from New Holland. Blumenbach had requested both from Joseph Banks in order to complement his collection and theory of human diversity. He subsequently used some physical traits of the New Hollander as examples for his scheme of gradual transition of race characteristics. As he noted in the concluding parts of his treatise, the Malayan variety made "the transition from that medial [Caucasian] variety to the other extreme, namely the Ethiopians."[158] On the basis of "degrees in beauty and other corporeal attributes" such as skin colour, stature and facial

[154] Augstein, "Caucasus and Beyond", 62–63.

[155] Blumenbach, "Natural Variety of Mankind (1795)," 209.

[156] Sabine Ritter, "Natural Equality and Racial Systematics," in *Racism and Modernity. Festschrift for Wulf D. Hund*, ed. Iris Wigger and Sabine Ritter (Berlin: LIT Verlag, 2011), 102–16.

[157] Johann Friedrich Blumenbach, *De Generis Humani Varietate Nativa.* 3rd. ed. (Göttingen: Vandenhoek et Ruprecht, 1795), plate iv.

[158] Blumenbach, "Natural Variety of Mankind (1795)," 275.

features, he further distinguished within the variety between *Otaheitans* (some of which appeared similar to Europeans) at one end of the scale and, on the other, New Hollanders who "graduate[d] so insensibly towards the Ethiopian variety, that if it was thought convenient, they might not unfairly be classed with them."[159]

Based on the third edition of *De Generis* (1795) and Blumenbach's subsequent editions of the *Handbuch* and the *Beyträge*, I shall in the last part of this chapter first explore Blumenbach's acquisition and incorporation of the first New Hollander skull in his possession into his theory and body of evidence. I shall then analyse his consideration and racial classification of the *Neuholländer* in his discussion of other racial markers in comparison to his 1775 and 1781 deliberations. I thereby trace how the New Hollander remained an ambiguous category that was difficult to classify because it fluctuated between the Malayan and the Ethiopian variety's characteristics. Through my analysis it will become clear that Blumenbach, based predominantly on his skin colour classification, resolved this ambivalence through his schemes of gradual or fluid transition and his concept of race (de-)generation.

Neuholländer head-shaping

A comparison of Blumenbach's considerations of human skulls in his 1775 dissertation with the third edition of *De Generis* reveals the extent to which his interest in and reliance on human crania had increased within these twenty years. By 1795, Blumenbach investigated human skulls in addition to inferring from the work of other scholars and systematising the observations of travellers, as he had done in 1775. From the mid-1780s on, he began to systematically collect and investigate "exotic skulls"[160] as representations for his human varieties.[161]

By 1795 he had acquired a significant number of human skulls from all of his five varieties as foundation for his race classification and developed his own method of cranial investigation.[162] He thought skulls were appropriate objects for anthropological research because they "exhibit[ed] the firm and stable foundation of the head, and [could]

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[159] Ibid.

[160] Douglas, "Novus Orbis Australis," 110.

[161] Fulford, "Theorizing Golgotha," 121; Turnbull, "Anthropology and Ancestral Remains," 217; Douglas, "Novus Orbis Australis," 106; Gascoigne, "Beginnings of Anthropology," 90.

[162] See Blumenbach's "Index of the Author's Anthropological Materials, which he made most use of in illustrating this edition" in Blumenbach, "Natural Variety of Mankind (1795)," 155–56.

be conveniently handled and examined, and considered under different aspects and compared together."[163]

Blumenbach was not the first to examine human skulls for racial classification. In the eighteenth century, the Dutch anatomist, naturalist and artist Pieter Camper (1722-1789) had already constructed and compared the "facial angle" of a set of human skulls.[164] Dissatisfied with the traditional method of the depiction and differentiation of human races based on skin colour as sole classificatory criterion,[165] Camper turned to comparative anatomy and to using human and animal skulls for their geometrical comparison.[166] In the 1770s, searching for the laws of human beauty and the best way to depict it in a manner most true to nature,[167] he invented "the first craniometric method for distinguishing the varieties of the human species."[168] He devised the (in)famous anthropometric measure as "a line drawn along the forehead and the upper lip"[169] and the horizontal line.[170] His depictions of the facial angle ranged from the head of the statue of the Greek God Apollo to that of an ape.

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[163] Blumenbach, "Natural Variety of Mankind (1795)," 234. See also Turnbull, "Anthropology and Ancestral Remains," 214.

[164] Fulford, "Theorizing Golgotha," 122.

[165] Nicholas Hudson, "The 'Hottentot Venus'. Sexuality, and the Changing Aesthetics of Race, 1650-1850," *Mosaic* 41, no.1 (2008): 7; Fforde, *Collecting the Dead*, 10.

[166] Fforde, *Collecting the Dead*, 10–12; Zammito, "Policing Polygenitism," 45.

[167] Miriam Claude Meijer, *Race and Aesthetics in the Anthropology of Petrus Camper (1722-1789)* (Amsterdam: Rodopi, 1999), 87–89.

[168] Miriam Claude Meijer, "Camper, Petrus (1722-1789)," in Spencer, *History of Physical Anthropology*, 242. Camper first presented his new architectonic drawing method in 1770 at the Amsterdam Academy of Drawing. Meijer, *Race and Aesthetics*, 19, 88. A report on the two lectures was published by Ploos van Amstel, translated to German in 1784. Meijer, *Race and Aesthetics*, 95. His treatises on the facial angle were published posthumously in 1791 and translated to German in 1792 by Samuel Thomas Soemmerring. Meijer, *Race and Aesthetics*, 228.

[169] Petrus Camper, *The Works of the Late Professor Petrus Camper on the Connexion between the Science of Anatomy and the Arts of Drawing, Painting, Statuary*, trans. T. Cogan (London: C. Dilly, 1794), 9. Also quoted in Fforde, *Collecting the Dead*, 11.

[170] On Camper's "discovery of the facial angle" see Meijer, *Race and Aesthetics*, 105–9. See also e.g. Douglas, "Climate to Crania," 92n44.

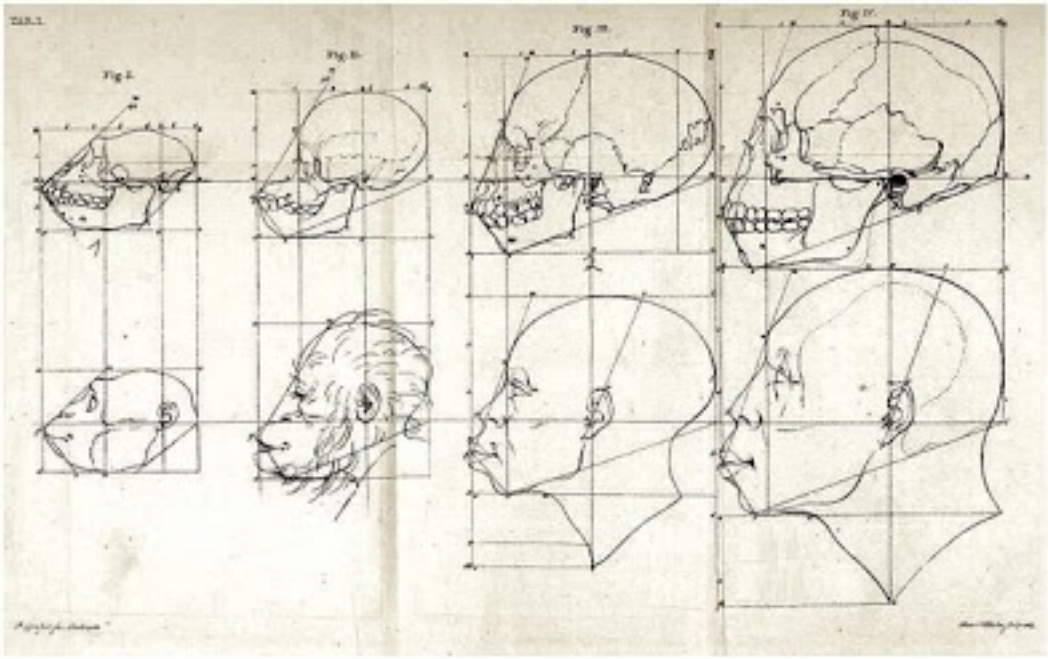

Figure 6 Pieter Camper's facial angles (monkey, orang-utan, African, Asian)[171]

As Zammito has noted, Camper clearly exhibited his "ethnocentric aesthetic judgement"[172] when he delineated his system of cranial angularity as a series depicting the "national physiognomy"[173] of human races; starting with the contemporaneous epitome of beauty, the head of the classic statue of the ancient Greek god Apollo (100°), followed by those of a European (80°), a "Calmuck" and an African (both 70°). Although Camper suggested, there existed another human race on a fifth continent comprised of the South Sea islands, New Holland and New Zealand, he did not include it in his series considering too little was known about it.[174] As was normal for his period in time,

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[171] Petrus Camper, *Verhandeling van Petrus Camper, over het natuurlijk verschil der wezenstrekken in menschen van onderscheiden landaart en ouderdom; over het schoon in antyke beelden en gesneedene steenen*, ed. Adriaan Gilles Camper (Utrecht: Wild and Altheer, 1840), Table 1.

[172] Zammito, "Policing Polygenitism," 45. See also Peter J. Bowler, *Evolution. The History of an Idea*, (Berkeley: University of California Press, 2009), 52; Fforde, *Collecting the Dead*, 11; Hudson, "Changing Aesthetics of Race," 7. As Meijer has pointed out, Camper was well aware "that aesthetic judgments were relative and, as such, had little or no scientific value." Meijer, "Camper, Petrus," 242. As Thomas Becker has noted about Camper's frontal depictions of the skull series, "until today nobody has noticed that this series presents a definite forgery. In the geometric construction of the skull volume of the Greek Apollo bust in frontal view Camper added a few centimetres which represent Apollo's hairdo rather than the skull size." Thomas Becker, *Mann und Weib – Schwarz und Weiß. Die wissenschaftliche Konstruktion von Geschlecht und Rasse 1600-1950* (Frankfurt: Campus, 2005), 40 also quoted in Wulf D. Hund, "Die Körper der Bilder der Rassen. Wissenschaftliche Leichenschändung und rassistische Entfremdung," in *Entfremdete Körper. Rassismus als Leichenschändung*, ed. Wulf D. Hund (Bielefeld: Transcript, 2009), 19.

[173] Camper, *Works*, 9. Also quoted in Fforde, *Collecting the Dead*, 11.

[174] Meijer, *Race and Aesthetics*, 106.

Camper did not stop at arranging the facial angles of humans[175] but also related the angle of his "Angolese" skull to those of apes, namely an orang-utan (58°) and a tailed monkey (42°), as shown in figure 6.[176]

Accordingly, whereas the European most approximated his artistic antique ideal of beauty, Camper announced that his measure "pointed out the degree of similarity between a negro and the ape."[177] Despite his pictorial approximation of Africans and apes, Camper insisted that there existed no actual relationship between Africans and apes as the latter could neither walk nor speak.[178] According to Miriam Claude Meijer, his contemporaries rather than Camper himself "were willing to blur the demarcation between humanity and animality, belittled the humanity of the black race while maintaining that of their own."[179] She has therefore insisted that Camper "was far from being a racist,"[180] pointing out, firstly, that Camper was a monogenist who, like Buffon, regarded the environment as the main cause for racial variation.[181] Secondly, he emphasised the similarities between white and black humans by acknowledging "the nature of aesthetic preference and prejudice"[182] inherent in the concept of beauty.[183] Meijer has further argued that Camper, the artist, merely placed the human in "between animals and art, but ... derived no taxonomical consequences from the difference in facial angles between human races" – unlike "post-Enlightenment anthropologists who did subscribe Camper's facial angle measure to racial hierarchy and racial intelligence."[184]

Although Cressida Fforde has acknowledged that Camper negated a genetic relation between humans and apes, she has also pointed out that he derived his scheme from the classical Greek artistic tradition of presenting wisdom by 100 degrees facial angle and stupidity with smaller angles. Thus, his new craniometrical method "carried with it an implicit measurement of intelligence"[185] according to which his apes' and the African's smaller facial angles suggested a smaller degree of intelligence – and lesser status

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[175] Ibid., 107.
[176] Ibid., 108.
[177] Camper, *Works,* 9. Also quoted in Fforde, *Collecting the Dead*, 11.
[178] Meijer, *Race and Aesthetics*, 123–24; Bowler, *Evolution*, 52; Fforde, *Collecting the Dead*, 11.
[179] Meijer, *Race and Aesthetics*, 144.
[180] Meijer, "Camper, Petrus," 242.
[181] Ibid., 243; Fforde, *Collecting the Dead*, 11.
[182] Meijer, "Camper, Petrus," 243.
[183] Ibid., Fforde, *Collecting the Dead*, 12.
[184] Meijer, *Race and Aesthetics* 95, see also p. 105.
[185] Fforde, *Collecting the Dead*, 11.

in racial terms. That is why, as Wulf D. Hund has argued, Camper's series of heads and their skeletal representations embodied a racialised scale of European beauty, culture and intellect – in contrast to non-Europeans' alleged bestial nature and ugliness, represented by not only the ape head but also that of an African right next to it.[186] As will be discussed further in the course of this thesis, this linkage of skull shape with intelligence clearly foreshadowed the "classificatory/physiological/hereditary turn"[187] at the beginning of the nineteenth century, when scientistic anthropologists associated small facial angles with racial inferiority. Even though they frequently criticised Camper's construction of the measure as too simple, late-nineteenth-century physical anthropologists persistently contrasted protruding ("prognathous") with non-protruding ("orthognathous") facial profiles as hierarchically determinant physical and mental markers. Constantly complicating the geometric composition of Camper's original measure, they nevertheless stuck to its racialising reading by delineating "lower" races based on prognathy and "higher" races on orthogny respectively. Additionally, depending on the respective anthropologist's world view, smaller facial angles were seen to reflect their bearers' supposed physical and intellectual approximation or genetic relation to one or another great ape species.[188] For example, Hermann Klaatsch (to whom I shall return in detail in Chapter 8), on the one hand credited Camper with establishing a scientifically justified connection between cranial features, racial determination and pre-human ancestry, and on the other, criticised his limited understanding of the facial angle.[189]

Blumenbach, however, gathering "daily experience and … familiarity" with his skulls, criticised Camper's method for providing insufficient and inconsistent information.[190] First, he argued, the facial line presented an invalid measure because it empirically classed "the most different nations" together while it separated members of the same. Second, methodologically, the facial line only considered one aspect of the skull shape (the position of the jaws in relation to the forehead) without clearly defining ref-

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[186] Hund, "Körper Bilder Rassen," 17.

[187] Snait B. Gissis, "Visualizing 'Race' in the Eighteenth Century," *Historical Studies in the Natural Sciences* 41, no.1 (Winter 2011): 91.

[188] This racialising application of the facial angle was common in the anatomical and physical anthropological sciences in the western world. See e.g. Fforde, *Collecting the Dead*, 10–12.

[189] Hermann Klaatsch, "Entstehung und Entwickelung des Menschengeschlechtes," in *Weltall und Menschheit*, ed. Hans Kraemer (Berlin: Bong & Co., 1902), 30–32.

[190] Blumenbach, "Natural Variety of Mankind (1795)," 235–36. See also Fulford, "Theorizing Golgotha," 123 and Kitson, "Romantic Theories of Race," 98.

erence points for the skulls' alignment and the corresponding facial angles[191] (and his nineteenth-century successors still grappled with all of the said problems). Blumenbach introduced a further perspective to the investigation of skulls. Not only the profile, he stressed, but also the width of skulls needed consideration for racial distinction. For this purpose, he removed the lower jaws, placed the skulls in a row on a table and introduced the "vertical scale (*norma verticalis*)" as additional craniological measure. Through this new comparative perspective, seen "from above and from behind,"[192] "all that most conduces to the racial character of skulls, whether it be the direction of the jaws, or the cheekbones, the breadth or narrowness of the skull, the advancing or receding outline of the forehead &c. strikes the eye … distinctly at one glance."[193]

Until 1793, Blumenbach's cranial comparisons were limited to only four of his varieties because he possessed none of the fifth. Consequently, he was "so anxious above all to obtain"[194] representative skulls of the South Sea Islanders that, in 1787, he sought the assistance of Banks to acquire the hard evidence for his fifth variety.[195] Banks was the appropriate addressee for such a demand, as he had long established an extremely effective international network for the exchange of natural history specimens and information.[196] Blumenbach and Banks corresponded at least since 1783, whereby Blumenbach obtained a number of natural history items including human skulls from the Americas.[197] After several years of disappointment, Banks finally presented the requested "very rare skull of a New Hollander from the neighbourhood of Botany Bay"[198] and one of a "Tahitian female."[199]

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[191] Blumenbach, "Natural Variety of Mankind (1795)," 235–36.

[192] Ibid., 236.

[193] Ibid., 237. Blumenbach documented such observations in a series of catalogues titled *Decas Collectionis Suae Craniorum Diversarum Gentium Illustrata* (henceforth referred to as the decades), which, as a result of his collection's growing dimensions, amounted eventually to seven consequently updated editions (1790-1820). Each new decade sketched the current state of his theory and supplied drawings of his cranial collectibles, ordered according to his human varieties and their subdivisions. Additionally, each skull was explicated by reflections on its variety's cultural and anatomical characteristics. See also Fulford, "Theorizing Golgotha," 123–24.

[194] Blumenbach, "Natural Variety of Mankind (1795)," 149 (letter dedicated to Banks and published as preface to *De Generis* in 1795).

[195] Gascoigne, *Banks and English Enlightenment*, 150–53; Fulford, "Theorizing Golgotha," 119; Turnbull, "Anthropology and Ancestral Remains", 216.

[196] Gascoigne, *Banks and English Enlightenment*, 150–51.

[197] Ibid.; Douglas, "Novus Orbis Australis," 110; Fulford, "Theorizing Golgotha," 124.

[198] Blumenbach, "Natural Variety of Mankind (1795)," 239.

[199] Douglas, "Novus Orbis Australis," 110; Blumenbach, "Index of the Author's Anthropological Materials, which he made most use of in illustrating this edition," in Blumenbach, "Natural Variety of Mankind

In a letter to Banks, Blumenbach exclaimed his delight about these eagerly awaited acquisitions. He now held in his hands the cranial representations "of both the two principal Races which constitute this remarkable variety in the 5th part of the world; viz. of the black race & of the brown one."[200] He assigned his new cranial trophies from the "original barbarians inhabiting the Southern Ocean Islands; one of which is of course the New Hollander,"[201] the highest place in his anthropological collection, examined them and published illustrations and descriptions of the "two specimens" in 1795 in the third decade.[202] Upon its investigation, he regarded the New Hollander skull as generally similar to that of the *Otaheitan*. However, its *norma verticalis* revealed a slightly narrower shape and thus, believed Blumenbach, "approach[ed] the Ethiopians very much."[203] A missing tooth confirmed reports on the New Hollanders' habit of extracting the incisors (which Dampier had also mentioned).[204]

Blumenbach did not refer to these details in *De Generis*, but he integrated other findings about his new skulls. The *Otaheitan* from then on represented the entire Malayan variety, while the New Hollander skull served as an (this time evidence-based) example for artificial head shaping in Blumenbach's discussion about the causes of racial skull formation.[205] Finding that it was "conspicuous beyond all others for the singular smoothness of the upper jaw," he explained the feature in accordance with his (somewhat Lamarckian) idea about the eventual inheritability of artificial head formation: The New Hollanders' "paradoxical custom" of inserting wooden sticks through the nasal septum and the thereby exerted "perpetual pressure" had gradually resulted in a racial characteristic.[206]

(1795)," 162 (female Tahitian skull), 239; Turnbull, "Anthropology and Ancestral Remains", 215, 218; Gascoigne, *Banks and English Enlightenment*, 151.

[200] Blumenbach to Banks, 1 November 1793 (original emphasis) quoted in Gascoigne, *Banks and English Enlightenment*, 153. Same quote see also Fulford, "Theorizing Golgotha," 124 and Douglas, "Novus Orbis Australis," 107.

[201] Blumenbach, *Decas Tertia Collectionis Suae Craniorum Diversarum Gentium Illustrata* (Göttingen: Johann Christian Dieterich, 1796), 3.

[202] Ibid., 11.

[203] Ibid., 12.

[204] Ibid., 13; Turnbull, "Anthropology and Ancestral Remains," 218.

[205] Blumenbach, "Natural Variety of Mankind (1795)," 239.

[206] Ibid., 239–40; Blumenbach, *Decas Tertia,* 13.

The "racial form of skulls" had at this point in time developed into the most significant criterion for Blumenbach's varietal characterisations and definitions. He maintained that, despite individual differences within a variety and the gradual transition between the heads of each variety, human skulls formed a "consistency of characteristics which cannot be denied."[207] The racial skull, he argued, was shaped on the inside by the brain and on its exterior surface through the modelling effects of the facial muscles. As in 1775, the climate remained the "primary cause" for skull shape, even though it had only "an indirect share in forming the racial character of the skull"[208] (I shall explain in more detail its impact on the" national face" below). Similar to his original dissertation, Blumenbach emphasised the most important "accessory" cause for the formation of racial skulls, namely the manipulation of infant skulls by the exertion of "constant pressure"[209] to particular areas of the skull.[210] In his earlier discussion of the "national face" he gave one example of the artificial shaping of the nose, practised by peoples as distant from each other as "the Ethiopians" and the "inhabitants of the Society islands in the Southern Ocean." They "exaggerated" their infants' noses by the "violent and long compression of the nose when soft" to the effect that the individual had a permanently depressed nose. This, Blumenbach thought, was not a hereditary skull conformation – it could "in no wise be made thus originally, since ... the racial face may be recognized even in abortions."[211]

With regard to the question of the (eventual) heredity of artificially effected skull shapes, Blumenbach thus seems to have been less willing to support this idea than in 1775. Referring again to Hippocrates's view that head manipulations became "a sort of hereditary prerogative and congenital, and finally a second nature,"[212] Blumenbach preferred to "leave this matter ... in the abstract just as it is."[213] He referred his readers, however, to his discussion of the issue in the animal world where he posited Hippocrates's (and Aristotle's) position against that of Kant and others[214] who, according to Blumenbach, "attributed to chance" the (re-)occurrence of acquired parental characteristics

[207] Blumenbach, "Natural Variety of Mankind (1795)," 235.
[208] Ibid., 239.
[209] Ibid., 240.
[210] Ibid., 240–42.
[211] Ibid., 233.
[212] Ibid., 242.
[213] Ibid., 243.
[214] Ibid., 203 incl. n1 and n2.

in animal offspring. As Blumenbach stated, he "would willingly give [his] suffrage" to the latter, were it not for the problem of "other marks of race" such as facial features, which appeared to be inheritable from one generation to another. This, Blumenbach implied, could not be explained by chance.[215] The nature of seemingly congenital characteristics thus was not (yet) known and Blumenbach similarly pointed to the "enigmatical phenomena of degeneration" whose causes "still escape our observation, the racial and constant forms of skulls, the racial colour of eyes, et&c."[216]

The *Neuholländer*'s "racial face"

In his examination of racial physiognomy Blumenbach again emphasised the individuality and variance of facial traits within all human varieties, ranging from Europeans to the "barbarous nations." But he also insisted that "it is not less undoubtedly a fact that every different variety of mankind (and everywhere, even in the inhabitants of single provinces) all over the world has a racial face peculiar to each of them by which it may be easily distinguished from the remaining varieties."[217] Based on the work of artists, augmented by his own observations of "foreigners" at "markets,"[218] Blumenbach's argumentation became more systematic than in 1775 and 1781. He specified five such faces, each of which was linked to a human variety and explained by his degeneration hypothesis. He differentiated between two kinds of degeneration from the first variety's "medium" face, distinguishable from the frontal (wide or long) and side (flat or pronounced) perspectives.[219] According to this classification, Malayan and Ethiopian faces appeared elongated. He then further distinguished faces whose "nose and the remaining parts" were "somewhat indistinct" from "projecting angularly"[220] profiles. Following this definition, the Malayan variety, including New Hollanders, presented more pronounced features than the Ethiopian variety.[221]

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[215] Ibid., 204.

[216] Ibid., 206.

[217] Ibid., 227.

[218] Ibid., 227. Regarding Blumenbach's "authentication" of living exhibits at these fairs see Roslyn Poignant, *Professional Savages: Captive Lives and Western Spectacle* (New Haven: Yale University Press, 2004), 111.

[219] Blumenbach, "Natural Variety of Mankind (1795)," 228.

[220] Ibid.

[221] Ibid., 228–29. Blumenbach numbered these facial varieties from 1 to 5. While he regarded the first as "medium" he labelled the extremes as "wide" and "elongated" but did not explicitly refer to the pronounced and flat profiles as intermediate forms ("2. Mongolian: wide and flat, 3: American: wide and pronounced, 4. "Guinea face:" long and flat, 5. Malay: long and pronounced"). Therefore, his facial delin-

The causes for the formation of a variety's "national face"[222] were complicated. Although Blumenbach attributed "much" to the mixing of races, he conjectured that climate was its "principal cause:" firstly, people(s) living in the same climatic conditions presented a consistency in their facial conformation;[223] secondly, those who migrated as individuals to a different climate adapted their faces to those of the peoples of that climate; and thirdly, the faces of "original stocks" that lived in a different climate from their origin (for example due to colonial endeavours) developed faces that corresponded with the climate of the colonies and not with that of their origin.[224]

The specific impact of a climate on the eventual characteristics of a racial face appeared "extremely difficult"[225] to ascertain despite, for example, Kant's efforts to come to a conclusion. In this context, Blumenbach referred to Dampier's New Hollanders, tentatively suggesting "that accessory causes sometimes endemical to peculiar climates ... may do something towards contracting the natural face of the inhabitants" of that region. The additional causes were the "constant clouds of gnats"[226] inhabiting the same climatic region as the New Hollanders, who as a result (citing Dampier) "never open[ed] their eyes like other people."[227]

Whether Blumenbach thought that the New Hollanders' contracted face represented their "national face" appears uncertain. Remarkably, he no longer described their ferocious physiognomy and temperament and Parkinson's engravings, showing "fierce and savage" New Hollanders, vanished altogether. This could be due to a, so to speak, methodological limitation to the examination and comparison that he introduced for the evaluation of "national faces." Accordingly, "looks, expression" was "sometimes racial," thus indicative of "temperament" and they were to be excluded from racial categorisation. Therefore, his discussion of the face only concerned the "proportion and direction of its parts … peculiar and characteristic to the different varieties of mankind."[228]

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eation did not correspond exactly with his cranial delineation of mediate, intermediate and extreme varieties. In other words, his extreme faces were in fact the less pronounced.

[222] Ibid., 226.

[223] Ibid., 229.

[224] Ibid., 230.

[225] Ibid., 231.

[226] Ibid., 232.

[227] Ibid., 232n4.

[228] Ibid., 229.

Thus, in comparison to his previous consideration of the New Hollanders, Blumenbach's more systematic approach and change in methodology brought with them the elimination of the juxtaposition of "fierce and savage" New Hollanders with milder *Otaheitans*. His racial differentiation between the Malayan variety's "black race" and "the brown one,"[229] announced upon the receipt of his South Sea skulls, however, persisted in his discussion of the "[r]acial varieties of colour"[230] in the third edition of *De Generis* and in the subsequent editions of the *Handbuch* and the *Beyträge*.

The *Neuholländer*'s skin colour

In line with his environmentalist scheme of gradual transition Blumenbach differentiated five skin colours that were largely associated with his five human varieties: Europeans were "white," Mongolians "yellow, orange-tinged" and Americans of a "copper colour;" the "Malay race and the men of the Southern Archipelago" were "tawny" and the Ethiopians "tawny-black" to "jet-black."[231] He cautioned, however, none of these colours were exclusively characteristic of their respective varieties. Black skin, he explained, derived from the content of carbon in the human body and its chemical reaction with the atmospheric oxygen of specific climates. As a result, the "torrid zones" of Africa produced black Ethiopians.[232] That is why their tawny-blackness also occurred in "others of the most different and most widely separated varieties,"[233] who lived under similar climatic conditions. Blumenbach therefore located "tawny" *Otaheitans* (living in a milder climate) at the one end of the Malayan's "sensible transition" in skin colour and the "tawny-black" New Hollanders (living in a hotter climate) at the other.[234]

Following the 1795 edition of *De Generis* Blumenbach introduced both the transitional colour scheme of the Malayan variety and his hypothesis on the extreme and intermediate varieties, to the subsequent editions of the *Handbuch*. Here, the Malayan skin colours ranged from "light mahogany" to the "darkest clove- and chestnut-brown."[235] From the *Handbuch*'s sixth edition (1799) onwards, reiterating his 1795 ex-

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[229] Blumenbach to Banks, 1 November 1793 (original emphasis) quoted in Gascoigne, *Banks and English Enlightenment*, 153.

[230] Blumenbach, "Natural Variety of Mankind (1795)," 209.

[231] Ibid.

[232] Ibid., 211–12.

[233] Ibid., 209–10.

[234] Ibid., 210.

[235] Blumenbach, *Handbuch* (1797); 62; Blumenbach, *Handbuch* (1799); 63; Blumenbach, *Handbuch* (1803), 67; Blumenbach, *Beyträge* (1806), 71; Blumenbach, *Handbuch* (1807), 69.

planation of different shades of black, he additionally explained the differences in the darkness of Ethiopians and New Hollanders by their slightly different climatic environments: "The Ethiopian race in burning hot Africa has degenerated [from the white Caucasian] to the other extreme in the stages of the human varieties, while it fades into the Malay race through the rather milder New Holland and on the New Hebrides."[236] The New Hollanders' transitional position however turned into a racial subcategory by 1806, in the second edition of the *Beyträge*. Here, the Malay were "mostly" brown whereas Blumenbach added that within the variety there existed "one or another people" that differed from the other in their division. Accordingly, "the black Papoos on New Holland etc. are divided from the brown Otaheitans and other Islanders of the Pacific Ocean as separate sub classes"[237] – a distinction Blumenbach henceforth carried on in all ensuing *Handbuch* editions.[238]

Chapter Conclusion

Blumenbach's selective utilisation of his sources indicates their racial position within a tacit continuum as both the extreme element within the Malayan variety and the boundary-blurring element between this intermediate and the extreme Ethiopian variety. From 1775 onwards, he also distinguished between two human groupings in the Southern Pacific, which would later be assigned to the fifth, or Malayan, variety – the *Neuholländer* and the *Otaheitan.* He construed this distinction based on a diversity of characteristics and methodological approaches. Skin colour, although identified as an unsatisfactory racial marker, was crucial to this distinction, both implicitly in his dissertation (1775) and increasingly explicit after its second edition (1781). In these first two editions of his dissertation Blumenbach distinguished wilder, or "fierce and savage", New Hollanders from appealing *Otaheitans.* In 1775, this distinction was based explicitly on his interpretation of Parkinson's engravings combined with silently applied skin colour classification. In 1781, Blumenbach underscored his juxtaposition with reference to Reinhold Forster's biased differentiation of darker and fairer South Sea peoples. By 1795, the distinction had shifted through a change in methodology, from the interpretation of mild

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[236] Blumenbach, *Handbuch* (1799), 64n.

[237] Blumenbach, *Beyträge* (1806), 72 ("Jeder dieser fünf Hauptrassen begreift übrigens wieder *ein, und das andere Volk* das sich durch seine Bildung mehr oder minder auffallend von den übrigen derselben Abtheilung auszeichnet. Und so könnten z.B. die Hindus ... so wie ... die schwarzen Papus auf Neuholland etc. von den braunen Utaheiten u.a. Insulaners des Stillen Oceans als *eigene Unterarten* abgesondert werden").

[238] He transformed this passage of the *Beyträge* into a footnote in the *Handbuch* editions.

and ferocious physiognomies to the classification of skin colours. From then on, Blumenbach upheld the New Hollander's position as part of the Malayan climatically caused skin colour range (from "light mahogany to the darkest clove- and chestnut-brown") although he also contended that they could be conveniently classed with the extreme Ethiopians. From 1806 onwards, as Douglas has argued in connection to "a harsher racial climate in western Europe,"[239] Blumenbach separated New Hollanders as "black Papoos" into a separate sub-racial category within the Malayan variety, again in stark opposition to the "brown Otaheitans."

Blumenbach's categorisation of the *Neuholländer* demonstrates another development of physical anthropological investigation in the late eighteenth century. As Peter J. Kitson has argued, Blumenbach was one of "the Enlightenment natural scientists who had established a paradigm of difference written on and inside the body."[240] Blumenbach's investigative as well as theoretical approach to the study of human nature and the classification of human diversity presents a first shift towards empiricism. This more empirical mode was based on the investigation of objects while still also using travel narratives for theorising.[241] It in part foreshadowed the antihumanist empiricism of the first generation of German physical anthropologists who outright rejected travel narratives and the historicist approach to the study of humanity.[242]

When Blumenbach, in 1775, created an imagined cranial sequence of the Southern Seas "dark nations" by positioning the *Otaheitan* on the lighter end towards the American skull while the New Hollander skull faced the "very deepest black" Ethiopian, this construction lacked any empirical basis. Throughout the following twenty years, however, Blumenbach amassed significant numbers of human skulls as empirical evidence for his racial hypothesising. This shift towards examining and comparing human skulls has gained him the title of "father of physical anthropology" already in the late nineteenth century when early practitioners of the science in Germany looked to Blumenbach's cranial investigations as a starting point for their own, newly defined physical anthropological race investigations. But Blumenbach's utilisation of Australian Aboriginal skulls in the third edition of *De Generis* also points to his clearly environmentalist

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[239] Douglas, "Seaborne Ethnography," 14.
[240] Kitson, "Romantic Theories of Race," 99.
[241] Fulford, "Theorizing Golgotha," 119.
[242] Zimmerman, *Anthropology and Antihumanism*, 218.

concept and his intentional inclusion of the non-physical sphere into his human taxonomy.

The period in between these two empirical approaches, that is post-Blumenbach at the end of the eighteenth century and pre-establishment of *Anthropologie* in the late 1860s – was signified by a decline in Blumenbachian "anthropological researches"[243] due to the epistemological changes in the enquiry into humanity outlined in Chapter 1. Nevertheless, during this period individual practitioners of what would become physical anthropology undertook race investigations in the medical-anatomical and comparative anatomical disciplines. As I shall show in the next chapter, they remained interested in the inhabitants of the Australian continent, perpetuating the already existing notions of Australian Aborigines' low state of existence.

[243] Johann Friedrich Blumenbach to Joseph Banks, 1 May 1795 (Letter 903), in Dougherty, *Correspondence of Blumenbach*, 395.

4 Early perceptions of "the Australian race" and the establishment of *Anthropologie* as a natural science

Blumenbach is widely recognised as the German "father of physical anthropology." This reputation results from his long-lasting division of humankind into five varieties (or races) on the basis of his descriptions of human skulls – although it is also widely acknowledged that this was not his only criterion. His physical anthropological approach, however, did not initiate further such craniological investigations in Germany. In 1856, for example, to the despair of Blumenbach's successor in Göttingen, Rudolf Wagner (1805-1864), researchers appeared to be uninterested in the great anthropologist's skull assemblage.[1] He was one of the few members of German university anatomy departments who investigated existing craniological collections as a private endeavour rather than as part of their academic work. Their area of research was marginal to the medical discipline.[2]

As I have illustrated in Chapter 1, Andrew Zimmerman has shown how German physical anthropology (and ethnology) was established as a decidedly natural science discipline through a determined counter-movement against the German humanist tradition. This antihumanism involved a radical reinterpretation of what previously entailed *Anthropologie* in Germany by assigning non-European bodies (and cultures) the function of being objective sources for the investigation of humanity – especially those regarded as "natural", "lower" or "primitive" races. Concurrently, they insisted on the statistically based, empiricist, inductive method as the only means to investigate humanity, thus initiating the systematic acquisition and investigation of the skeletal remains of their research objects.

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[1] Rudolph Wagner, "Die anthropologische Sammlung des Physiologischen Instituts," *Nachrichten von der G. A. Universität und der Königl. Gesellschaft der Wissenschaften zu Göttingen*, no. 14 (6 October 1856): 240.

[2] James Ryding, "Alternatives in Nineteenth-Century German Ethnology: A Case Study in the Sociology of Science," *Sociologus* 25 Supplement (1975): 11.

The increasing orientation towards a natural scientific enquiry into human diversity and origin is reflected in the way early practitioners of what later would be defined as physical anthropology presented their somewhat eclectic research to the Gesellschaft Deutscher Naturforscher und Ärzte (Association of German Naturalists and Physicians, henceforth referred to as German Naturalists Association). In the first part of this chapter, I shall investigate the areas of anthropological research, with particular reference to "the Australian race", presented at the association's annual meetings until the end of the 1850s. In the second part of this chapter, I shall illustrate the turn towards a non-humanist or non-philosophical definition of *Anthropologie* by the example of the 1861 Göttingen Meeting, the discussion of Darwinian evolution mechanisms in the German Naturalists Association and the eventual establishment of the Gesellschaft für Anthropologie, Ethnologie und Urgeschichte (Society for Physical Anthropology, Ethnology and Prehistory, henceforth referred to as German Anthropological Society) in 1870.

4.1 Human diversity and origin at the German Naturalists Association meetings (1827-1858)

The antihumanist establishment of physical anthropology in the German sphere took place over many decades from the mid-nineteenth century onwards. Following Blumenbach's death in 1840, physical anthropological research became insignificant in the German-speaking sphere.[3] Marginal to the medical discipline,[4] physical anthropological investigations were sporadically undertaken by members of the universities' anatomy departments whose interest was a private endeavour rather than part of their academic research. Before they attempted to organise their field through the establishment of anthropological journals and eventually societies in the late 1860s, the only opportunity for the practitioners of physical anthropology to present their findings to the German scientific community were the annual meetings of the German Naturalists Association.[5]

[3] Ursula Zängl-Kumpf, *Hermann Schaaffhausen (1816-1893). Die Entwicklung einer neuen physischen Anthropologie im 19. Jahrhundert* (Frankfurt a.M.: R. G. Fischer, 1990), 33.

[4] Ryding, "Alternatives German Ethnology," 11.

[5] Ursula Zängl-Kumpf, "Hermann Schaaffhausen (1816-1893) und die frühe Geschichte des Faches Anthropologie," *Anthropologischer Anzeiger* 50, no.4 (1992): 340; Andrew Zimmerman, *Anthropology and Antihumanism in Imperial Germany* (Chicago: University of Chicago Press, 2001), 47.

Founded in 1822 under the leadership of Lorenz Oken (1779-1851), whose liberal-nationalist convictions influenced its operating principles,[6] the German Naturalists Association was considered a political tool for German unification and operated on "egalitarian and democratic principles in its internal organization and membership policies."[7] Aiming to foster a cooperative democratic atmosphere for natural scientific research free from state intervention, its founders sought to create a forum for natural scientists and medical researchers to communicate and publish their scholarly work.[8] Each year, its meetings took place in a different town throughout the entire German-language region, making them accessible for German-speaking researchers who believed in the progressive forces of "the new method of the exact natural sciences."[9] With its ambition to operate "in contrast to the philosophical or transcendental tendencies of Romanticism"[10] the association can be regarded as an epitome of German antihumanism in accordance with its liberal foundations.

At its meetings practitioners of anthropology presented their research and communicated their ideas in the general, medical or zoological sections. Their papers reflect the scope of physical anthropological interest and method in the first half of the nineteenth century, ranging over a variety of content that would later become the objectives of the German Anthropological Society's three sections.[11] As I shall show, the papers concerning Australian Aborigines in one or another way similarly reflect the scope of these areas of investigation.

Apart from their topical diversity, the anthropological presentations at the association's early meetings point to the marginality of physical anthropology in the German

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[6] Sander Gliboff, *H. G. Bronn, Ernst Haeckel, and the Origins of German Darwinism. A Study in Translation and Transformation* (London: MIT Press, 2008), 154. For a short overview of the establishment of the German Naturalists Association see Wolfram Schmitt, "Konstituierung der Gesellschaft Deutscher Naturforscher und Ärzte," in *Die Versammlung Deutscher Naturforscher und Ärzte im 19. Jahrhundert*, ed. Heinrich Schipperges (Stuttgart: Gentner Verlag, 1968), 31–41.

[7] Gliboff, *Origins of German Darwinism*, 156. See also Schmitt, "Konstituierung der Gesellschaft," 38–39.

[8] Schmitt, "Konstituierung der Gesellschaft," 37–39; Hans Querner, "Die Anthropologie auf den Versammlungen der Deutschen Naturforscher und Ärzte bis zur Gründung der Gesellschaft für Anthropologie 1869," in *Festschrift zum Hundertjährigen Bestehen der Berliner Gesellschaft für Anthropologie, Ethnologie und Urgeschichte 1869-1969. Erster Teil. Fachhistorische Beiträge*, ed. Hermann Pohle and Gustav Mahr (Berlin: Bruno Heßling, 1969), 144.

[9] Heinrich Schipperges, "Einführung," in Schipperges, *Versammlung Deutscher Naturforscher*, 14. See also Querner, "Anthropologie auf den Versammlungen," 143–44.

[10] Ilse Gärtner, "Die achte Versammlung in Heidelberg (1829)," in Schipperges, *Versammlung Deutscher Naturforscher*, 46.

[11] For a short overview of anthropological papers presented at the meetings up to the foundation of the German Anthropological Society see Querner, "Anthropologie auf den Versammlungen."

natural scientific community at the time. There was no specialised anthropological section at the meetings, which made the presentation of papers a random exercise. For example, in 1854, Rudolf Wagner presented a paper to the members of the combined "sections for anatomy, physiology, zoology and medicine, surgery and obstetrics."[12] With regard to the methodological approach of physical anthropological investigation during the early decades of the nineteenth century, the papers also show that their presenters originated from a diversity of scientific backgrounds; they were mostly zoologists, comparative anatomists and physicians who undertook their race investigations sporadically and without topical or methodological coordination. While there were several attempts to establish anthropological sections in the association, these reflect not only the diverse meanings the term and discipline *Anthropologie* entailed throughout the early nineteenth century, but also its marginality. An "anthropological-medical" section founded in 1840, for example, was concerned exclusively with medical topics, while in successive sections the subject matter was psychiatry.[13]

Karl von Hügel's conflicting representation of the *Neuholländer* (1837)

Throughout the first fifteen years, anthropological questions were rarely debated at the German Naturalists Association's meetings. The earliest anthropologically oriented paper was presented in 1827, when the obstetrician Ferdinand von Ritgen (1787-1867) of Gießen presented his views on the natural order of the world in the vein of natural history thinking of the previous century. Accordingly, he ranked the human as the pinnacle and centre of the natural world, followed by not further defined less humanlike organic forms and stages.[14] In the same year, the Prague mineralogist and botanist, Kaspar von Sternberg (1761-1838) discussed a number of fossil animal and human bones that had been unearthed at the beginning of the 1880s in a gypsum mine at the Elster River banks near Köstritz (Thuringia). The issue was whether the discovery indicated that primordial humans had co-existed with long extinct animals, which was a supposition deemed impossible at the time on the basis of the French Enlightenment palaeontologist and physical anthropologist Georges Cuvier's (1769-1832) catastrophism theory. Sternberg too regarded it unlikely, suggesting the human bones were recent and had been

[12] Rudolph Wagner, "[Ueber die Rassenbildungen]," *Amtlicher Bericht über die Ein und Dreissigte Versammlung Deutscher Naturforscher und Ärzte zu Göttingen im September 185,* 15–22.

[13] Querner, "Anthropologie auf den Versammlungen," 144–45; Zängl-Kumpf, "Hermann Schaaffhausen," 340.

[14] Ferdinand Ritgen, "Über die Aufeinanderfolge des ersten Auftretens der verschiedenen organischen Gestalten," *Isis* 21, no. 5–6 (1828): 487–91; Querner, "Anthropologie auf den Versammlungen," 151.

mixed with those of primordial extinct animals in the wake of several floodings and the subsequent collapsing of the Elster River banks.[15]

In 1837, the Austrian noble and naval circumnavigator Karl von Hügel (1795-1870) reported on his observations of "Man in the different formation of his families and social conditions, from the lowest stage of his animal-like existence to that entangled and often-unnatural one of the highest civilisation."[16] Von Hügel had circumnavigated the globe in the 1830s in search of the "developmental laws"[17] that influenced a human race's progress – or lack thereof. In this context, he can be regarded as one of the first German-speakers to provide first-hand descriptions of Australia's indigenous inhabitants in a scheme of human cultural and physical development. His representation of New Hollanders at the naturalists' meeting substantially differed from his more positive and elaborated views expressed in the manuscript of his "New Holland Journal."[18]

At the naturalists' meeting, von Hügel claimed "India's *Urstamm*," the black-skinned Andamans, occupied "the lowest stage of mankind"[19] where the "transition of man to animal [was] inconceivable."[20] "Of small, unsightly, weak body build,"[21] they lived as individuals rather than in families or hordes, "fleeing apelike up the trees if one encounters them incidentally."[22] The *Neuholländer*, in von Hügel's view, were only marginally better placed. Based on his observations made during his visit to the Australian continent between November 1833 and October 1834, von Hügel described the physical and cultural characteristics of "New Holland's unhappy inhabitants"[23] in a vein similar to Dampier's, although he differed from Dampier on their racial classification. Regarding them as of the same "black race"[24] as his Andaman *Urstamm*, he distin-

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[15] Kaspar von Sternberg, "Über die fossilen Knochen von Köstritz," *Isis* 21, nos 5–6 (1828): 481–85; Querner, "Anthropologie auf den Versammlungen," 153.

[16] Karl von Hügel, "[Abriss seiner in den J. J. 1830 bis 1836 unternommenen Weltbereisung]," *Bericht über die Versammlung deutscher Naturforscher und Aerzte in Prag im September 1837*, 36–37.

[17] Ibid., 37.

[18] For biographical information on Karl von Hügel see Dymphna Clark, introduction to *New Holland Journal, November 1833-October 1834, by Baron Charles von Hügel,* ed. Dymphna Clark (Melbourne: Melbourne University Press, 1994). The original diaries and notes, on which the manuscript was based, have not been recovered.

[19] von Hügel, "[Abriss seiner Weltbereisung]," 41.

[20] Ibid., 45.

[21] Ibid., 41.

[22] Ibid., 45.

[23] Ibid., 44.

[24] Ibid., 45.

guished them from both "Papuans" and "Africa's Negroes."[25] Their "ugly and misshapen bodies [and] repugnant facial traits"[26] to him betrayed a lack of spirituality and intelligence – in contrast to the "tribe of Van Dumensland [sic]" (Tasmania), which belonged to the "race of New Guinea (*Papua*)." By the example of a thirteen-year-old Tasmanian Aboriginal schoolboy, who was "the most excellent head of the entire school", he argued that this people was far more intelligent than the New Hollanders (whose children could not be incited to stay at school for long).[27] In his view, "Nature has treated no animal more cruelly than these pitiful humans"[28] by depriving them of a benevolent environment that might have supported their progress towards some grade of civilisation (signified by the existence of shelter, clothing or domestic animals).

In a tone invoking Kant's view of what it meant to be (not quite) human, von Hügel lamented, "the New Hollander is like an animal only occupied with the physical life; with the requirements of his body."[29] Even worse, lacking the instinctive foresight of animals to store food for future needs, the New Hollander in some respect lived a life below that of animals. (Here his view of animal instinct, however, was in contrast to Kant's who regarded the foresight to plan for the future not as instinctive but as a step towards humanness.) In short, von Hügel's New Holland "*Urvolk*"[30] – roaming the land in "hordes .... like a pack of wild animals"[31] – had remained part of nature, just one small step above the scattered apish members of his Indian *Urstamm*.

Von Hügel planned to publish a "New Holland Journal" with the intention "to speak in somewhat greater detail about these unfortunate people"[32] about whom "scarcely any information ... ha[d] found its way to Europe"[33] apart from Britain. Strikingly, here he portrayed the New Hollanders in a more differentiated way, for example, distinguishing peoples from "the interior" favourably from "corrupted natives" who lived in colonised areas.[34] While he perceived all of them as living a miserable life of

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[25] Ibid., 41.
[26] Ibid., 44.
[27] Ibid., 45.
[28] Ibid.
[29] Ibid.
[30] Ibid., 45.
[31] Ibid.
[32] von Hügel, *New Holland Journal*, 26.
[33] Ibid.
[34] Ibid., 418.

deprivation and famine caused by their unfavourable natural environment,[35] his first impressions and expectations of "the inferior intellectual level generally attributed to them by most authors"[36] were soon "erased."[37] In contrast to the views expressed in his presentation, von Hügel "was astonished at their powers of perception and their replies, which always went straight to the point."[38] He described the various peoples of Australia as "gentle and inoffensive,"[39] "anything but stupid"[40] and "neither deceitful nor liars."[41] Even so, in von Hügel's view, their intellectual capacities were limited. His interrogative gaze into their deep eyes only noticed "a blank wall,"[42] indicative of an incapacity for spiritual life, even though "they ... appear[ed] to have some notion of a continuing existence after death."[43]

Apart from "inherent passive defects"[44] they had "in common with all other savages"[45] (namely a "poor, uncouth and indolent"[46] nature, "their restless, innate desire for freedom"[47] and "the acknowledged inability of savages to reflect on the past or to take thought for the future"[48]), Australian Aborigines were of a "good nature."[49] Any kind of unpleasant behaviour, such as drinking and violent demeanour, was not innate but incited by the British colonisers' maltreatment[50] and their lack of understanding that the right educational measures[51] might achieve an "improvement of their moral and physical condition."[52]

Von Hügel's depiction of their physical characteristics differed even more from the appalling features he portrayed at the German Naturalist Association's meeting. In his

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[35] Ibid., 39.
[36] Ibid., 417.
[37] Ibid., 37.
[38] Ibid., 270.
[39] Ibid., 37.
[40] Ibid., 270.
[41] Ibid., 421.
[42] Ibid., 49.
[43] Ibid., 50.
[44] Ibid., 418.
[45] Ibid., 419.
[46] Ibid., 270–71.
[47] Ibid., 418.
[48] Ibid.
[49] Ibid., 46.
[50] Ibid., 37, 46, with regard to Tasmania see pp. 138–47.
[51] Ibid., 270–71, 350, 417, 418, 420.
[52] Ibid., 418.

journal manuscript he observed that the continent was populated by a variety of different peoples (that were distinguishable by both different languages and bodily appearances) whom he described in general as dark-skinned, muscular people with thin lower legs.[53] Strikingly, in his manuscript von Hügel compared New Hollanders to Europeans, stating that "neither their cranium nor their facial structure differ in the slightest from that of a European" and "their noses are certainly neither Roman nor Grecian but of a shape common to Europe."[54] In fact, his theory about the New Hollanders' proximity to the apish human *Urstamm* or allusions to an animal lifestyle were entirely absent in von Hügel's manuscript.

Skulls, apes and the "lower races" at the German Naturalists Association meetings (1840s)

It remains unknown why von Hügel chose to omit his faith in the New Hollanders' "many redeeming qualities,"[55] which equipped them for a heightened existence, when he presented his observations to his naturalist colleagues (although it can be speculated that he sought to convey the expected imagery of this "lower race"). In any case, the lasting impression his representation left of New Hollanders was reflected in the zoological section of the same meeting. At this time another global explorer, Wilhelm Gottfried Tilesius von Tilenau (1769-1857), presented his observations, conducted in the Zoological Garden in Macao, on the physiognomy of an orang-utan with impressive "intellectual capacities."[56] According to the meeting proceedings' editors, Tilenau felt "induced by Bar[onet] v[on] Hügel's paper on the low stage of the New Hollander"[57] to also present some images of the "stupid physiognomies of this thin-legged wild tribe."[58] Whether this representation and wording reflects on the editors' impression of von Hügel's and Tilenaus's papers or the latter's own understanding of the matter cannot be ascertained. Nonetheless, it shows that the association of New Hollanders and Africans with apes (in this early case based on a more positive perception and interpretation of

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[53] Ibid., 49, 81, 319.

[54] Ibid., 49.

[55] Ibid., 418.

[56] Tilenau participated as ship's surgeon and naturalist in the first circumnavigation of the world conducted by the Russian Empire between 1803 and 1806. Led by Adam Johann von Krusenstern (1770-1846), the expedition did not visit the Australian continent.

[57] Tilesius von Tilenau, "[Nachricht der Erdumseglung Crusensterns]," *Bericht über die Versammlung deutscher Naturforscher und Aerzte in Prag im September 1837*, 186.

[58] Ibid.

the orang-utan's physiognomy) seemed not a far fetch for Germany's naturalists and physicians.

Two more forthright physical anthropological papers were presented in 1841 and 1846. The first dealt with craniological comparisons by the Dutch zoologist and owner of a human skulls collection, Jan von Hoeven (1801-1868), who displayed the "images of skulls from different nations."[59] His choice of "some Negro skulls for comparison with Papuans"[60] reflects the contemporaneously ongoing question that already puzzled Blumenbach and his contemporaries: whether skin colour or skull features were the criterion for racial classification; and were both "Negros" and "Papuans" of one black race or did they represent distinct ones because of their different craniological characteristics?

The geographer August Zeune (1778-1853) presented a craniologically agued paper on the polygenetic "genesis of mankind,"[61] reiterating the (unnamed Buffonian and Kantian) rules for species and race definition.[62] This paper was based on Zeune's earlier publication on the formation of the skull.[63] There he argued for the multiple origins of human races "wherever the conditions for life existed"[64] without, however, going into detail about the nature of these conditions. In order to "work out anew this dark and convoluted matter"[65] of classifying human races, Zeune investigated "2–300 skulls"[66] in the anatomical department at the Berlin University. Comparing his own measurements with those published by Blumenbach, the British anatomist James Cowles Prichard (1786-1848) and the American Samuel Morton (1799-1851), Zeune aspired to categorise races according to the "cephalic index" recently devised by the Swedish comparative anatomist Anders Retzius (1796-1860).

Retzius divided humanity into four racial groups based on the ratio between skull breadth and length, differentiating between long-headed (dolichocephalic) and short- or

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[59] Jan van der Hoeven, "[Abbildungen von Schädeln verschiedener Nationen]," *Bericht über die neunzehnte Versammlung deutscher Naturforscher und Aerzte in Braunschweig im September 1841*, 65.

[60] Ibid.

[61] August Zeune, "Ueber die Entstehung des Menschengeschlechts," *Amtlicher Bericht über die 24. Versammlung Deutscher Naturforscher und Aerzte in Kiel im September 1846*, 27–31.

[62] Ibid., 28.

[63] Ibid., 31.

[64] August Zeune, *Über Schädelbildung zur festern Begründung der Menschenrassen* (Berlin: Vereins-Buchhandlung, 1846), 4.

[65] Ibid., iii.

[66] Ibid., 9, 11.

round-headed (brachycephalic) races. He divided each of these further into prognathous and orthognathous groups (that is, with protruding and non-protruding jaws respectively). Retzius argued this new, craniometrical method enabled the "correction"[67] of human classification based on skin colour and/or geographical distribution. For example, instead of classing African "Negros" with "Papuans" by skin colour or upholding Blumenbach's Malay variety, Retzius classed long-headed "Negros" with "New Hollanders," while "Malayans" and "Papuans" belonged to the short-headed races. All of them, however, were unfortunate enough to have the "countenance disfiguring feature"[68] of protruding jaws that identified them as prognathous races.

Zeune, however, found it "very difficult to determine the classes to which some skulls"[69] in the Berlin collection belonged. Devising a method of "skull polarity,"[70] he added the second and third dimension to the measurement of human skulls to contrast "not only long skulls with short skulls but also broad skulls with narrow skulls and high skulls with flat skulls."[71] Additionally, he divided humanity by the four geographic directions. Applying this "five-fold contrariness,"[72] Zeune argued that there existed in both the Old and New World three races respectively:[73] northern high skulls (Apalaches and Caucasians), median broad skulls (Caribs and Mongolian) and southern "snout-like"[74] long skulls (Peruvian and Ethiopian) that appeared to be "similar to the ape skull."[75] Inhabitants of the Southern Seas, in Zeune's view, could not be regarded as genuine races but mixtures between either Caucasians and Mongolians (Malayans) or Mongolians with Ethiopians (Papuans).[76] Summarising his ventures into the world of craniology, Zeune thus argued for the craniological distinction of six human races.

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[67] Anders Retzius, "Ueber die Schädelformen der Nordbewohner," *Archiv für Anatomie, Physiologie und wissenschaftliche Medicin* (1845): 87. Retzius presented his original paper "Om formen af Nordboernes Cranier" in 1842 at the Meeting of Scandinavian Naturalists in Stockholm. Ibid., 84. On Retzius see Torstein Sjøvold, "Retzius, Anders Adolf (1796-1860)," in Spencer, *History of Physical Anthropology*, 878–79.

[68] Retzius, "Schädelformen der Nordbewohner," 86.

[69] Zeune, *Schädelbildung*, 9.

[70] Ibid.

[71] Ibid., 10.

[72] Ibid.

[73] Ibid., 13–15, 20.

[74] Ibid., 11, 18.

[75] Ibid., 18.

[76] Ibid., 11, 12; Zeune, "Entstehung des Menschengeschlechts," 30. He regarded "Hottentots" as a mix of Malayans and Ethiopians.

Other papers dealt with questions concerning human physical proximity to modern ape species, but (still) rejecting ideas of human animal relations. At the 1842 meeting, Friedrich Sigismund Leuckart (1794-1843) talked about "the most human-like animals," the chimpanzees, whose physical similarity with humans nevertheless merely disguised their essential distance from the human "free world of the mind;"[77] two years later, the physicist and physiologist Johann Bernhard Wilbrand (1779-1846) came to similar conclusions. Wilbrand, however, regarded the orang-utan as the ape closest to man.[78]

Hans Reichenbach's "evolution of man" (1851)

According to Hans Querner, Hans (Peter Detlev) Reichenbach (1795-1885) presented the "earliest and most explicit formulation of a true genealogical relation between the human and the ape"[79] at the German Naturalists Associations' meetings in 1851. Referring to Zeune, the Hamburg physician regarded the question of poly- or monogenetic origin as insignificant. His paper on "the evolution of man" aimed at further elucidating the "how" of human origin, arguing that the first human drank the milk of an ape mother. When Reichenbach suggested "we humans still carry in the body and in the mind traces of [our ape ancestor]" he meant not those human individuals listening to his paper but "the Bushman – the Hottentot in general – the Fuegian, Van Diemenslander, New Hollander, Negro etc." [80] Whereas some Africans "still live[d] with their whole families on trees in little huts,"[81] the New Hollanders, in Reichenbach's view, exhibited a lifestyle devoid of even the slightest cultural achievement:

> He goes naked, at most dressed in animal skins, consumes everything uncooked, sleeps either in the open or in a miserable hut or holes up in caves. One can think of state, religion, arts, science as little with them as with the Bushman. He fishes, climbs like the apes up the trees, at times hunts the easily killed

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[77] Friedrich Siegesmund Leuckart, "Über die menschenähnlichsten Thiere," *Amtlicher Bericht über die zwanzigste Versammlung der Gesellschaft deutscher Naturforscher und Aerzte zu Mainz im September 1842*, 40.

[78] Johann Bernhard Wilbrand, "Ueber die körperliche Bildung der Affen im Vergleich mit der körperlichen Bildung des Menschen, und über die entgegengesetzte Entwickelungs-Richtung beider von Seiten des geistigen Lebens," *Amtlicher Bericht über die zweiundzwanzigste Versammlung Deutscher Naturforscher und Ärzte in Bremen im September 1844*, 50–58.

[79] Querner, "Anthropologie auf den Versammlungen," 152. See also Hans Querner, "Die Idee der Evolution auf den Naturforscherversammlungen des 19. Jahrhunderts," in Schipperges, *Versammlung Deutscher Naturforscher*, 58–59.

[80] Hans Peter Detlev Reichenbach, Ueber die Entstehung des Menschen. Ein kleiner Beitrag zur Anthropologie und Philosophie. Vorgetragen in einer allgemeinen Versammlung der 28ten Versammlung der deutschen Naturforscher und Aerzte zu Gotha, 8.

[81] Ibid., 11.

> kangaroos, catches birds, but consumes everything uncooked and frequently even does not pluck the birds' feathers.[82]

Physically the New Hollander resembled the ape even more, with a "big, protruding ape-like mouth, thick lips, white rounded teeth, deep-lying black eyes and really, like almost all Australians [i.e. the inhabitants of the southern Pacific region], ape-like features; and like the ape, very meagre thin extremities."[83]

Reichenbach was the first member of the German Naturalists Association to explicitly link this particular combination of "the still existing wild lower humans with the higher organised apes" and, on that basis, to "presume a very gradual, nearly imperceptible transition of the one to the other."[84] Additionally, he proposed that an extinct ancient human species had existed before the emergence of humanity's modern form by describing the "signs of man, which prove his descent from the animal kingdom" in those "lower peoples whose raw physiognomy sufficiently points to their animal nature."[85] Convinced that "the animal dispositions in the build of the brain also show[ed] in the resulting skull formation,"[86] Reichenbach told of Peruvian skulls which "prove[d] that they belonged to an extinct human species which was distinct from all humans that presently live on the earth." Their skull shape, he claimed, betrayed that "2/3 of their brain mass was located behind the foramen magnum [i.e. the hole in the skull base that connects to the spinal cord], and [the] facial bones were apishly elongated." In view of this, he suggested "to assemble some such skulls in our anatomical institutes among the other human, ape and animal skulls, which certainly would provide proof for the development of man from the ape in the same way Nature does without such assembly."[87]

At this time such ideas about human ape relations (and their proponents) were unpopular,[88] which is presumably the reason why this paper was never published in the meeting's proceedings. Reichenbach thus published it himself in 1845. His evolutionary scheme remained nevertheless obscure although, nearly twenty-five years later, the well-known Darwinist anatomist and physiologist Ludwig Büchner (1824-1899) gave

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[82] Ibid., 9–10.

[83] Ibid., 9.

[84] Ibid., 21–22n2. This quote refers to one of two comments Reichenbach added to the published version of the paper.

[85] Ibid., 11.

[86] Ibid., 19.

[87] Ibid., 11.

[88] Querner, "Evolution auf Naturforscherversammlungen," 58.

credit to Reichenbach's paper as the earliest publication "in which the doctrine of the animal-derivation of Man was most definitely laid down and defended," albeit it lacked "profound scientific evidence."[89]

Although his claims were random suggestions, Reichenbach effectively associated the idea of human ape relation with the intellectual incapacities and physical characteristics of apes, both of which he alleged to have discovered in a particular group of "the lower races" and a presumed extinct, non-modern human species. As will become evident in the following chapters, many of his mid- to late-nineteenth-century successors used similar observations to imply a lack of intelligence in Australian Aborigines. Further, his call for the assembly of human and ape skulls for comprehensive comparison was indicative of attempts in the near future to transform physical anthropological research into a discipline based on statistical methods.

Rudolf Wagner's *physische Anthropologie* (1854)

In the same year that Reichenbach published his pamphlet, one of Blumenbach's "most notable students"[90] and his successor, Rudolf Wagner, welcomed the naturalists and physicians at their meeting in Göttingen with a presentation widely known for its contribution to the *Materialismusstreit*.[91] In his "discourse"[92] on the "Creation of Man and Substance of the Mind"[93] the anatomist and brain physiologist distinguished between the "physical and psychical aspects"[94] of *Anthropologie*. The latter concerned the en-

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[89] Ludwig Friedrich Büchner, *Man in the Past, Present, and Future. A Popular Account of the Results of Recent Scientific Research Regarding the Origin, Position and Prospects of Mankind* (New York: Peter Eckler Publisher, 1894), 140; Ludwig Friedrich Büchner, *Die Stellung des Menschen in der Natur in Vergangenheit, Gegenwart und Zukunft. Oder: Woher kommen wir? Wer sind wir? Wohin gehen wir?* (Leipzig: Verlag Theodor Thomas, 1869), 170.

[90] Timothy Lenoir, *The Strategy of Life. Teleology and Mechanics in Nineteenth-Century German Biology* (Chicago: University of Chicago Press, 1982), 17.

[91] David N. Livingstone, *Adam's Ancestors: Race, Religion, and the Politics of Human Origins* (Baltimore: Johns Hopkins University Press, 2008), 123.

[92] Rudolph Wagner, "Creation of Man, and Substance of the Mind," *Anthropological Review* 1 (1863): 227; Rudolph Wagner, "Menschenschöpfung und Seelensubstanz," *Amtlicher Bericht über die Ein und Dreissigte Versammlung Deutscher Naturforscher und Ärzte zu Göttingen im September 1854*, 15.

[93] I predominantly refer to the English translation of Wagner's paper and provide the page numbers of the German original in square brackets. The English translation omits, however, some of the content Wagner presented at the German Naturalists Association's meeting because it was not of anthropological interest to *The Anthropological Review*'s editor (namely "several passages touching on the supposed connection of the science of Man with historical Christianity and Revelation ... as these subjects have nothing to do with Anthropology." Wagner, "Creation of Man," 227n2). There are also some discrepancies between the two texts that are significant with view to meaning, although it remains unclear to me whether Wagner translated the text himself, thus authorising these differences in tone, or whether they were created by a translator. Where relevant I indicate these different ways of phrasing and provide English translations.

[94] Wagner, "Creation of Man," 227 [15].

quiry into the "substance of the soul"[95] whereas the former built on Blumenbach's legacy of "physical anthropology, the natural history of the human species."[96]

Wagner first elaborated on the current state of the enquiry into the origin of humanity, which he believed Blumenbach had rightly posited as monogenetic. According to Wagner, most of Blumenbach's key assumptions about the unity of the human kind had been proved in light of new "ethnographic knowledge,"[97] that is, physical anthropological investigations. In Buffonian terms, all humans belonged to one species, whose constancy in size and form was additionally proved by the "historical documents"[98] of ancient mummies and "human skeletons in sub-fossil state."[99] In terminology reminiscent of Kant (although as was the case with Buffon, not referring to Kant), Wagner confirmed that only those human varieties that perpetuated in different climates were genuine races, which, if they mixed, produced fertile *Mischlinge* (crossbreeds) – the "physiology of the generations"[100] verified this. Based on Blumenbach's five-fold taxonomy, Wagner suggested a further division based on "ethnographic evidence."[101] Possibly wishing to solve the classificatory problem of the dark-skinned peoples in the Southern Pacific (which Blumenbach had resolved by announcing two sub-races, the black New Hollanders and brown Malayans), Wagner separated the black elements from the "brown or Malay race." Accordingly, he proposed "the lank-haired race of New Holland" as the sixth race and "the Papuan" as the seventh, while he regarded "the wool-haired negroes of the sea coast" (South Pacific) as the same race as "the continental Negros."[102]

Wagner reflected on the question of human origin from one pair as being of a theological nature; it remained beyond the reach of "historic investigation" and natural sci-

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[95] Ibid.

[96] Ibid., 228 [16]. Regarding Wagner's crediting of his predecessor with the "genius" for establishing the basic rules for anthropological research and his delineation of the "typical differences" between human races see also Wagner, "Die anthropologische Sammlung", 240.

[97] Ibid., 16.

[98] Ibid., 17.

[99] Ibid.

[100] Ibid., 229 [17].

[101] Note the term, which denotes "physical anthropological." Its usage indicates the undefined anthropological terminology at the time. A few years later, Wagner praised Retzius as the "greatest connoisseur of scientific ethnology." Wagner, "Die anthropologische Sammlung", 241.

[102] Wagner, "Creation of Man," 229 [17].

entific study, namely "[natural historic] anthropology, combined with geology."[103] Accordingly, he placed particular emphasis on the separation of the religious from the scientific sphere: "*Neither positive proof for the teaching of the scripture can be established, nor can counter-evidence. The theological discipline must posit this proposition as an article of faith. It is my firm conviction that natural science's most recent findings leave this [proposition] entirely unaffected*"[104] (emphasis in original). Therefore, on the basis of "physiological principles the *possibility* of descent from one pair" could "scientifically not be disputed"[105] (emphasis in original). It appeared to Wagner that this was indicated by physical developments "in some colonies, [where] physiognomical characters develop in men and animals and become permanent, which, even if only vaguely, is reminiscent of the formation of races."[106] In general, however, the processes of race formation remained unknown having occurred "in a primordial time, perfectly inaccessible to science."[107] He noted nevertheless that in some colonies "we see ... physiognomical characters arise in men and animals which apparently become permanent, and exhibit certainly some analogy to the formation of races."[108] He gave no further detail as to which colonies he meant, but he possibly elaborated further when he invited his fellow anthropologists to a demonstration about "race formations"[109] by example of "the exquisite specimens of the former Blumenbachian skull collection" in the Physiological Institute. As I shall show, he not only hoped to bring Blumenbach's skull collection back to the attention of anthropologically inclined scientists but also intended to cam-

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[103] Ibid., 230. In the German paper Wagner described "anthropology" as *naturhistorische Anthropologie*, hence my addition in square brackets. Wagner, "Menschenschöpfung und Seelensubstanz," 18.

[104] Wagner, "Menschenschöpfung und Seelensubstanz," 18 ("Weder ein positiver Beweis für die Lehre der Schrift lässt sich führen, noch ein Gegenbeweis. Die wissenschaftliche Theologie muss von diesem Satze, als einem Glaubenssatze, ausgehen. Die jüngsten Resultate der Naturforschung lassen denselben nach meiner festen Überzeugung ganz unangetastet.") Note that in the English publication these references to religon are omitted. Wagner, "Creation of Man," 230.

[105] Wagner, "Menschenschöpfung und Seelensubstanz," 18 ("Die *Möglichkeit* der Abstammung von einem Paare lässt sich aber wissenschaftlich nach streng physiologischen Grundsätzen durchaus nicht bestreiten." [original emphasis]).

[106] Wagner, "Menschenschöpfung und Seelensubstanz," 18 ("Wir sehen unter unseren Augen in einzelnen kolonisierten Ländern physiognomische Eigenthümlichkeiten bei Menschen und Tieren entstehen und beharrlich werden, welche, wenn auch nur entfernt, an die Rassenbildung erinnern"). The translation conveys a much more certain leaning towards possible processes of race formation: "in some colonies, [where] physiognomical characters arise in men and animals and become permanent, which even if only vaguely, exhibit certainly some analogy to the formation of races." Wagner, "Creation of Man," 230.

[107] Wagner, "Creation of Man," 229 [18].

[108] Ibid.

[109] Rudolph Wagner, "[Ueber die Rassenbildungen]," *Amtlicher Bericht über die Ein und Dreissigte Versammlung Deutscher Naturforscher und Ärzte zu Göttingen im September 1854*, 120. The paper was not published in the meeting's proceedings.

paign for a methodologically modernised revival of physical anthropological and comparative craniological study.

Hermann Schaaffhausen's "approximation of the human to the animal form" (1854)

At the same meeting, Hermann Schaaffhausen (1816-1893) fundamentally challenged the distinction between humans and animals to argue for human animal descent. Unlike the obscure Hamburg physician Reichenbach, the paleo-anthropologist became a significant, if marginalised,[110] member of the German physical anthropological community in the following decades, with view to both his involvement with the standardisation of physical anthropological measurement and his classification of the original Neanderthal remains as human fossils (then strongly contested in Germany).[111] Schaaffhausen had only recently presented his evolutionist ideas "about the constancy and transformation of the species"[112] to a small regional audience at the meeting of his local naturalists society, the Naturhistorischer Verein der preussischen Rheinlande und Westphalens, challenging the still prevalent view of the fixity of species by proposing that a "continuous series of forms developed from one another."[113] In this earlier paper he proposed a pre-Darwinian evolutionist scheme of spontaneous generation.[114] According to Schaaffhausen, "the creative power of Nature" under "the influence and as a result of external influences"[115] generated the simplest organisms. Depending on changing environmental conditions, these progressively transformed into more complex and different species by ongoing evolutionary processes, resulting in a "continuous series of forms developed

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[110] Zimmerman, *Anthropology and Antihumanism,* 69, 90–91; Zängl-Kumpf, "Hermann Schaaffhausen," 337–39.

[111] Zimmerman, *Anthropology and Antihumanism*, 90–91; Zängl-Kumpf, "Hermann Schaaffhausen," 909.

[112] Hermann Schaaffhausen, "Ueber Beständigkeit und Umwandlung der Arten," *Verhandlungen des Naturhistorischen Vereines der preussischen Rheinlande und Westphalens* 10 (1853): 420–51.

[113] Ibid., 445.

[114] Throughout his life Schaaffhausen maintained that the first such simplest organisms came into being by spontaneous generation. Zängl-Kumpf, *Hermann Schaaffhausen*, 280. In 1853, he only fleetingly suggested that "the first plant must have been original [*ursprünglich*], and perhaps such a creation/origin is still possible for mould, fungus, lichen and algae." Schaaffhausen, "Umwandlung der Arten," 423. From this plant animals developed. Ibid., 446. In 1858, at the German Naturalists Association's meeting in Karlsruhe, Schaaffhausen argued for spontaneous generation (*Urzeugung*) and an original life force (*Lebenskraft*) or formative drive (*Bildungstrieb)* through which the simplest life on earth began and developed into all higher life forms. Hermann Schaaffhausen, "Ueber den Zusammenhang der Natur- und Lebenserscheinungen," *Amtlicher Bericht über die Vier und Dreissigte Versammlung Deutscher Naturforscher und Ärzte in Carlsruhe im September*, 34–35.

[115] Schaaffhausen, "Umwandlung der Arten," 448.

from one another."[116] Like Darwin building on Charles Lyell's (1797-1875) scheme of geological change in a far-reaching time frame, Schaaffhausen pointed to a variety of causes for the transformation and extinction of species, especially changing living conditions, relations between different species and "their life struggle among them."[117] In his view, similar species could have evolved independently and concurrently in distant places, given they emerged in similar environments.[118]

It was mainly the fossil record of extinct animal and plant species which led Schaaffhausen to argue for "a continuing series of organisms linked by reproduction and evolution"[119] throughout millennia. In addition to rejecting the idea of distinct characteristics and boundaries between species and their deviations, he suggested that the physical similarities between living and extinct fossilised animals strongly pointed to a gradual change in form.[120] The prehistoric artefacts found next to fossil animal remains (whom most of his contemporaries claimed had accidentally been transported there by natural forces in modern times[121]), in Schaaffhausen's view, pointed to the co-existence of humans with these long-gone animals. Unlike Sternberg twenty-seven years earlier, Schaaffhausen thus rejected Cuvier's then still widely accepted opinion that human fossils were beyond the bounds of possibility.

Declaring that "the constantly reiterated statement that there are no fossil human bones can no longer be upheld,"[122] Schaaffhausen proclaimed the skulls of "an extinct human species" with "peculiarly distorted skulls" had already been discovered in regions as distant apart as Austria, Russia and Peru. It had, however, not been recognised that their "low impressed" foreheads presented features no longer seen in living populations.[123] These animal forms, according to Schaaffhausen, demonstrated the "long existence of the humankind on earth"[124] and its emergence from an (unnamed) bygone ape

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[116] Ibid., 445.

[117] Ibid., 443.

[118] Ibid., 438. Accordingly, similar species could evolve independently and concurrently at places very distant from one another if their environment was similar. Therefore, argued Schaaffhausen, similar species could develop in distant geographical locations without them being [genetically] related.

[119] Ibid., 451.

[120] Ibid., 435, 439, 441, 451.

[121] Ibid., 441. See also Peter J. Bowler, *Theories of Human Evolution: A Century of Debate, 1844-1944* (Baltimore: John Hopkins University Press, 1986), 24–25.

[122] Schaaffhausen, "Umwandlung der Arten," 440. On Cuvier's verdict about the impossibility of human fossils see Bowler, *Theories of Human Evolution*, 24.

[123] Schaaffhausen, "Umwandlung der Arten," 441.

[124] Ibid.

species that began to walk upright, sending the human on the path to becoming the "highest and last development of animal life."[125] Intricately linking physical with intellectual development, Schaaffhausen argued that, as a bigger brain developed in early humans, it expanded the forehead, enabling gradually increasing intellectual capacities that in turn facilitated the use of the hands. It was thus the lack of these human features that rendered his ancient skulls into evidence for animal descent. According to Schaaffhausen, further such anatomical evidence was still observable in the animal forms of "the human ... on the lowest stage of physical formation, as can be found in the Negro and the Australian"[126] and in "the most human-like ape."[127]

In his 1854 paper "On the skin colour of the Negro and the approximation of the human to the animal form," presented at the German Naturalists Association's meeting in Göttingen, Schaaffhausen elaborated further on the modes of human physical and intellectual development from a presumably extinct ape. Based on the similar anatomy of humans and apes, Schaaffhausen proposed an answer to the issue of "how we should explain their occurrence; could we possibly imagine a cause that has created the human from the animal form."[128]

He proposed a hominisation trajectory based on the science of "organic psychology, which measure[d] the grade of intelligence in accordance with the level of the respective body parts' organisation"[129] in humans and animals. Accordingly, "the organisation of the brain and intelligence cause[d] each other"[130] and the "increasing intelligence alone accomplished this development"[131] towards humanness. The "awakening"[132] of reason then triggered the erect posture followed by the, literally, "first step towards culture."[133] As a result, argued Schaaffhausen, the acquisition of food became

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[125] Ibid., 449.

[126] Ibid., 450.

[127] Ibid.

[128] Hermann Schaaffhausen, "Über die Hautfarbe des Negers und über die Annäherung der menschlichen Gestalt an die Thierform," *Amtlicher Bericht über die Ein und Dreissigte Versammlung Deutscher Naturforscher und Ärzte zu Göttingen im September 1854*, 108.

[129] Ibid., 107.

[130] Ibid., 110.

[131] Ibid., 106.

[132] Ibid., 110.

[133] Ibid., 109.

easier through the use of the hands, levelling protruding facial bones previously needed by the ape to "grab the food."[134]

The "incomplete skull shape"[135] pointed to the incomplete development or cultivation of the intellectual dispositions of their apish ancestors, explaining why the "residues of perished peoples" had retained "flat and narrowed" skulls. In the case of the Titicaca Lake skulls already mentioned by Reichenbach, a "protruding jaw" caused their "ape-like appearance."[136] As he went on to explain, they shared these apish characteristics with modern "lower race types" exemplified predominantly by Africans but also by indigenous Americans and Australians. That both groups had not proceeded to the higher stages of humanness was evident, Schaaffhausen argued, in a plethora of physical characteristics "reminiscent of the ape." Among these were supposed signifiers of a lesser brain development and its physiological implications such as a "smaller skull cavity, less brain convolutions, protruding dentition, massive jaws, big partially projecting teeth."[137] The "consequences of a not quite upright gait" could be observed, thought Schaaffhausen, in the Africans' "flat feet"[138] or the "abducted big toe" that betrayed "the tracks of the savages of Australia."[139] These toes pointed to the hand-like feet of apes, enabling them to climb trees rather than roam the ground.

Schaaffhausen's association of "lower races" with apes for his animal descent scheme also worked the reverse way; that is, by emphasising the proximity of ape intelligence and social behaviour to human levels. With a brain "approximating the human" apes exhibited near-human behaviours such as "sociability, monogamy, caring child rearing, humanlike menstruation and pregnancy, and birth of mostly just one young, ... and finally, the highest intelligence and ability to learn."[140] Stating that too little attention was paid to "expressions of animal intelligence"[141] and marking them as "the cleverest of all animals,"[142] Schaaffhausen stressed that there existed a disposition for rea-

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[134] Ibid.
[135] Ibid., 108.
[136] Ibid., 107.
[137] Ibid., 108.
[138] Ibid.
[139] Ibid., 111.
[140] Schaaffhausen, "Umwandlung der Arten," 450–51.
[141] Schaaffhausen, "Hautfarbe des Negers," 114.
[142] Ibid., 113.

son in apes.[143] This emphasis on the intellectual and social capacities of great apes was important for Schaaffhausen's progressivist scheme of human evolution, because it was this intellectual disposition that enabled human "intellectual evolution by the gradual formation of its natural dispositions through the path of experience"[144] to eventually transform from the "state of animal brutality to the highest intellectual state."[145]

As was already indicated, not all human races were able to attain "the highest and noblest capacities" because they existed "on very different stages of intellectual and moral development."[146] Thus questioning the universality of human reason and physical perfection, Schaaffhausen declared "the decreasing intelligence of the races reveal more and more animal forms."[147] He linked Africans and Australian Aborigines to the ape by, on the one side, invoking the latter's social and intellectual humanness and, on the other, comparing the former culturally and physically with Europe's and the Americas' long "extinct rough human race."[148] Schaaffhausen cautioned, however, the need to keep in mind Europe's own uncivilised past: "If we now declare the Bushmen and other low standing Negro tribes and Australians and similar inhabitants of the inner parts of the larger islands of South Asia to be degenerated animalised humans … we must not forget what the geographers of the Ancient times tell us about the oldest inhabitants of Europe." They had practised cannibalism and other "cruel customs" before they were possibly "devoured" by their Germanic conquerors – "just as America's and Australia's natives vanish before the European colonists."[149] Schaaffhausen thus situated the virulent trope of the vanishing races, frequently exemplified by Australian Aborigines (or presented as *fait accompli* with reference to Tasmanian Aborigines)[150] within an evolutionist scheme of species transformation. The colonialist displacement of indigenous populations thereby became part of the apparently natural cycle of general species transfor-

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[143] Ibid., 112–13, 106. A year later, Schaaffhausen reiterated "the human body is just the finest and most perfect product of animal organisation, ... in the animal soul lie ... the fundamental powers of the human soul which aspires for the infinitive." Schaaffhausen, "Zusammenhang Natur- und Lebenserscheinungen," 36.

[144] Schaaffhausen, "Umwandlung der Arten," 442.

[145] Schaaffhausen, "Hautfarbe des Negers," 106.

[146] Ibid., 114.

[147] Ibid., 106.

[148] Ibid., 107.

[149] Ibid.

[150] Patrick Brantlinger, *Dark Vanishings: Discourse on the Extinction of Primitive Races, 1800-1930* (Ithaca: Cornell University Press, 2003).

mation by the "struggle"[151] between different species and within the one species. In other words, just like plants and animals, human races emerged, migrated to different locations and vanished again.[152]

In the following years, Schaaffhausen presented a number of papers on questions of race and human evolution at the naturalists' meetings, in some of which he referred (among other representatives of the "savage races") to Australian Aborigines as examples for low levels of cultural-intellectual and physical development. His scheme of human evolution led Schaaffhausen to anticipate the discovery of human fossil remains. After the unearthing of the Neanderthal fossils in 1856, it formed the argumentative basis for his then highly controversial insistence on their human nature. In 1857, he was the first to describe the fossils, readily interpreting them as those of an extinct premodern human race or species.[153] He thereby took a stance against the majority of Germany's anthropologists, including Virchow. Throughout the ensuing decades he persistently argued for the idea of human evolution from animal ancestors, emphasising apish characteristics in both fossil human remains and the skulls and bones of, among other "lower races," Australian Aborigines.

In February 1857, he presented a plaster cast of the Neanderthal skullcap to his local naturalists society, identifying its "peculiar conformation:" While the brain cavity appeared to be "unusually large," the forehead was "narrow and very flat" with an eyebrow region that protruded "in such a way that the head acquire[d] a nearly bestial expression, reminiscent of the facial conformation of the great apes."[154] As he had pointed out in previous years, similarly long and narrow skulls had been discovered in both the Old World and the Americas, belonging to members of ancient societies that followed cultural practises of artificial skull shaping. (Apparently, Schaaffhausen thought that American indigenous peoples and the Hunns were as obsessed with race in the past as contemporary Europeans, when he surmised they did so in an attempt to retain "their tribes' ancient race traits."[155]) Schaaffhausen distinguished those "uglily distorted" skulls from "those that betray[ed] a low level of brain development by their receding

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[151] Schaaffhausen, "Umwandlung der Arten," 443.

[152] Ibid., 441.

[153] Zängl-Kumpf, "Hermann Schaaffhausen," 335, 340; Zängl-Kumpf, *Hermann Schaaffhausen*, 277.

[154] Hermann Schaaffhausen, "[Gypsabguss einer menschlichen Hirnschale]," *Verhandlungen des Naturhistorischen Vereines der preussischen Rheinlande und Westphalens* 14 (1857): Sitzungsberichte, xxxviii.

[155] Ibid.," xxxix; see also ibid., xl where Schaaffhausen cites the suggestion that the Hunns "distorted their heads, namely to make them similar to the Mongolian form."

forehead, which c[ould] be discerned as well in the skulls of the lowest standing races."[156] Such skulls were found in ancient French and Germanic graves, Brazil, Peru and the British Isles. The Neanderthal skull too had this "primitive, underdeveloped shape"[157] of ancient race skulls. Especially its protruding eye brow region, "caused by the expansion of the frontal sinuses," represented "the human type on such a low level of development that can scarcely be found in the now living most savage human races."[158]

A few months later, Schaaffhausen provided a more detailed description of the skullcap fragment and the long bones, emphasising their importance for the investigation of "the oldest types of the human kind."[159] He associated the eyebrow region with the unusually thick femur bone, emphasising their animal character. Similar to the solid upper leg bones, the large frontal sinuses were caused by strong musculature and their connection to the respiratory tracts; "their expansion in animals also is evidently linked to the strength and endurance of their body movements."[160] In this second talk to the members of the local naturalists society he again linked the "animal forehead conformation" to both pre-historic human skulls and the "the heads of savage races."[161] He demonstrated the formers' shape by presenting an "artificially compressed" Hunnish skull, comparing it with the "very noble conformation"[162] of Celtic skulls.

His deliberations on the fossilised humanness of the Neanderthal remains were not well received at the annual meeting of the German Naturalists Association (also convening in Bonn, only three months later). He contributed to two separate sessions, referring to Australian Aborigines in his presentations. As stated by the editors of the meeting's proceedings he talked about "the allegedly fossil human skull" of the Neander valley, presenting another skull fragment found in Germany "with the same unusual conformation, with which substantiates his view that this hitherto unknown skull shape belongs to an original race living in northern Europe before the Germanic migration." The

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[156] Ibid., xl.

[157] Ibid., xli.

[158] Ibid., xli-xlii.

[159] Hermann Schaaffhausen, "[Fundes menschlicher Gebeine]," *Verhandlungen des Naturhistorischen Vereines der preussischen Rheinlande und Westphalens* 14 (1857): Bericht über die 14. General-Versammlung, 50.

[160] Ibid.

[161] Ibid., 51.

[162] Ibid., 52.

editors were, however, less sceptical of Schaaffhausen's ensuing elaboration of "some characteristic markers of the lowest race skulls," which he demonstrated "for comparison" with the Neanderthal skull by the examples of the skulls of an Australneger and a "Peruvian" from Bolivia.[163]

This comparison foreshadowed the linkage of Australian Aboriginal skull features with those of human fossils in anthropological discourse as more of the latter were discovered in the course of the nineteenth century. A few years after Schaaffhausen's presentation, Thomas Henry Huxley (1825-1895) undertook his own investigation of the Neanderthal skull fragments, building predominantly on Schaaffhausen's description. He aimed at establishing whether the fossil skulls belonged to a missing link between the human and an ape species. In his complex elaboration Huxley drew attention to a variety of similarities between the Neanderthal skull's defining features and those of "certain Australian skulls."[164] As Russell McGregor has pointed out, Huxley's "remarks were cautious, by no means indicating the identity of the two; still less that the Aboriginal could be regarded as a missing link. Yet the clear implication of his comparison was that the Aborigines did embody peculiar primitive anatomical features."[165] Huxley's more careful consideration of these similarities was subsequently broken down more crudely in the work of other anthropologists. In 1869, for example, Ludwig Büchner (who, as I have mentioned above, also praised Reichenbach's early evolutionary scheme) contended that Huxley "declared the Neanderthal skull to be the most bestial and ape-like in existence, corresponding most nearly with the skulls of the Australians."[166]

In the "physical anthropological" papers presented at the various sections concerned with human nature, questions of human origin and evolution continued to be a prominent topic. In 1858 a number of disparate theories about the origins of life and development of the human kind on earth were aired. Apart from Schaaffhausen, the Frei-

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[163] Nöggerath and Kilian, "Tageblatt der 33. Versammlung Deutscher Naturforscher und Ärzte in Bonn im Jahre 1857 no. 3 (Montag, den 21. September 1857)," *Amtlicher Bericht über die Versammlung Deutscher Naturforscher und Ärzte 1857*: 30.

[164] Thomas Henry Huxley, "On Some Fossil Remains of Man," in *Evidence as to Man's Place in Nature*. (New York: Appleton, 1863), 165.

[165] Russell McGregor, *Imagined Destinies. Aboriginal Australian and the Doomed Race Theory, 1880-1939* (Melbourne: Melbourne University Press, 1997), 23. On Huxley's comparison of Australian Aboriginal skulls with the Neanderthal skull see also Thomas Gondermann, *Evolution und Rasse. Theoretischer und institutioneller Wandel in der viktorianischen Anthropologie* (Bielefeld: Transcript, 2007), 124–27.

[166] Büchner, *Man in the Past*, 76, see also pg. 145; Büchner, *Stellung des Menschen,* 80, 176.

burg physician Karl Heinrich Baumgärtner (1798-1886) presented his theory of "formative cells"[167] (or spheres: *Bildungskugeln*) as the foundations for organic life. "Germany's most prominent palaeontologist"[168] Heinrich Georg Bronn (1800-1862) also proposed a scheme of directed, progressive evolution towards the human kind[169] that came "very close to a founded theory of descent."[170] In the following year, Bronn published his annotated translation of Charles Darwin's *Origin of Species*.[171]

For the next few years, physical anthropological research was absent at the German Naturalists Association's meetings. Questions of human origin would become the centre of debates in 1863,[172] when Ernst Haeckel (1834-1919) posited human animal descent as the consequence of Darwinian evolutionary principles. Meanwhile, in 1861, a select number of practising physical anthropologists came together in Göttingen with the aim to discuss their field of research, agree on methodology and initiate the establishment of a decidedly natural scientific association for the investigation of human nature.

4.2 Establishment of *Anthropologie* as a natural science

The Göttingen Meeting (1861)

The irregular and eclectic nature of the anthropological papers presented in, for example, the zoological, physiological and anatomical sections at the German Naturalists Association's meetings point to the marginality of the field and its mixed methodology. Finding that their discipline was underappreciated and lacking both an agreed methodology and the relevant amount of scientifically examinable data (that is, skeletal remains and anthropometric measurements), practitioners of physical anthropology began to call for the establishment of their subject as an independent scientific discipline.[173] One of

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[167] Karl Heinrich Baumgärtner, "Ueber die Bedeutung des Menschengeschlechtes in den Werken der Schöpfung," *Amtlicher Bericht über die vier und dreissigste Versammlung Deutscher Naturforscher und Ärzte in Carlsruhe im September 1858*, 15–19.

[168] Gliboff, *Origins of German Darwinism*, 1.

[169] Heinrich Georg Bronn, "Ueber die Entwickelung der organischen Schöpfung," *Amtlicher Bericht über die vier und dreissigste Versammlung Deutscher Naturforscher und Ärzte in Carlsruhe im September 1858*, 30.

[170] Querner, "Evolution auf Naturforscherversammlungen," 58–59.

[171] Charles Darwin, *Über die Entstehung der Arten im Thier- und Pflanzen-Reich durch natürliche Züchtung, oder Erhaltung der vervollkommneten Rassen im Kampfe um's Daseyn*, trans., ed. Heinrich Georg Bronn (Stuttgart: Schweizerbart'sche Verlagshandlung und Druckerei, 1860).

[172] Querner, "Anthropologie auf Versammlungen," 155.

[173] See e.g. Alexander Ecker, "Die Berechtigung und die Bestimmung des Archivs," *Archiv für Anthropologie* 1 (1866): 5–6.

the driving forces was Wagner, who had already in 1856 lamented that the "material [was] far too scarce .... not single, but hundreds of skulls of one and the same nation [we]re needed"[174] for devising "the anatomy of the races and nations of man."[175]

Committed to acquire "larger series of the skulls of one and the same nation,"[176] he had been "moderately successful"[177] in completing Blumenbach's collection. He called attention to the "necessity for ... physical anthropological collections" to resolve the "widely known arguments about the origin of mankind."[178] Without naming it, Wagner here of course referred to the fundamental debate about humanity's poly- or monogenetic origin(s) and whether its varieties represented one and the same or different species. To solve these questions in Germany, Wagner hoped a new generation of physical anthropologists would leave their armchairs and undertake research on the skulls and bones "scattered"[179] in European and American collections. For the time being, he offered free access to Blumenbach's assortment of human skulls in Göttingen.

The eminent Russian embryologist (and collector of human skulls who did not refrain from robbing church bone houses[180]) in St. Petersburg, Ernst von Baer (1792-1876),[181] answered the call. He measured the "heads of Russians"[182] in order to gain clues about Europe's racial prehistory,[183] thereby attempting to "determine the median

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[174] Rudolph Wagner, "Die anthropologische Sammlung des Physiologischen Instituts," *Nachrichten von der G. A. Universität und der Königl. Gesellschaft der Wissenschaften zu Göttingen*, no. 14 (6 October 1856): 241. He repeated the demand for "not single but hundreds of skulls of one and the same nation" six years later. Rudolph Wagner, "Ueber die Begründung einer vergleichenden und historischen Anthropologie durch umfassendere Hilfsmittel, mit besonderer Rücksicht auf mitteleuropäische Völker-Verhältnisse," *Nachrichten von der G. A. Universität und der Königl. Gesellschaft der Wissenschaften zu Göttingen*, no. 27 (24 December 1862): 559.

[175] Wagner, "Anthropologische Sammlung," 240.

[176] Ibid., 242.

[177] Ibid., 235.

[178] Ibid., 240.

[179] Ibid.

[180] Benno Ottow, "K. E. von Baer als Kraniologe und die Anthropologen-Versammlung in Göttingen," *Suhoffs Archiv* 50, no.1 (1966): 44–45, 47.

[181] Spencer, *History of Physicial Anthropology*, 155–56, 347.

[182] Karl Ernst von Baer and Rudolph Wagner, *Bericht über die Zusammenkunft einiger Anthropologen im September 1861 in Göttingen zum Zwecke gemeinsamer Besprechungen* (Leipzig: Leopold Voss, 1861), 5. This report on the Göttingen Meeting was published by von Baer and Wagner. It is a compilation of the invitation to the meeting, reports on the different sessions that took place between 24 and 26 September 1861. Its form resembles that of proceedings; however, the different parts, can easily be related to either von Baer or Wagner. Uwe Hoßfeld, *Geschichte der biologischen Anthropologie: Von den Anfängen bis in die Nachkriegszeit* (Stuttgart: Franz Steiner Verlag, 2005), 89. I therefore refer in the text to the respective author.

[183] Von Baer and Wagner, *Bericht Zusammenkunft in Göttingen*, 53–54.

head form of Russia's diverse peoples."[184] He encountered general interpretative and methodological problems that were intricately linked to the project of physical anthropological race investigation, be it on the basis of Blumenbachian descriptions or the emerging statistical method of median types. As was common practice at the time, he built his racial categorisations on what were regarded as philological relations between defined populations. Accordingly, he expected the median skull shapes of the Russian Empire's different peoples would correspond with their different languages. But, in reality, his measurements suggested there existed substantial physical differences between linguistically closely related peoples. Adding to the confusion, von Baer found that his measurements did not support the racial differentiation based on Retzius's cephalic index which, as I have illustrated above, distinguished races by long-headed (dolichocephalic) and short-headed (brachycephalic) populations. While von Baer's Scandinavian friend classified all Russians as belonging to the round-headed "Slavic form," according to von Baer's measurements, this was true only for Ukrainians.[185]

These empirical inconsistencies prompted fundamental questions regarding the causes for the formation of race characteristics in Russian skulls.[186] In von Baer's view, they reflected that existing theories about the present and past "variations within the human kind,"[187] "how these differences came into being and how they [were] maintained,"[188] were mostly presumptions lacking "statistical proof."[189] Faced with the emerging anthropological discipline's "great uncertainty"[190] about the means with which to gain scientifically valid knowledge about these matters, von Baer argued for "scientific, i.e. methodical"[191] research based on a combination of zoological, physiological, anthropological and medical expertise as well as scientific travellers' first-hand knowledge.[192]

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[184] Ibid., 4.
[185] Ibid., 4 (Russian skulls), 68 (diverse shapes of African skulls).
[186] Ibid., 4.
[187] Ibid., 7, 27.
[188] Ibid., 8,11.
[189] Ibid., 18.
[190] Ibid., 68.
[191] Ibid., 16.
[192] Ibid., 26.

The two major methodological problems arising with the statistical method in "comparative anthropology,"[193] in von Baer's view, concerned sample size and inconsistent measurement methods. Agreeing with Wagner, von Baer ascertained that physical anthropological questions – as, for example, the relation between linguistically and physically (dis)similar Russians – could only be resolved through the comparative investigation of "very large material."[194] On a more general scale, the insufficient quantity of comparable skulls also caused the unreliability of the "small number of measurements"[195] on which Retzius's cranial index-based race determinations had to rely. The solution therefore lay, firstly, in the mass collation of human skulls (and other human remains) according to racial divisions. Secondly, a standardisation of the diverse methods and technologies for measurement and representation was required across Europe; otherwise, existing studies would be useless for comparative investigation.[196]

In 1861, following their collaborative sharing of their cranial series, Wagner and von Baer assembled a select group of "scientific men"[197] at the Physiological Institute in Göttingen (in reverence to Blumenbach).[198] Their invitation points to the desired exclusively natural scientific approach to the investigation of the human kind. It can thus be regarded as one of the first explicit expressions of the "new antihumanist worldview"[199] as argued by Zimmerman. The duo welcomed those naturalists with experience in "the comparison of the races of the present or the past, or who ha[d] advised of methods and apparatuses for measurements and illustrations of the human body or individual parts of the same"[200] – they explicitly discouraged all those who understood *Anthropologie* as mere "philosophical contemplation."[201] Among those invited were the Frankfurt comparative anatomist Johann Christian Gustav Lucae (1814-1885), Freiburg University's anatomist Alexander Ecker (1817-1887) and Herrmann Schaaffhausen. While the latter two were unable to attend, all of those mentioned became founding fathers in the establishment of German physical anthropology in the ensuing decade. Furthermore, as I

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[193] Ibid., 17, 27.
[194] Ibid., 4.
[195] Ibid.
[196] Ibid., 5, 6.
[197] Ibid., 28.
[198] For a short overview on the meeting see Hoßfeld, *Geschichte der biologischen Anthropologie*, 87–91.
[199] Zimmerman, *Anthropology and Antihumanism*, 1.
[200] Von Baer and Wagner, *Bericht Zusammenkunft in Göttingen*, 2.
[201] Ibid., 27.

shall explore in Chapter 5, Ecker and Lucae were the first German physical anthropologists to obtain and utilise Australian Aboriginal human remains as evidence for their theorising on human diversity.

The need for such an exclusive meeting arose from the problems that the diversity of questions, methods and spaces of physical anthropological work posed for the natural scientific approach towards "certain questions regarding the particularities and relations of the earth's nations."[202] Ideally, the participants of the Göttingen Meeting would discern the means to create "a collection in which nearly all peoples of the earth with their different variations were represented, or a collection of well-executed reliable illustrations of typical forms, or at least consistent measurements, which have been conducted following the same principle."[203] The postulation of the scientific method also aimed at settling the ongoing dispute regarding the "important general questions"[204] about the nature and causes for human diversity.[205] Finally, von Baer did "not wish to suppress the hope that the mass comparison of the skull forms with the intellectual formation of whole peoples will lead us with more certainty to an insight into the relationship between the physical and intellectual dispositions of the human than the investigation of the individual."[206] Von Baer's aspirations at this initial stage of the emerging discipline contradict one of the main arguments that has been posited for Germany's anti-racist anthropological tradition, namely that German physical anthropologists strictly separated the body from culture or intellect.[207]

Coming together in 1861, the participants of the Göttingen Meeting were inevitably confronted with the debates on Darwinian modes of human animal descent. After the Dutch physician and comparative anatomist Willem Vrolik (1801-1863) talked about the "lateral ventricle and the pes hippocampi minor"[208] in the brain of an orang-utan, Wagner was requested to position himself in the famous "dispute concerning the physiological differences between the brains of the gorilla and the human."[209] Several

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[202] Wagner, "Die anthropologische Sammlung", 241.
[203] Von Baer and Wagner, *Bericht Zusammenkunft in Göttingen*, 11.
[204] Ibid., 1.
[205] Ibid., 7.
[206] Ibid., 69–70.
[207] See Chapter 1.1 of this thesis (*Anthropologie*'s "Liberal Paradigm").
[208] Ibid., 30.
[209] Gondermann, *Evolution und Rasse*, 105. The debate took place only a few months before the Göttingen Meeting.

months earlier, the British anatomists Huxley and Richard Owen (1804-1892) had fought their "highly technical disagreement"[210] about the anatomical (dis)similarities in the brains of the great apes and humans. Owen insisted on the distinction between humans and apes based on, firstly, the latter's classification as *Quadrumana* in contrast to two-handed humans and, secondly, what he claimed was the unique occurrence of the *hippocampus minor* in the human brain. Huxley, arguing for the Darwinian "doctrine of progressive development,"[211] successfully refuted these arguments by denying the significance of the first and falsifying the second of Owen's claims (based on, among others, Vrolik's investigations).[212]

Wagner agreed with Huxley's anatomical findings[213] but he assigned them only minor significance, arguing they constituted no evidence "in favour of the Darwinian origins of creatures and transmutations from one species to the other."[214] Mostly interested in the human skull as indicator for the form, structure and intellectual capacities of the human brain, Wagner in his own brain studies differentiated between simple and complex brains. According to Wagner, those brains with a small number of convolutions – which he found mostly in women and the "race brains" of "so-called lower races (Negroes and Hottentots)" – indicated "an arrest at an earlier developmental stage, a more embryonic state."[215] This kind of argument against Darwinian human-animal relation reflected the way in which most first generation physical anthropologists in Germany articulated their anti-Darwinian position, denoting it as conjectural rather than scientifically proven and declaring the evidence Darwinists offered as either insignificant or pathological phenomena.

Apart from discussing theories about human nature, the participants of the Göttingen Meeting experimented with different methods of craniological measurement and graphic representation. A few days earlier, Gustav Lucae had attended the German Nat-

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[210] Peter J. Bowler, *Evolution. The History of an Idea* (Berkeley: University of California Press, 2009), 208.

[211] Thomas Henry Huxley, "A Succinct History of the Controversy Respecting the Cerebral Structure of Man and the Apes," in *Evidence as to Man's Place in Nature* (New York: Appleton 1863), 136.

[212] For Huxley's depiction of the dispute see ibid., 133–38. Published in 1863, Huxley referred in support of his argument about the occurrence of the *hippocampus minor* in apes to "the venerable Rudolph Wagner, whom no man will accuse of progressional proclivities." Ibid., 136. See also Bowler, *Theories of Human Evolution*, 64–65.

[213] Von Baer and Wagner, *Bericht Zusammenkunft in Göttingen*, 30.

[214] Ibid., 31.

[215] Ibid., 32.

uralists Association's meeting in Speyer, where he "talked about some methods, to make drawings (orthogonal not perspective projections) of any chosen object [and] present[ed] two instruments, which can be used for this method."[216] He then travelled to Göttingen in order to demonstrate his geometric drawing device, using "a sawn through skull."[217] Most likely, this skull had belonged to an Australian Aborigine. As I shall examine in detail in Chapter 6, he used six *Australneger* skulls to explain the application and utility of his *Geometer* a few months earlier in a publication about "the morphology of race skulls."[218]

In order to overcome their marginal position in the German scientific community at the time they agreed to exchange inventories of their respective physical anthropological collections, and planned for the establishment of a scientific association with annual meetings[219] as well as the publication of a journal for the exchange and discussion of their research.[220] The task at hand for future meetings was to consider a "comprehensive definition"[221] and the scope of their new anthropological science, to work out its scientific methodology, such as the "measures to obtain reliable and extensive material,"[222] and the agreement for "consistent measurement methods for the whole body and in particular the head (or skull)."[223]

While the Göttingen Meeting constituted a forerunner to the establishment of *Anthropologie* as a scientific discipline in the German sphere,[224] it took years before some of these aspirations were achieved. From 1866 on, the *Archiv für Anthropologie* was published once a year with the aim of transforming physical anthropology into "an in-

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[216] Gustav Lucae, "[Genaue Zeichnungen]," *Beilage zum Tageblatt der 36. Versammlung deutscher Naturforscher und Ärzte in Speyer. Vom 17. Bis 24. September 1861*, 27.

[217] Von Baer and Wagner, *Bericht Zusammenkunft in Göttingen*, 29.

[218] Gustav Lucae, "Zur Morphologie der Rassen-Schädel. Einleitende Bemerkungen und Beiträge. Ein Sendschreiben an ... den Akademiker Carl Ernst v. Baer in St. Petersburg," *Abhandlungen der Senckenbergischen Gesellschaft, Frankfurt am Main* 3 (1861).

[219] Von Baer and Wagner, *Bericht Zusammenkunft in Göttingen*, 66.

[220] Ibid., 62.

[221] Ibid., 17.

[222] Wagner, "Begründung einer vergleichenden Anthropologie," 557; see also von Baer and Wagner, *Bericht Zusammenkunft in Göttingen*, 1.

[223] Von Baer and Wagner, *Bericht Zusammenkunft in Göttingen*, 1 (Invitation to the Göttingen Meeting); see also Wagner, "Begründung einer vergleichenden Anthropologie," 557, 558.

[224] Hoßfeld, *Geschichte der biologischen Anthropologie*, 87–91; Zängl-Kumpf, "Hermann Schaaffhausen," 340; Anja Laukötter, *Von der 'Kultur' zur 'Rasse' – vom Objekt zum Körper? Völkerkundemuseen und ihre Wissenschaften zu Beginn des 20. Jahrhunderts* (Bielefeld: Transcript Verlag, 2007), 39.

dependent discipline, define its field and represent it in the scientific literature."[225] Annual conventions were only established after the founding of the German Anthropological Society in 1870. Until then, the *Archiv für Anthropologie* functioned as a substitute for the anticipated anthropological organisation until it became the German Anthropological Society's central organ. Meanwhile, the meetings of the German Naturalists Association remained the only possibility to discuss questions about human diversity and origin.

Debating Darwin's theory of evolution (1863)

The debate about Darwin's theory and human animal descent became a central bone of contention, especially in 1863 at the meeting in Stettin. The German populariser of Darwinist ideas, Ernst Haeckel, was the first to apply the principles of Darwinian evolution to the human kind in the meeting's welcome address. Explaining the principles of random variation, natural selection and the continuous evolution of species, he proposed the human as "the highest stage" of evolution from "man-like apes,"[226] all of whom had evolved from one common origin. At the same meeting, Rudolf Virchow took an (anti-humanist) stance against the philosophical approach to natural science and its charge of *Materialismus* in the German natural sciences, mainly promoting his own primary field of research, pathology. In his speech, Virchow invoked Kant's "wise rules," acknowledging "that in all things there exists a certain limit to human comprehension," in particular for the natural scientist. While the example of Humboldt showed that men of science could be knowledgeable across a number of fields, such a general overview did not enable the natural scientist to "build a new philosophical system."[227] In Virchow's view, natural scientists therefore could not "begin to speculate" but had to remain within the "areas of certain facts" and not aim for their interpretation.[228] In this context, Virchow responded to Haeckel's earlier speech, arguing Darwin's theory might be proven right in

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[225] Ecker, "Bestimmung des Archivs," 1. On the delay of the establishment of the *Archiv für Anthropologie* see Zängl-Kumpf, "Hermann Schaaffhausen," 341.

[226] Ernst Haeckel, "Ueber die Entwicklungstheorie Darwin's," *Amtlicher Bericht über die acht und dreissigste Versammlung Deutscher Naturforscher und Ärzte in Stettin im September 1863*, 27.

[227] Rudolf Virchow, "Ueber den vermeintlichen Materialismus der heutigen Naturwissenschaften," *Amtlicher Bericht über die acht und dreissigste Versammlung Deutscher Naturforscher und Ärzte in Stettin im September 1863*, 39.

[228] Ibid.

the future but, at this point in time, there existed no "positive" evidence that human ape descent was a "fact."[229]

In the following years, Schaaffhausen was the most active contributor to the debate about human animal descent. In 1864, he reminded the audience of his version of the "theory of progressive evolution," referring to his 1853 publication. Schaaffhausen agreed with the idea of the struggle for existence as a significant factor for species change but he criticised Darwin for posing "a mysterious Something" as the cause for the origin of life. He instead argued for spontaneous generation (*Urzeugung*), emphasising the influences of "external natural factors" that acted according to natural laws.[230] At the same meeting he presented a set of plaster casts and photographs of the Neanderthal skull, reiterating it represented a human "race type"[231] rather than individual or pathological characteristics.

A year later, Ernst Hallier (1831-1904) took issue with Darwin, claiming his plan to publish his own theory about "the law of specification"[232] nearly a decade earlier never came to fruition because of his professional demands as a teacher. Praising Darwin for uncovering the inconsistency of species, the Jena botanist proposed his own (rather obscure) "transcendental-philosophical"[233] scheme of speciation (as he saw it, based on Kantian principles), which he claimed superseded "the English point of view"[234] in its clarity. Taking an excursion into the anthropological field, he argued that one of the misconceptions created by Darwin's "limited" explanations and then "spread"[235] to Germany, was the idea that the human species had evolved from apes. To the contrary, Hallier insisted, "both man and the ape have one creature as their progenitor, which was very different from each of them and from which they evolved through uncountable intermediate stages as different branches of the phylogenetic tree."[236]

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[229] Ibid., 39–40.

[230] Hermann Schaaffhausen, "Über die Urzeugung," *Amtlicher Bericht über die Neun und Dreissigste Versammlung Deutscher Naturforscher und Ärzte in Giessen im September 1864*, 183.

[231] Hermann Schaaffhausen, "Über den Neanderthaler Schädel," *Amtlicher Bericht über die Neun und Dreissigte Versammlung Deutscher Naturforscher und Ärzte in Giessen im September 1864*, 194.

[232] Ernst Hallier, "Ueber Darwin's Lehre und die Specification," *Amtlicher Bericht über die vierzigste Versammlung Deutscher Naturforscher und Ärzte zu Hannover im September 1865*, 36.

[233] Thomas Junker, *Der Darwinismusstreit in der deutschen Botanik. Evolution, Wissenschaftstheorie und Weltanschauung im 19. Jahrhundert* (Norderstedt: Books on Demand, 2011), 110.

[234] Hallier, "Ueber Darwin's Lehre," 35.

[235] Ibid.

[236] Ibid., 40.

At the same meeting, Schaaffhausen presented a craniological talk, arguing the development of the individual skull from infancy to adulthood "repeats the changes that the skull underwent in the history of our kind." In his view, skulls were longer in childhood whereas they grew wider towards the adult stage. On this basis, he defined "the primitive skull," claiming "the strikingly long and narrow skulls … which have been preserved from ancient times must, with regard to their small diameter, be regarded as primitive; as inhibited from their higher formation, [in the same way] as the skulls of the wildest races are distinguished by their narrowness. Here we find the same law, that links man in his prenatal development with the animal world."[237]

Two years later, he intervened again in the debate about "the anthropological questions of the present," celebrating the new meaning of *Anthropologie* as a natural scientific approach to the investigation of humanity.[238] In this foundational paper (which was reprinted in the second volume of the *Archiv für Anthropologie*) Schaaffhausen reinforced his stance for human ape descent, repeating his conviction of the apes' approximation to human levels of intelligence, his emphasis of environmental causes for speciation over Darwinian struggle of existence and the similarities between apes and humans. He further supported his view on the basis of fossil evidence and the anatomy of "lower races," arguing that "even the gap that separates man from the animal appears less deep and wide, since we have learnt of higher apes in Africa, the gorilla and the chimpanzee, which are closer to man than the hitherto known Asian orang-utan, and of the physical build of lower races and, what is significant too, noticed the characteristics of fossil man, which undoubtedly have to be regarded as approximations to the animal form."[239]

Finally, in 1868, the German Naturalists Association's meeting functioned as a springboard for the long anticipated founding of a separate anthropological society, when an "invitation" was issued for the formation of "a separate section for comparative anthropology and ethnology" with the aim to focus on the "investigations of the body and the soul of man, into the origin and unity or differences of mankind, about race and

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[237] Hermann Schaaffhausen, "Ueber das Wachsthum des menschlichen Schädels," *Amtlicher Bericht über die vierzigste Versammlung Deutscher Naturforscher und Ärzte zu Hannover im September 1865*, 243.

[238] Hermann Schaaffhausen, "Über die anthropologischen Fragen der Gegenwart," *Tageblatt der 41. Versammlung Deutscher Naturforscher und Ärzte in Frankfurt a. Main 1867*, 44. See also Querner, "Anthropologie auf Versammlungen," 156.

[239] Schaaffhausen, "Anthropologischen Fragen der Gegenwart," 43.

character of the different peoples."[240] While most papers in the new section's sessions were concerned with the investigation of race and skulls, they also, on the whole, reflected the scope and problems of physical anthropological investigation. The zoologist, comparative anatomist and translator of Darwin's and Huxley's work, Victor Carus (1823-1903), freshly elected first chairman of the association's new ethnological-anthropological section, gave an introductory address, commenting on the lack of information about human races and the insufficient methods of skull measurement. Underlining the interdisciplinary approach of anthropological investigation, he named some of the questions *Anthropologie* set out to answer; namely, the relationship between the body and "ethnological-social conditions"[241] for the determination of race, the definition of the human races as belonging to one or several species and the age of humanity.

A paper on "the race differences in the east of Asia,"[242] presented by the medical doctor and physical anthropologist, Arnold Schetelig (1835-1900), prompted a discussion about the occurrence and significance of differences between skulls deemed Polynesian and Malayan. Schetelig (who after Carus's talk had raised the difficulty of distinguishing individual from race characteristics) pointed out that these skulls differed significantly in their bone structure; that is, Polynesian skulls were thick whereas the Malayans' were thin. This answered the question, posed by one listener who was knowledgeable about Blumenbach's South Sea skulls in Göttingen, how their unevenness could be explained: unlike the Polynesian skulls, the Malayan skulls were asymmetrical because their bones could not withstand the pressure caused by a child's one-sided sleeping position.[243] Schaaffhausen took this opportunity to exemplify his idea of the occurrence of specific ape characteristics in the human populations of the same habitat. Confirming Schetelig's findings, he linked the "very specific type" of the Malayan skull to that of the orang-utan, a similarity that he saw proved "in particular by the skull of a mad Malay woman." He did, however, add that the "spherical Malay skull" represented

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[240] Moritz Weinhold, "Einladung zur Bildung einer Section für Anthropologie und Ethnologie," *Tageblatt der 42. Versammlung Deutscher Naturforscher und Ärzte in Dresden 1868,* no. 7 (23 September 1868): 145.

[241] Moritz Weinhold, "XVII. Section: Anthropologie und Ethnologie," *Tageblatt der 42. Versammlung Deutscher Naturforscher und Ärzte in Dresden 1868,* no. 7 (23 September 1868): 164.

[242] Ibid.

[243] Ibid., 165.

more of a civilised people, while he implied the Polynesian's lowliness was similar to the skulls of "different regions and periods of time."[244]

In the following year a similar range of papers dealing with physical anthropological, prehistoric and ethnological topics were presented at the anthropological section. From this platform, suggestions were made (among others by Virchow) to establish a German anthropological association that was entirely independent from the German Naturalists Association. Shortly after, the first two exclusively anthropological societies were founded in Berlin and Munich. The German Anthropological Society was founded in 1870, with local sub-chapters in a variety of German towns and cities following suit. The titles of these first German anthropological societies point to three intricately linked areas of scientific interest that had developed in the German sphere by that time. In short, *Anthropologie* denoted two areas of investigation; first, the comparative research of non-European human bodies and remains for the purposes of racial categorisation, and second, the investigation of ancient and current European populations based on their skeletal remains. *Ethnologie* dealt to a large degree with the examination of non-European societies based on the acquisition and appropriation of their cultural items, and *Urgeschichte* related to the interpretation of prehistoric artefacts (that is, the non-textual documents of European culture).[245] The German Anthropological Society, and within it its most active Berlin branch, continued to discuss the methodologies and methods of standardised physical anthropological measuring and representation – as Zimmerman has argued, this was a crucial element in the establishment of the discipline.[246] Not only did an agreement on one method "further institutionalize anthropolo-

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[244] Ibid.

[245] On recent definitions of *Ethnologie*, *Ethnographie* and *Physische Anthropologie* see Thomas Theye, *Ethnologie und Photographie im deutschsprachigen Raum: Studien zum biographischen und wissenschaftsgeschichtlichen Kontext ethnographischer und anthropologischer Photographien (1839-1884)* (Frankfurt a. M.: Peter Lang, 2004), 28–39. *Ethnologie* was further divided into *Volkskunde* (folklore studies, i.e. the investigation of German and other European cultures) and *Völkerkunde* (investigation of non-European societies). Monique Scheer, Christian Marchetti and Reinhard Johler, "'A Time Like No Other': The Impact of the Great War on European Anthropology," in *Doing Anthropology in Wartime and War Zones*, ed. Monique Scheer, Christian Marchetti and Reinhard Johler (Bielefeld: Transcript, 2010), 22. On the German terminology referring to anthropological disciplines see also Andrew D. Evans, "A Liberal Paradigm? Race and Ideology in Late-Nineteenth-Century German Physical Anthropology," *Ab Imperio* 8, no. 1 (2007): 114 and Benoit Massin, "From Virchow to Fischer. Physical Anthropology and 'Modern Race Theories' in Wilhelmine Germany," in *Volksgeist as Method and Ethic: Essays on Boasian Ethnography and the German Anthropological Tradition*, ed. George W. Stocking (Madison, Wisconsin: University of Wisconsin Press, 1996), 82n2.

[246] Zimmerman, *Anthropology and Antihumanism*, 87–107.

gists' rejection of Darwinism"[247] through their eventual collaboration on "the great inductive project of anthropological knowledge."[248] It also assisted in the building of their "collective identity as natural scientists of humanity."[249]

Chapter Conclusion

In summary, the anthropological papers presented at the German Naturalists Association's meetings indicate the various approaches to physical anthropological questions at the time. They included Linnaean-esque classifications of the human in the natural order, assessments of fossil bones, travel reports, comparative anatomical investigations and the observation and/or measurement of human physical traits for racial classification. The papers dealing with human physical diversity showcased a cluster of non-European, mostly dark-skinned groups of humans: "the iconic triad of those deemed lowest on the scale of civilisation"[250] – namely "Fuegians," "Van Diemenslanders and "Hottentots", – and "Negros", "Andamans", "New Hollanders" or "Australians" and "Van Diemenslanders", "Papuans" and "Malayans". Early practitioners of anthropology determined these presumed low states on the basis of aesthetic judgements, perceptions of a lack of culture or civilisation and allegations of physical approximations to apes. The way in which these anthropologists argued shows that Blumenbach's and Kant's "invention of the scientific concept of race" had by then become widely accepted scientific anthropological tenets, even though in most cases neither of these scholars was referred to explicitly.

Questions of human physical diversity and origin were also explored in the context of unclear evolutionary processes in pre-Darwinian times. Eventually, the combination of existing judgements about the "lowest races" was easily merged into speculations about their genetic relationship to various ape species. Although the idea was mostly rejected, the issue of human ape relation – if not direct ape descent – more or less tentatively underpinned the debate on human origin and diversity. The natural scientific definition and establishment of German *Anthropologie* similarly occurred in the wake of the debate of Darwinian modes of human evolution. Despite Haeckel's quick and bold popularisation of the idea of human ape descent, however, the majority of the German

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[247] Ibid., 88.

[248] Ibid., 92.

[249] Ibid., 88.

[250] Helen Gardner and Patrick McConvell, *Southern Anthropology –A History of Fison and Howitt's Kamilaroi and Kurnai* (New York: Palgrave Macmillan, 2015), 81.

physical anthropological community rejected the *Affentheorie* as mere speculation due to their scepticism towards its hypothetical-deductive approach. The topic permeated and divided the German physical anthropological community throughout the second half of the century. I have shown in this context, that the interpretation of Australian Aborigines as a "low race" by German naturalists with an interest in physical anthropology was established long before they established their area of investigation as a natural scientific discipline. They formed their views of the *Australier* or *Neuholländer* by replicating already existing bodies of (assumed) knowledge circulating in the British colonial sphere.

In the previous chapters, I have illustrated how the physical anthropological comparison, classification and evaluation of human physical properties as collective, typical and hereditary race traits emerged from a variety of existing natural historical and scientific disciplines and their methodologies.[251] Blumenbach, for example, "defined … and thereby founded [physical] anthropology as a scientific 'natural history of mankind,' based on the existence, differentiation and classification of human races, that was distinguished from anatomy."[252] His methodological turn to human skulls as material objects for the categorisation of humanity was a point of departure for the transformation of *Anthropologie* to a "more natural scientific (biological)"[253] investigation of the natural history of humanity. But he also relied to a high degree on travel literature, which his nineteenth-century successors increasingly deemed too subjective to be regarded as scientifically sound evidence. During the second half of the nineteenth century, they eventually abandoned his craniological approach, which they regarded as too limited in its descriptions of single examples assumed to be "typical individuals to characterise entire races."[254] They favoured the systematic collection and comparative metric investigation of vast amounts of non-European human skulls and bones, defining the median measures as types, against which the individual skull should be evaluated.[255] At the Göttingen Meeting von Baer articulated this new approach in the following way: "And

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[251] See also Hoßfeld, *Geschichte der biologischen Anthropologie*, 57.

[252] Schurig, " Sonderstellung der Anthropologie," 30. See also Frank William Peter Dougherty, "Buffons Bedeutung für die Entwicklung des anthropologischen Denkens im Deutschland der zweiten Hälfte des 18. Jahrhunderts," in *Die Natur des Menschen: Probleme der Physischen Anthropologie und Rassenkunde (1750-1850)*, ed. Gunter Mann, Jost Benedum and Werner F. Kümmel (Stuttgart: Gustav Fischer Verlag, 1990), 233.

[253] Hoßfeld, *Geschichte der biologischen Anthropologie*, 36.

[254] Zimmerman, *Anthropology and Antihumanism*, 87.

[255] See e.g. von Baer and Wagner, *Bericht Zusammenkunft in Göttingen*, 11, 12, 68–69.

if endless rows of numbers are used to determine the trajectory of heat or the pressure of the air in different regions at different points in time, or to find the direction of the magnetic needle, does the human not deserve a similar toil?"[256] Therefore, large amounts (in Wagner's vision, ideally "hundreds or thousands"[257]) of human skulls were to be acquired for their comparative examination – a task that proved impossible to accomplish.

Following Zimmerman's argument, I have also illustrated, that the founders of *Anthropologie* rejected what they regarded as a philosophical approach to the enquiry into humanity. As a consequence, they eschewed the proclamation of larger explanatory schemes. Their emphasis on the inductive and empirical approach aimed at the accumulation of all available physical data of humankind and its diversity. Its interpretation had to wait until everything that could possibly be known had been collected and quantified. This reluctance or cautiousness to formulate comprehensive hypotheses led them to reject Darwinian theory as speculation along with the construction of definite race hierarchies. It also, so they claimed, called for the qualification of the category "race" (for example, by referring to "so-called" lower races) and its separation from evaluations of culture and intelligence.

As I have outlined in Chapter 1, historians who emphasise the humanist-liberal tradition of German *Anthropologie* have interpreted this as a sign of the late-nineteenth-century physical anthropologists' non-racist approach to the investigation of humanity. In the following chapter, I shall analyse the way in which first generation "liberal" German physical anthropologists investigated and interpreted the skeletal remains of Australian Aborigines.

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[256] Ibid., 69.

[257] Wagner, "Begründung einer vergleichenden Anthropologie," 559.

5 Alexander Ecker's *Australier*

In 1860, Alexander Ecker and Gustav Lucae received the skeletal remains of Australian Aborigines independent from each other. Apart from the skull of a Tasmanian young woman that was acquired by the Berlin Anatomical Museum in the early 1840s, these were the first skeletal remains that were appropriated and shipped to Germany since Blumenbach's *Neuholländer* skulls.[1] Both immediately used them to conduct physical anthropological investigation; the resulting publications gave the final incentive to von Baer and Wagner for the Göttingen Meeting.[2] As I shall show in this and the ensuing chapter that deals with Lucae's investigation, both of these anti-Darwinist physical anthropologists implicitly or explicitly incorporated the already existing notion of the physically and/or culturally-mentally "low-standing Australian race" into their investigations.

5.1 On Ecker's "Knowledge about the Natives of South Australia

In 1861, the Freiburg professor of anatomy, Alexander Ecker (1817-1887), published a comparison of two Australian Aboriginal skeletons with those of an African and a European. His investigation of "the natives of South Australia" was not only his first published work[3] concerned with "the anatomy of the races"[4] but also the first examination

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[1] According to my research, based on the collection catalogues published by the *Archiv für Anthropologie* and published anatomical-anthropological literature, there was only one female skull that was acquired for a German collection before 1861. This was the skull of "Nanny, native of Kangaroo Island", which was given to the Berlin University's Anatomical Museum by Adolphus (or Abraham) Schayer. Gustav Brösike, *V. Berlin. Das Anthropologische Material des Anatomischen Museums der Königlichen Universität. Erster Theil* (Braunschweig: 1881), 51. It was probably the skull of a young Tasmanian woman who may have died from the consequences of a severe middle ear infection. It is most likely that the skull was added to the Berlin collection in the early 1840s, as Schayer returned to Germany from Tasmania in 1843. I would like to thank Andreas Winkelmann for providing this information during our personal conversations. I would also like to thank Ian McFarlane for providing information about Adolphus Schayer at the early stages of my research in 2009.

[2] Karl Ernst von Baer and Rudolph Wagner, *Bericht über die Zusammenkunft einiger Anthropologen im September 1861 in Göttingen zum Zwecke gemeinsamer Besprechungen* (Leipzig: Leopold Voss, 1861), 6–7. See also Uwe Hoßfeld, *Geschichte der biologischen Anthropologie: Von den Anfängen bis in die Nachkriegszeit* (Stuttgart: Franz Steiner Verlag, 2005), 90.

[3] According to a list of publications by Wolf Dietrich Foerster, *Alexander Ecker: Sein Leben und Wirken* (Freiburg i. Br.: Verlag Eberhard Albert Universitätsbuchhandlungen, 1963), 51–52, 38n176.

of Australian skeletal remains since Blumenbach's times. According to his own testimony, Ecker's schoolboy reading of Blumenbach's writings (including the "portraits of representatives of the different human races, their skulls and of apes etc.") inspired his "inclination"[5] for "comparative anthropometry or race-anatomy."[6] In 1857, after becoming professor of human and comparative anatomy, and probably also motivated by Blumenbach's work,[7] Ecker began to build a "special anthropological collection"[8] by reallocating human skulls from the university's zoological and anatomical departments. In 1859, he gave a public lecture on "the human races according to their head form"[9] based on this collection. In accordance with his preference for the comparative and inductive method, he considered Blumenbach's descriptions of single, representative skulls as insufficient for scientifically sound (that is, statistically usable) evidence. Ecker therefore aimed at increasing his collection of human skulls and rapidly turned it "into one of the most plentiful of the time."[10] At the time of his death in 1887, it consisted of around five hundred human skulls,[11] which had been sent to him by "friends and former students who lived in foreign countries."[12] By 1880, he had come into the possession of five skeletons and seven additional skulls from Australian Aborigines sourced by this method.[13]

Ecker was a significant member of the founding generation of German *Anthropologie*. In 1858, he became acquainted with von Baer at the German Naturalists Meeting, and

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[4] Alexander Ecker, "Zur Kenntnis der Eingebornen Südaustraliens," *Berichte der Naturforschenden Gesellschaft zu Freiburg* 2, nos. 22-24 (May-June 1861): 338.

[5] Alexander Ecker, *Hundert Jahre einer Freiburger Professoren-Familie. Biographische Aufzeichnungen* (Freiburg: Mohr, 1886), 53. See also Foerster, *Alexander Ecker*, 13, 16, 33.

[6] Ecker, *Freiburger Professoren-Familie*, 116. Also quoted in Daniel Möller, "Die Alexander-Ecker-Sammlung in Freiburg," in *Sammeln, Erforschen, Zurückgeben? Menschliche Gebeine aus der Kolonialzeit in akademischen und musealen Sammlungen*, ed. Holger Stoecker, Thomas Schnalke, and Andreas Winkelmann (Berlin: Christoph Links Verlag, 2013), 109.

[7] Möller, "Alexander-Ecker-Sammlung," 110; Foerster, *Alexander Ecker*, 31–33.

[8] Ecker, *Freiburger Professoren-Familie*, 116. Also quoted in Möller, "Alexander-Ecker-Sammlung," 109.

[9] Foerster, *Alexander Ecker*, 40n183.

[10] Ibid., 32.

[11] Möller, "Alexander-Ecker-Sammlung," 110.

[12] Ecker, *Freiburger Professoren-Familie* 116, also quoted in Möller, "Alexander-Ecker-Sammlung," 109 and Foerster, *Alexander Ecker*, 31.

[13] Alexander Ecker, *3. Freiburg i. B. Catalog der Anthropologischen Sammlungen der Universität. Nach dem Stande vom 1. April 1878* (Braunschweig: Vieweg & Sohn 1880), 6–7, 53–54. A further skull was presented to him as being of a "native of New Zealand" which "obviously belong[ed] to an Aboriginal from Australia." Ibid., 58.

the following year von Baer visited Ecker's collection in the pursuit of his investigation of Russian skulls.[14] On this occasion they discussed the possibility of a specific gathering for practitioners of physical anthropology, which was quickly realised in Göttingen. In 1866, as a result of the Göttingen Meeting, Ecker became one of the inaugural editors of the *Archiv für Anthropologie*,[15] which provided the German-speaking physical anthropological community with a space for discussion and exchange of ideas until the journal became the official organ of the German Anthropological Society in 1870.

Ecker's surprise – the superior skeleton of the *Australier*

In the summer of 1860, Ecker's encouragement to former students to obtain for him human remains bore valuable fruit when he received the skeletons of a man and a woman from Australia,[16] sent to him as a "gift"[17] by Anton Vogt. Living in Greenock near Port Adelaide (South Australia) since 1857, the medical doctor took the opportunity to strengthen his connection with his former professor and obliged with his request by robbing Aboriginal burial sites near his residence.[18] Five more skulls and one further (female) skeleton followed in future years, enhancing Ecker's physical anthropological collection.[19]

Ecker immediately used the skeletons to make "not a superfluous contribution to the formation"[20] of the nascent physical anthropological discipline, whose establishment and standardisation he had discussed with von Baer the previous year. The Göttingen Meeting took place only a short while after Ecker showed his anthropological collection to von Baer[21] who praised his "most recent work on the skeleton of the New Hollander"[22] as one of the incentives for the assembly. Ecker's study consisted of three parts: After comparing the skeleton of the Aboriginal man with those of an African and a European, he described the woman's skeleton and concluded his paper by citing an Aus-

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[14] Foerster, *Alexander Ecker*, 34–35.

[15] Alexander Ecker, "Die Berechtigung und die Bestimmung des Archivs," *Archiv für Anthropologie* 1 (1866): 5–6; Foerster, *Alexander Ecker*, 35; Ecker, *Freiburger Professoren-Familie*, 122.

[16] Möller, "Alexander-Ecker-Sammlung," 116.

[17] Ecker, *Calatog Freiburg*, 6–7.

[18] Ecker, "Kenntnis der Eingebornen Südaustraliens," 337.

[19] Ecker, *Calatog Freiburg*, 6–7, 53–54. Vogt appears to have been an avid gatherer of human skulls; he also donated ten from Fiji to the Freiburg Museum of Ethnology in 1908. Möller, "Alexander-Ecker-Sammlung," 117.

[20] Ecker, "Kenntnis der Eingebornen Südaustraliens," 337.

[21] Ecker, *Freiburger Professoren-Familie*, 117–18.

[22] Von Baer and Wagner, *Bericht Zusammenkunft in Göttingen*, 6.

tralian colonial report about "the present condition of the Aborigines" in Victoria.[23] I shall focus on the first and the last part as they served to determine the *Australier* as a race, whereas Ecker described the woman's skeleton rather as an individual with pathological characteristics, supposed to be caused by syphilis. (It is noteworthy, however, that Ecker thought that the female skeleton approximated that of the African more than the man's.[24] He also supposed that the "not insignificant"[25] differences between the male and female skeleton resulted from their owners' different tribal affiliation – or racial origin – based on information given by Vogt, that Aboriginal men stole the women of other tribes.)

Strikingly, he began with providing information about the individuals whose skeletons he measured. One belonged to a young man who, according to Vogt, "had fallen off a cart"[26] and whose remains Vogt had "dug up himself"[27] a few kilometres out of town. His forehead was injured in such a way that Ecker was able to measure its bone thickness.[28] The second skeleton resulted from Vogt's neighbourly collaboration with a British colonist, who had informed him about a seriously ill woman who had "finally died"[29] to be buried by her family behind a bush. As Vogt admiringly noted, her body was "wrapped in a blanket of possum skins, which the natives' women know to sew beautifully together."[30] He excavated the not-yet fully decomposed corpse, stripped off its remaining tissue and hair and shipped it to Freiburg.[31] On the basis of his examination of her remaining teeth and her skeleton, Ecker suggested that she had suffered from syphilis and died aged around forty years.[32] Like the Australian Aboriginal man's skeleton, the *Negerscelet* had belonged to a nineteen- to twenty-year-old man from an area near the Malawi Lake (then German East Africa) who had succumbed to tuberculosis in a Cairo hospital.[33] The least information was given about the "European" skeleton of a

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[23] Select Committee of the Legislative Council, Victoria, *Report of the Select Committee of the Legislative Council on the Aborigines* (Melbourne: John Ferres Government Printer, 1859), iii.
[24] Ecker, "Kenntnis der Eingebornen Südaustraliens," 355–56.
[25] Ibid., 358.
[26] Ibid., 340.
[27] Ibid., 360.
[28] Ibid., 350.
[29] Ibid., 359.
[30] Ibid., 360.
[31] Ibid., 360.
[32] Ibid., 354–57.
[33] Ibid., 338.

nineteen-year-old German whose remains were kept in the anatomical department for reasons not specified by Ecker.[34]

Having thus established the comparability of the skeletons, Ecker asserted that "when I talk here of the Negro or Australian, I do not claim that the circumstances are valid for all Negroes or all inhabitants of mainland Australia."[35] This introductory individualisation was not so much concerned with the individuals as living social beings – it resulted from the methodological shift from Blumenbach's description of single, assumedly representative, skulls to the (aspired) statistically based comparison of masses of skeletal remains. As long as German collections were so scarcely furnished, Ecker emphasised, it was "still a long time ahead until we can think of generalisation in the comparative anatomy of races."[36] Thus, it was only for the time being that he compared "very specific Negroes with specific Australians."[37] Or so he claimed – in reality, Ecker treated these skeletons as bony representatives of their respective races by establishing a metric racial hierarchy between Africans, Australians and Europeans. That his contemporaries perceived the work as an investigation of Australian Aboriginal race characteristics becomes obvious in von Baer's report on the Göttingen Meeting where he praised Ecker's "specific" skeletal investigation as generally "instructive examinations of the skeleton of *the Australians*"[38] (emphasis added).

Ecker meticulously measured the lengths and thicknesses of the skulls, long bones, hands and feet, hips, spines and teeth, estimating the measurements of the finger bones that Vogt had failed to unearth.[39] His statement with regard to the arms can serve as an example of his study:

> 1) The upper extremity of the Negro is longer than that of the Australian and the European.
> 2) Regarding the separate parts, in relation to the radius the humerus is the shortest in the Negro (= 28,5:23,6), it follows the Australian (= 30,5:22,4), then the European (= 31,3:21,7). The relative length of the hand is also most significant in the Negro, in relation to the total upper extremity it measures = 17:69,1, in the European = 16,7:69,7, in the Australian = 15,9:68,8.

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[34] Ibid., 338–39.
[35] Ibid., 338n.
[36] Ibid.
[37] Ibid.
[38] Von Baer and Wagner, *Bericht Zusammenkunft in Göttingen*, 46n.
[39] Ecker, "Kenntnis der Eingebornen Südaustraliens," 340.

> With regard to our Negro, this results in what has already been stated by others, that his arms have a relatively greater length and that this is caused by a greater length of the forearm and the hand, while the upper arm is relatively shorter. In the Australian the upper extremity (…) is shorter than in the Negro and, concerning the relation of the separate sections, he stands between the Negro and the European, as the forearm in relation to the upper arm is longer than the European's, but shorter than the Negro's. Burmeister regards a relative shortening of the upper arm as an approximation to the ape type.[40]

This quote is illuminating in three aspects. Firstly, it exemplifies the new methodological approach of measuring human bones in absolute and relative measurements in contrast to Blumenbach's descriptions. Secondly, Ecker's choice of an African skeleton for comparison not only with the European and the Australian skeletons but also with ape characteristics elucidates his interpretative framework. Thirdly, following from the second point, it indicates that the investigation built on and carried with it received knowledge about the lowly racial position of Africans and Australian Aborigines.

Regarding the second point, Ecker repeatedly referred to Karl Hermann Konrad Burmeister (1807-1892) as authority on the nature of the *Neger* as a race category. A "rigid biblical creationist"[41] and anti-Darwinian "all-round-scientist,"[42] Burmeister travelled and lived in South America during the second half of the nineteenth century. His publication "Der Schwarze Mensch" (The black human), which Ecker cited repeatedly in this and many of his subsequent physical anthropological publications, first appeared in 1853 in the *New York Evening Post*. With a paternalistic abolitionist intention, Burmeister set out to investigate the extent to which the human kind varied "without departing the sphere of humanity, without becoming animal-like!"[43] Comparing enslaved Africans with Europeans in the quasi laboratory Brazil, Burmeister likened the majority of African body parts – that is, sizes, shapes and function – to those of apes. He concluded that his investigation "prove[d] that, while the coloured man remains human ... there occurs in fact a degradation that positions him mentally as well as physically beneath related other races against which he is rated."[44]

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[40] Ibid., 342–43.

[41] Elvira Ines Baffi and Maria F. Torres, "Burmeister, Karl Hermann Konrad, (1807-1892)," in Spencer, *History of Physical Anthropology*, 235.

[42] Werner Ulrich, "Hermann Burmeister, (1807-1892)," *Annual Review Entomology* 72 (1972): 1.

[43] Hermann Burmeister, "Der Schwarze Mensch (Januar 1853)," in *Geologische Bilder zur Geschichte der Erde und ihrer Bewohner* (Leipzig: Verlag Otto Wigand, 1855), 99.

[44] Ibid., 99–100.

To name a few examples taken up by Ecker, Burmeister found that African skeletal limbs were thinner and longer in relation to their respective body heights than those of Europeans. The proportions between the upper and lower parts of their extremities differed too, that is to say, their upper arms were relatively shorter than their lower arms. It made Burmeister "involuntarily think of the ape"[45] whose upper extremities he defined by a "brutish relative shortening of the upper arm."[46] Respectively, Burmeister stated that African thighbones were relatively shorter than their upper arms;[47] and the feet's appearance and function approximated his ape-type. As he pointed out in an earlier essay, the humanness and beauty of the human foot lay in its straight toes, the only slightly shorter but most prominent non-opposable first toe and the arched structure.[48] Thus, "long, narrow, flat feet with long toes imitate the ape type; they depart further from the human conformation the more they show these three mentioned characteristics."[49] According to Burmeister, Brazil's slaves had "ugly, apish"[50] too short big toes – in his view thus an "ape conformation."[51]

All of this proved to Burmeister that there "truly exist[ed] better and worse organised human races"[52] which he measured in comparison with differing degrees of the beauty, normality and intelligence of Europeans.[53] Disappointed by failing to find "intellectual life" even in those slaves who, as he thought unexpectedly, displayed some beautiful features, Burmeister felt "forced" to abandon his "idealistic conception."[54] This allowed him to claim freely that Africans remained "on the lowest stage of human existence."[55] At the same time, he decided that notwithstanding their apish insufficien-

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[45] Ibid., 112.

[46] Ibid., 117.

[47] Ibid., 102–6, 117–18.

[48] Burmeister, "Der menschliche Fuß als Charakter der Menschheit," in *Geologische Bilder zur Geschichte der Erde und ihrer Bewohner* (Leipzig: Verlag Otto Wigand, 1855), 112, passim.

[49] Ibid., 103.

[50] Ibid., 104.

[51] Ibid., 112n.

[52] Burmeister, "Der Schwarze Mensch," 100.

[53] Burmeister, for example, measured African women with reference to the "norm" of European women, stating that the former did not reach "the female norm of 63 inches," (which he defined earlier as the European female body height) and that "the measured [legs of] female Negroes were a long way from achieving the normal measure of a well-built European [woman]." Ibid., 104.

[54] Ibid., 133.

[55] Ibid., 133, see also 99–100.

cies and incapacities, Africans should not be enslaved but led towards a more civilised state by the White man.[56]

Burmeister's view, of course, drew on similar notions that were regarded as scientifically established since the early seventeenth century when the comparative anatomical investigation of African anthropoid apes frequently included the bodies of Africans.[57] In 1699, the British physician Edward Tyson (1651-1708) was the first to anatomically examine the similarities and differences between humans (represented by the body of an African) and apes (a chimpanzee erroneously called "pygmy" by Tyson). According to Peter Martin, his study remained largely descriptive without drawing racialising conclusions about the possible relations between the human in general or the African in particular to the ape species.[58] Seventy-five years later, though, Blumenbach inquired about Africa's human and ape inhabitants, aiming to determine the meaning of such similarities and differences. This interest in the anatomy of African humans and apes inspired his collecting of skulls.[59]

Such investigations established a long-lasting tradition of associating African bodies and minds with those of apes, thereby labelling Africans as primitive and inferior.[60] Ecker not only reinforced this paradigm by repeatedly referencing Burmeister's "generally proven, scientific fact"[61] that "the black man" approximated the ape as much as he departed from Europeans, but also added the *Australier* to the equation, measuring them too against Burmeister's recurrent ape analogies. Although he saw no place in this investigation for judgements about beauty or ugliness, his references to Burmeister illuminate the racialising framework behind his skeletal comparisons.

Returning to the above citation, according to Ecker's measurements, the Australian Aborigine's arms were shorter than his African counterpart's and relatively shorter than his own legs. The reverse condition applied to the *Negerscelet*, suggesting to Ecker that "the Negro approximated the ape type."[62] Ecker also confirmed Burmeister's findings with regard to the leg proportions, stating that the African skeleton's "thigh in relation to

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[56] Ibid., 138.

[57] Peter Martin, *Schwarze Teufel, Edle Moren Afrikaner in Bewußtsein und Geschichte der Deutschen* (Hamburg: Junius Verlag, 1993), 215.

[58] Ibid., 226.

[59] Ibid., 227–28.

[60] Ibid., 215–16.

[61] Burmeister, "Der Schwarze Mensch," 135.

[62] Ecker, "Kenntnis der Eingebornen Südaustraliens," 345.

the lower leg is shorter than in the Australian and even more so than in the European, thus here too the Australian keeps in the middle between the Negro and the European." Finally, the feet of Ecker's African skeleton were long and flat – "quite characteristic" – and their big toes were too short to qualify for Burmeister's definition of truly human feet: "as Burmeister already stated … a characteristic that also betrays an approximation to the apes." Although the Australian skeleton shared the flat feet, it departed from African apishness by its big toes, which (just as the European's) were longer than the second toes.[63] On the whole, Ecker concluded, "regarding the proportions of the extremities … the Australian stands closer to the European than does the Negro."[64]

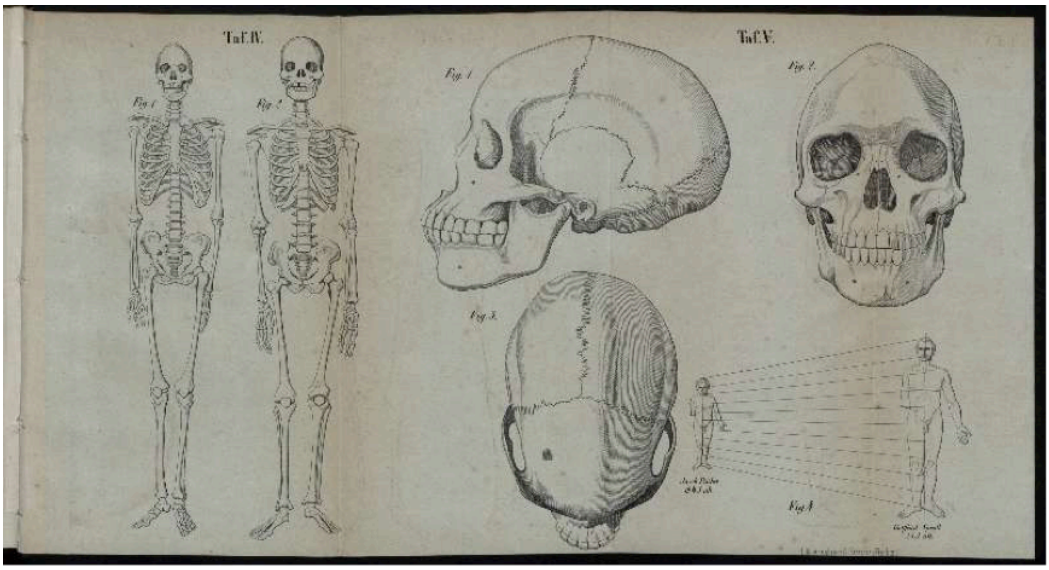

Figure 7 Ecker's superior skeleton of the *Australier* (left)[65]

Commenting on this middle-position, Ecker conceded "this result, as I willingly admit, was a very unexpected one for me, because the conformation of the skull, as will become obvious from the following, assigned the Australian a rather lower stage than the Negro and I would have hoped this character would be expressed in the remaining skeleton."[66] His measurements, therefore, did not merely describe the skeletons' proportions but also indicated their stages in a racial hierarchy. Based on the skull's "lower stage" he seems to have expected the Australian skeleton would present characteristics that were

[63] Ibid, 344.

[64] Ibid., 345.

[65] Ibid., 561 plates iv and v.

[66] Ibid., 345. Ecker stated: "Es war dieses Ergebniss, wie ich gern gestehe, mir ein sehr unerwartetes, da die Schädelbildung, wie auch aus dem folgenden erhellen wird, dem Australier eher eine niedrigere Stufe anweist als dem Neger und ich gehofft hätte, es würde sich dieser Charakter auch im übrigen Scelet aussprechen."

also "lower" than the African's and, therefore, approximating those of apes to a higher degree.

The "lower stage" of the Australian skull

In contrast to his skeletal investigation Ecker did not indicate in his skull examination what made a feature higher or lower, neither did he make statements about the skulls' respective ranking in relation to each other, or whether a feature was regarded as approximating the ape type. He found the non-facial part of the skull "strikingly"[67] long and narrow (exactly 0.2cm and 0.6cm longer than the African and European skulls respectively; 1 cm narrower than the African while it was 1.2cm narrower than the European skull[68]). The circumference of the skull was the smallest and its skullcap was "characteristically roof shaped."[69] Ecker found it "particularly striking" that the frontal parts of the head showed a "relatively lesser development" resulting in its "narrowness and lowliness, in general the small extension of the forehead."[70]

Ecker did not explain the significance of these lower characteristics. Without going into the details of each of his skull measurements, it can be stated though that he thought the lowliness of the Australian skull would be "illuminated" or "become obvious" (*erhellen*) to his anthropologically interested readers through the measurements and descriptions cited above.[71] This also indicates that he expected his readers to know what a "lower" skull characteristic was. The dissection of the brains of Africans, undertaken in the preceding century by Blumenbach's student and friend, Samuel Thomas Soemmerring (1755-1830), may provide the context of evaluating head sizes and shapes and their content in comparative and human anatomical investigations. In his (then famous and today rather infamous) 1774 publication *Über die körperliche Verschiedenheit des Mohren vom Europäer*[72] (On the physical difference of the Moor from the European) Soemmerring aimed to answer questions about Africans' place in the Great

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[67] Ibid., 346.

[68] Ibid., 347, 377.

[69] Ibid., 347.

[70] Ibid., 347–48 "Was die einzelnen Abtheilungen des Schädels betrifft, so ist die relativ geringe Entwicklung des Vorderkopfs oder des Stirntheils besonders auffallend. ... Die Schmalheit und Niedrigkeit, überhaupt die geringe Flächenausdehnung des Vorderkopfs ist an diesem Schädel besonders auffallend."

[71] See German original citation in previous footnote.

[72] Samuel Thomas Soemmerring, *Über die körperliche Verschiedenheit des Mohren vom Europäer* (Mainz, 1784).

Chain of Being with an abolitionist intention.[73] Similar to Burmeister several decades later, he sought to investigate "from the perspective of an anatomist"[74] whether Africans should be considered humans (thus not be enslaved) or animals (thus, legitimately made to work like animals).

Transcending skin colour as a race-defining criterion, Soemmerring focused on the brain as the ultimate human "organ of reasoning power."[75] Regarding the conformation of the skull, he referred to the "greatest brain capsule" of Camper's Ancient Greek head which through its straight forehead and evenly curved shape provided the brain with more space for a larger volume. He then cited Herder's distinction between the Greek's "most extensive space of a free brain" at the front of the skull and the smaller back portion of the human brain. According to Soemmerring's citation, Herder thought the frontal part represented the human part of the brain, whereas the rear housed the "animal cerebellum."[76] In contrast, "in the Moor the flatter forehead recedes, joining the equally flat rear."[77] In his initial deliberation of African heads Soemmerring added that the "transition from the back of the head to the spine is hollowed out flatter, less deep than in us, just as if something is deducted from the brain-containing skull towards the rear; this is the case to a much stronger degree in the ape."[78]

Discussing the French anthropologist Paul Broca's (1824-1880) craniometry, Stephen Jay Gould has aptly reduced the significance which anthropologists assigned the brainy content in shaping the forehead to the formula "front is better."[79] According to this dictum, "higher mental functions were localised in anterior regions of the cortex, and … posterior areas busied themselves with the more mundane, though crucial, roles of involuntary movement, sensation, and emotion. Superior people should have more in the front, less behind"[80] – and the other way around should then apply to inferior humans. In this way, Soemmerring linked human brain and skull features to different levels of intelligence and civilisation. Consequently, his findings were interwoven with

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[73] Lilienthal, "Soemmerring Rassenunterschiede," 36, 38.

[74] Ibid., 36.

[75] Samuel Thomas Soemmerring, *Ueber die körperliche Verschiedenheit des Negers vom Europäer* (Frankfurt: Varrentrapp und Wenner, 1875), 16. I refer to the second, augmented edition of Soemmerring's investigation cited by Ecker.

[76] Ibid., 17.

[77] Ibid., 18.

[78] Soemmerring, *Verschiedenheit des Mohren*, 8.

[79] Stephen Jay Gould, *The Mismeasure of Man* (New York: Norton, 1996), 129.

[80] Ibid.

clearly un-anatomical remarks on Africans' alleged low mental capacity that only reinforced the very biases he set out to interrogate.[81]

That Ecker (and most likely his readers) knew of Soemmerring's craniological investigations becomes clear in his consideration of the back of the Australian skull, namely the position of the *foramen magnum*. Soemmerring, confirmed the French naturalist Louis-Jean-Marie Daubenton's (1716-1800) finding that the "oval opening of the brain capsule, through which the spinal cord passes down," was further back in animals than in humans because "man must carry his head upright." In apes and in Africans "the hole seem[ed] to lie a little bit further to the back."[82] Ecker found that Soemmerring's finding was "not valid, in any case not for the Australian."[83] This feature could thus not be a low one, but indicated, so to speak, a "more human" position than that of Soemmerring's Africans. (In 1870, Ecker confirmed the view that the position of the *foramen magnum* in Africans presented a "race peculiarity"[84] which contributed to their skull's general "lower, animal-like conformation."[85]) Ecker noted another feature in the Australian skull that would not be categorised as "low", namely the "not unusual" thickness of the skull bone structure, which he measured through the Aboriginal man's skull injury. This finding did not confirm "the significant thickness of the skull bones generally regarded as characteristic for the Australian race."[86]

Turning to the facial area of the skull, Ecker stated that the Aboriginal skull presented a facial angle of "hardly 70 [degrees]."[87] This measure alluded to Camper's illustrations of Asian and African face profiles of seventy degrees, thus positioning them just above Camper's ape. As I have mentioned earlier, nineteenth-century physical anthropologists used facial angle measurements to define human hierarchies according to more or less protruding faces. While the *Australier*'s skull profile did not call for further comment at this point in his paper, the African's seemingly untypical higher angle and

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[81] Soemmerring, *Körperliche Verschiedenheit des Negers*, 24. See also Georg Lilienthal, "Samuel Thomas Soemmerring und seine Vorstellungen über Rassenunterschiede," in *Die Natur des Menschen. Probleme der Physischen Anthropologie und Rassenkunde (1750-1850)*, ed. Gunter Mann and Franz Dumont (Stuttgart: Gustav Fischer Verlag, 1990), 38.

[82] Soemmerring, *Körperliche Verschiedenheit des Negers*, 45.

[83] Ecker, "Kenntnis der Eingebornen Südaustraliens," 350.

[84] Alexander Ecker, "Ueber die verschiedene Krümmung des Schädelrohres und über die Stellung des Schädels auf der Wirbelsäule beim Neger und beim Europäer," *Archiv für Anthropologie* 4 (1870): 299.

[85] Ibid., 310.

[86] Ecker, "Kenntnis der Eingebornen Südaustraliens," 350.

[87] Ibid., 351.

thus smaller degree of prognathism needed explanation. Measuring an impressive eighty degrees, it equalled Camper's measure for the European nearly ideally shaped, straight forehead. Ecker interpreted this supposed irregularity as an indication that the bearer of this particular skull was not a real *Neger*. Instead he suggested it approached the less prognathous "skull formation of the Bushmen"[88] who were regarded among physical anthropologists as presenting more Asian facial features and had a lighter skin. The African's facial angle might even have surpassed the European's but Ecker did not document the latter's facial angle. In this part of his paper, he did not elaborate on the meaning of the facial angle. He did, however, question the facial angle measurements of Australian heads undertaken by one of his compatriots in the Australian colonies in a review of British colonial sources about the physical and cultural and/or intellectual characteristics of Australian Aborigines.

Ecker's review of "the state of the Australian race"

In the 1850s, the colonial government of Victoria became worried about the welfare and population demise of Australia's original inhabitants.[89] In 1858, instigated by humanitarian concerns uttered in the British metropolis and by some influential colonists, it established a Select Committee of the Legislative Council on the Aborigines "with the view of endeavouring to ameliorate their present condition."[90] The Select Committee interviewed government officials, missionaries and other colonists who "were thought competent to reply"[91] to their enquiries due to their various interests and interactions with Aboriginal people. From these investigations it was concluded that "the great and almost unprecedented reduction in number of the Aborigines is to be attributed to the general occupation of the country by the white population; to vices acquired by contact with a civilized race, more particularly the indulgence in ardent spirits; and hunger, in consequence of the scarcity of game since the settlement of the Colony; and also, in some cases, to cruelty and ill-treatment."[92] To alleviate their suffering it recommended

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[88] Ibid., 351n, see also p. 352n.

[89] Leigh Boucher, "The 1869 Aborigines Protection Act: Vernacular Ethnography and the Governance of Aboriginal Subjects," in *Settler Colonial Governance in Nineteenth-Century Victoria*, ed. Leigh Boucher and Lynette Russell (Canberra: ANU Press, 2015), 69–72.

[90] Select Committee of the Legislative Council, Victoria, *Report on the Aborigines*, 25.

[91] Ibid., v.

[92] Ibid., iii.

the establishment of reserves under the guardianship of missionaries whose task included "to induce the Aborigines to take an interest in the occupations of civilised life."[93]

As Leigh Boucher has noted, the Select Committee "was as much directed by ethnographic enquiry as it was by humanitarian intervention."[94] Accordingly, it handed out a questionnaire of eighty-nine questions of which the overwhelming majority related to matters of cultural, intellectual and physical characteristics. The first part, based on fourteen highly suggestive questions about their treatment by and responses to British settler society, related to the living conditions of Aborigines and suggestions as to their betterment. While the second part sought information about physical anthropological and anthropometric measurements, experiences with the impact of "intermixture on physical and moral character"[95] as well as "intellectual character,"[96] it was predominantly concerned with cultural anthropological themes such as linguistics, cultural, religious or political organisation. The information supplied in response to this section featured to a minimal degree in the Select Committee's report. As the Chairman Thomas McCombie (1819-1869) proudly conveyed, the resulting document should be regarded as an important historical document, "prized by the learned societies of Europe"[97] which were "very anxious"[98] to prevent "the irretrievable loss which science must sustain"[99] through the feared extinction of the Australian Aborigines.

Among those who contributed to the Select Committee's findings were three Germans – the Moravian missionaries Friedrich Wilhelm Spieseke (1820-1877) and Friedrich August Hagenauer (1829-1909) and the artist, naturalist and explorer Ludwig Becker (ca 1808-1861).[100] One of the 'Forty-Eighters', Becker arrived in Australia in

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[93] Ibid., v.

[94] Boucher, "1869 Aborigines Protection Act," 90.

[95] Select Committee of the Legislative Council, Victoria, *Report on the Aborigines*, 48.

[96] Ibid.

[97] Ibid., v.

[98] Ibid.

[99] Ibid., 25.

[100] The biographical information on Becker is based on Marjorie Tipping, "Ludwig Becker and Eugène von Guérard: German Artists and the Aboriginal Habitat," in *From Berlin to the Burdekin: The German Contribution to the Development of Australian Science, Exploration and the Arts*, ed. Jürgen Tampke and David Walker (Kensington: New South Wales University Press, 1991), 82–107. Ludwig Becker emigrated to Australia in the wake of the 1848 revolution in Germany. He participated as scientist in the ill-fated Burke and Wills expedition during the course of which he died. Marjorie Tipping, "Becker Ludwig (1808?-1861)," in *Australian Dictionary of Biography* Vol 3 (1969). Tipping has emphasised that Becker, as a German, had a very different view of Australian Aborigines than the British who "had despised them as primitive and of little intelligence." Tipping, "Becker and Guérard," 91.

1851, making a living from portrait painting and newspaper illustrations. He is probably mostly remembered for his participation in and death during the ill-fated Burke and Wills Expedition of 1860/61. His portraits of Aboriginal men and women have also been highly acclaimed; namely the "sympathetic, if sad, representations"[101] of Aboriginal Tasmanians in the deadly reserve of Oyster Cove in 1852[102] and his two "excellent likeness[es]"[103] of two Aboriginal men from the Murray River in Victoria.[104] As Marjorie Tipping has stated, these miniature paintings reflected his Humboldtian "compassion for the native people." Accordingly, he "portrayed them as flesh and blood human beings with a realism and dignity rarely, if ever, surpassed in colonial likenesses of Aborigines."[105]

Following his Humboldt-inspired interest in natural history, Becker became an industrious member of Melbourne's scientific community, in particular its Philosophical Institute, where he presented papers on a range of natural history topics such as zoology, meteorology and anthropology. In December 1856, for example, he presented the nest and eggs of a lyrebird that he had acquired through the faithful services of a number of Aborigines whom he had previously met. Becker negotiated the collecting of the nest with Simon, "the son of the Yarra tribe chieftain," who, as Becker pointed out, "possess[ed] a higher degree of civilization and intelligence than the rest."[106] As the institute's proceedings recorded of another meeting, Becker also "exhibited and described some specimens of interest in natural history and the ethnography of Australia ... illustrated by several aboriginal skulls, shell necklaces, tomahawks and other native weapons, belonging to the true Australian race, the aborigines of Tasmania, New Zealand, New Guinea, and the Feegee Islands." He used these items to speculate on the genetic relations between the respective peoples, suggesting "that our own aborigines, in Aus-

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[101] Tipping, "Becker and Guérard," 87.

[102] Gabriella Coslovich, 'Rare Portraits of Tasmanian Aborigines Up For Sale', *The Age* (16 May 2011), www.theage.com.au/victoria/rare-portraits-of-tasmanian-aborigines-up-for-sale-20110515-1eoah.html; Clarke, "Members Victorian Exploring Expedition," 26.

[103] Tipping, "Becker and Guérard," 90.

[104] On the portraits see also Marjorie Tipping, "Becker's Portraits of Billy and Jemmy (Tilki)," *La Trobe Library Journal* 6, no.21 (April 1978): 1–6.; Coslovich, "Rare Portraits"; Ian Clarke, "The Members of the Victorian Exploring Expedition and Their Prior Experience of Aboriginal Peoples," in *The Aboriginal Story of Burke and Wills: Forgotten Narratives*, ed. Ian Clark and Fred Cahir (Collingwood, VIC: CSIRO Publishing, 2013), 26.

[105] Tipping, "Becker's Portraits," 1.

[106] Ludwig Becker, "The Nest, Egg, and Young of the Lyrebird (Menura Superba)," *Transactions of the Philosophical Institute of Victoria, from August, 1855 to December, 1856, inclusive*, 1 (1857): 153.

tralia, are of a much higher class than as usually and wrongly stated in works treating of the same subject."[107]

Only a few weeks later, the Select Committee sent out its questionnaire, addressing Becker presumably on the basis of his portraits of Aborigines and his anthropological engagement at the Philosophical Institute.[108] Becker answered the questionnaire and was apparently also interviewed in person.[109] He responded to eight questions, stating in a rather sociological manner that alcohol should not be supplied to Aborigines, that he supposed they stole "impelled by necessity"[110] and that they were "not below the average intelligence of all other uneducated masses of nations, may they belong to the black, colored or white races of man."[111] Of the second set of questions, Becker answered the first five questions. These enquired about the Aborigines' "physical characters" such as body measurements, "any prevailing disproportions between different parts of the body" and craniological information including their assumed phrenological implications, based on "the corresponding development of moral and intellectual character."[112] According to Becker's responses, Australian Aborigines were strong, with limbs "not actually disproportioned" but "leaner than in the negro race." Provided with "food and shelter during the cold season they improve[d] their external appearance very soon" and, as he admiringly added, their black hair "when combed and oiled [fell] in beautiful ringlets down the cheeks and neck." He had noticed, however, a "peculiar odour" similar to that (purportedly) emitted by Africans but not as strong and "not for want of cleanliness."[113]

Questions 4 and 5 concerned the investigation of Australian Aboriginal heads and skulls, thoroughly elaborating on the significance of skulls for race determination and even giving instruction for craniologically utilisable measurement and illustration. The Select Committee was particularly interested in the skulls' long- or round-headedness

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[107] Ludwig Becker, "[Aboriginal skulls]," *Transactions of the Philosophical Institute of Victoria, from August, 1855, to December, 1856, inclusive* 1 (1857): Proceedings of the Ordinary Meeting 8th September, 1856, xxi.

[108] According to Tipping, Becker was "one of the few qualified to make any scientific analysis" of the Aborigines' conditions. Tipping, "Becker and Guérard," 92. David Dodd has characterised Becker's contribution to the meeting on 8 September 1858 as "perhaps his most significant presentation at the Philosophical Institute's meetings." David Dodd, "The Aboriginal Contribution to the Expedition, Observed Through Germanic Eyes," in Clark and Cahir, *Aboriginal Story: Forgotten Narratives*, 86.

[109] Tipping, "Becker and Guérard," 92.

[110] Select Committee of the Legislative Council, Victoria, *Report on the Aborigines*, 82.

[111] Ibid., 82.

[112] Ibid., 46.

[113] Ibid., 82.

and the facial profile, including the shapes of the frontal and rear parts of the head (or skull), the position of the head on the neck, "the advance or recession of the chin" and "the character of the lips and nose ... in profile."[114] Becker's most detailed contribution concerned these craniological questions. He presented the two portraits of young Australian Aboriginal men already mentioned above and the illustrations and descriptions of three Aboriginal skulls (which might have been the same that he presented at the Philosophical Institute meeting three months earlier). The portraits depicted Billy and Tilki (or Jemmy), two young men Becker had met and painted in 1854 when visiting a farm at the Murray River. Based on these likenesses, representing the "neatly dressed and well-groomed"[115] individuals in profile, Becker answered the scientific questions about their head shapes. According to his observations, both men presented similar features, typified by Billy who was a strong, tall and broad-chested man with a "fine manly baritone." Regarding their craniological features, Becker listed "jaws, very much projecting; mouth, large" and "chin, small and receding" but also "head, well-formed; forehead, rising nearly perpendicularly from horizontal." Whereas Tilki too presented a "well formed ... profile," Becker had a lot more to say about his tribe's weapons, language and encounter history.[116]

Figure 8 Becker's portraits: "well-formed" heads and "perpendicular foreheads"[117]

The three skulls, one of a young man and two of "very old" individuals, all measured the same in their widths and lengths. The "skull of King John, a chief of the Adelaide

[114] Ibid., 46.
[115] Tipping, "Becker's Portraits," 1.
[116] Select Committee of the Legislative Council, Victoria, *Report on the Aborigines*, 88.
[117] Tipping, "Becker's Portraits," 3 (Billy) and 5 (Tilkie or Jemmy).

tribe" was made of strong bones and its skullcap had a "pyramidal shape, which [Becker] found to be the case with all the native skulls [he] had under examination." Apart from this "typical characteristic of the Australian race," Becker elaborated on the "obliquity of the jaw" which, he thought, was caused by the configuration of the upper jaw ("slants so much forward") and chin ("falls backward") so "that the facial angle is lowered to 85 degrees."[118] The second skull exhibited the same facial angle, whereas the third presented a shorter upper jaw, indicating a lesser degree of prognathism. Becker, engaging in all sorts of scientific endeavours, thus appears to have been to some degree familiar with the physical anthropological literature of the time; or he might just have attempted to meet the Select Committee's craniological requests. In any case, while his descriptions show that he adopted the scientific terminology of physical anthropological investigation, he betrayed his amateurish approach by his statement about the skulls' 'lowered' facial angle – an apparent error that, as I shall show below, was instantly picked up by Ecker in Freiburg.

In view of his evidence before the Select Committee, Becker's expertise on Australian Aborigines provides an interesting insight into the simultaneity of racialising and humanist attitudes towards Australia's indigenous peoples. As has been rightly argued on the basis of his art works, Becker depicted Aboriginal people as individuals, showed respect for their culture and emphasised that they were wrongly treated as a low "class"[119] of the South Pacific's original populations. As his remark about the level of intelligence among humanity's "uneducated masses" indicates, Becker saw intelligence as (in today's terms) a sociological category rather than a race trait. (His earlier comment about his lyrebird nest collector's "higher degree of civilisation and intelligence than the rest" of his tribe may also, kindly, be interpreted in this vein.) At the same time, utilising his portraits (conveniently showing Billy and Tilki in full side view) and Aboriginal skulls, Becker engaged with physical anthropological race investigation – as it were, in acceptance of its claim of scientific utility and validity for the Select Committee's ameliorating intentions. In the case of Tilki, he combined these investigations with cultural observations, whereas he described the skulls as demonstrating typical Aboriginal race characteristics. Nevertheless, Becker drew no conclusions regarding their racial status, mental capacities or state of civilisation from these physical traits.

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[118] Select Committee of the Legislative Council, Victoria, *Report on the Aborigines*, 88.
[119] Becker, "[Aboriginal skulls]," xxi.

Alexander Ecker was one of the "men of learning in Europe"[120] who, as the Select Committee's chairman had hoped, found "information ... of a very important character"[121] in its report. In the third part of his own examination he referred to the report at length to elucidate "the physical condition of the Australians and their current state."[122] In view of the little amount of information on physical characteristics provided by the report,[123] Ecker nevertheless used it selectively, partly summarising, partly translating useful details of the report. Especially with regard to Australian Aboriginal heads and skulls, Ecker cited Becker but ignored the discrepancies between his compatriot's elaborations and his own investigation.

With regard to the physical condition of the Australians, Ecker turned Becker's description of Billy's and Tilki's individual heads into a general statement about the Australian Aborigines (of Victoria and Southern Australia). In a general statement Ecker first stated: "Facial conformation. The head is long and narrow, the forehead rising nearly perpendicular. Jaw very protruding."[124] He then cited Becker's description of Billy and Tilki, using the exact same words as in his general statement: " Jaw very protruding ... forehead rising nearly perpendicular."[125] Reiterating his compatriot's view that their heads were "well built,"[126] he detected Becker's seemingly incongruent facial angle measure. In his nearly verbatim translation of Becker's description of King John's skull, he highlighted the passage about the skullcap and the upper jaws, thereby emphasising its importance. He then added a conspicuous question mark behind Becker's facial angles of "only 85°(?)."[127]

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[120] Select Committee of the Legislative Council, Victoria, *Report on the Aborigines*, 25.
[121] Ibid., v.
[122] Ecker, "Kenntnis der Eingebornen Südaustraliens," 360.
[123] Ibid., 364.
[124] Ibid., 363.
[125] Ibid., 364.
[126] Ibid., 364.
[127] Ibid., 365.

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Beobachter (Becker), dem wir die Portraits der Eingebornen verdanken, auch die Beschreibung und Abbildung einiger Schädel von Eingebornen gegeben und zwar

1) (Fig. 3, 4, 5, 6) den Schädel eines jungen Mannes, des King John, eines Häuptlings des Adelaide-Stamms. Becker gibt folgenden Durchmesser desselben an.

a. Parietaldurchmesser 5⅓″ engl.;

b. Occipito-Frontaldurchmesser 7½″ engl.;

c. Breite des Vorderkopfs zwischen den Schläfen 3¾″engl.

Becker bemerkt ferner:

„Der obere Theil des cranium, von vorn oder hinten gesehen, hat eine pyramidale Form, die immer vorhanden ist und für die australische Raçe typ[illegible] ein scheint. Der Oberkiefer ist [illegible] d, dass der Gesichtswinkel [illegible] trägt, ebenso stark tritt da[illegible] k. Die Jochbeine sind, obgleich stark, [illegible] ger vorstehend als bei der mongolischen Raçe. Die Schneidezähne stehen wegen der Prominenz der Kiefer schief, so dass sie sich in einer Weise abschleifen, dass sie Backzähnen ähnlich sehen.“

2) Der zweite Schädel (Nro. 7, 8, 9, 10) ist der eines Eingebornen vom Port Philipp-Distrikt, und zwar eines alten Mannes, wie aus dem bis auf wenige Spuren in der Occipitalgegend vollständigen Verschwundensein der Nähte, aus der Ausfüllung der Backzahnalveolen und der bis auf die Wurzel hinab vollständigen Abnützung der wenigen übriggebliebenen Zähne ersichtlich ist. Der Kamm (cre[illegible] Him[illegible]fs zeigt zwei Firsten mit einer Furche, welch[illegible] of bis zur Mitte des Kopfs verläuft. Gesichtswi[illegible] etal-durchmesser 5″, Occipito-frontaler 7″, [illegible] n den Schläfen 3⅓″.

85° (?)

85° (?)

Figure 9 Ecker's suspicion of "high" Australian Aboriginal facial angles[128]

Ecker did not comment on his questioning of Becker's findings, but it can be interpreted in two ways that do not necessarily contradict one another. He might have simply challenged Becker's accuracy and interpretation of the measure as "low." Even though nineteenth-century physical anthropologists had a lot to criticise about Camper's angle composition and continuously changed its reference points, they generally stayed within his angular craniometrical delineations. That meant, a facial angle of eighty-five degrees would by no means have been regarded as 'low'; quite to the contrary, King John's skull would have replaced Camper's European skull (80°) on the second-best position following Apollo's facial line. In this light, Ecker would have doubted the mere possibility of a low-standing *Australier* skull with a "high" facial angle. Whether Becker got it wrong or Ecker could not imagine large Australian facial angles, remains unclear. More importantly, Becker pointed to the skull's jaw and chin shapes as signifiers for a protruding

[128] Ibid.

facial profile, but at the same time described Billy's and Tilki's foreheads as straight. Ecker did not compare these descriptions with the receding flattened foreheads of the Australian Aboriginal skulls in his possession.

With regard to the "Australians' mental disposition," Ecker omitted Becker's sociological statements about Aboriginal intelligence but summarised a number of opinions documented in the report: "While some assign them a very low stage on the intelligence scale, others do not find such a significant gap between Europeans and [the Aborigines]." Commenting on the report's "in no way sufficient answers," he confirmed the Select Committee's view. He thought that their perceptive skills (memory, mimicking, senses for language, hearing and location) were "not less developed than in others (e.g. the Indians of South America), while they seem[ed] to demonstrate only little capacity for moral instruction and scientific education."[129] In this context, he reiterated a number of statements regarding the "lowness" of Aboriginal states; for example, their alleged scarcity of "religious ideas ... which without a doubt assigns them a lower stage in relation to other natural peoples," or the supposed "very low level" of Australian Aboriginal artifice, shelter construction or weaponry.[130]

On the whole, Ecker perpetuated the Select Committee's view that "the influence of the Europeans on the black race can be regarded as destructive."[131] He added, however, to the trope of the looming extinction of Australia's indigenous peoples by putting the blame on them for "learning" only the European vices and losing their "feeling for independence." Furthermore, he projected his own racialising notion on Australian Aborigines, contending that they "regard[ed] the Whites as a higher, and themselves as a doomed lower race."[132] Ecker, in conclusion of his review, emphasised the rhetorical question, asked by "some observers" with a view to the Aborigines' state of being "physically, morally and intellectually blighted," whether it was "desirable and worth the effort, to undertake steps to prolong the existence of such a race?"[133] The supposedly low racial status of Australian Aborigines thus seemed to justify the calling into question of their future existence, which was not quite what the Select Committee had in mind with their reservation recommendation.

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[129] Ibid., 368.
[130] Ibid., 372.
[131] Ibid., 374.
[132] Ibid., 375.
[133] Ibid.

Ecker thus added to his physical anthropological investigation of Australian Aboriginal remains a colonial review of their physical, cultural, moral and intellectual state. Although Ecker's investigation appears to be mainly descriptive, describing the anatomy of his Australian "specimens" and providing their meticulous measurements and ratios, it shows that the Australian skeletons were of interest because they were already deemed to (re)present "low characteristics". This becomes obvious in the frame of comparison Ecker chose, namely the skeleton of an African representing the race that was commonly regarded as being closest to the ape and a European skeleton, clearly a representative of the high(est) races. Thereby, the Australian skeletons were, so to speak, positioned on a racial ladder of anatomy. Ecker's review of the Select Committee's report on the Victorian Aborigines can be regarded as supplying additional, "less known information" about "the Australian race."[134] But it also provided more context for his own investigation by confirming the Australian Aborigines' low stage (the skull more so than the skeleton). This indicates that race and culture were not separate categories in his race investigations.

5.2 Ecker's (non-) Darwinism

In Ecker's physical anthropological publications his view of Darwinism is not easily discernible, but his work must be considered in the context of the ongoing debate of Darwinian evolution. In this part of the chapter, I attempt to trace Ecker's position regarding Darwinian theory.

Ecker's position on Darwinian theory appears to have changed over time. In 1866, introducing the inaugural issue of the *Archiv für Anthropologie*, he outlined the journal's "justification and definition," describing *Anthropologie* as "the natural history or zoology of man" in contrast to "history, in particular cultural history."[135] In this antihumanist vain Ecker divided the discipline into several areas of investigation: While *Vergleichende Anthropologie* (comparative anthropology) investigated human variation and its causes, including culture and intelligence,[136] *Paläanthropologie* concerned the skeletal

[134] Ibid., 337.

[135] Ecker, "Bestimmung des Archivs," 2. See also Alexander Ecker, "Die Zwecke der Deutschen Gesellschaft für Anthropologie, Ethnologie und Urgeschichte," *Correspondenz-Blatt der deutschen Gesellschaft für Anthropologie, Ethnologie und Urgeschichte* no. 6 (October 1870): 41.

[136] Ecker, "Bestimmung des Archivs," 2–3.

record of humankind's age.[137] Another area examined "man's differences from the so-called anthropoid animals standing closest to him, or 'man's place in nature' as this question has recently been termed."[138] Ecker's emphasis on the *differences* between apes and humans and his reference to Huxley's 1863 publication *Evidence as to Man's Place in Nature* point to his critical position in regards to Darwinian evolutionary theory at the time; in particular, as William M. Montgomery has termed it, Huxley's "startling [message] of human evolution"[139] from animals. As one of the founding members of German *Anthropologie* who was closely associated to opponents of the theory – such as Rudolph Wagner,[140] the already mentioned Hermann Burmeister and the most prominent anti-Darwinian Rudolf Virchow –, Ecker was of the view that there was yet too little knowledge to find a satisfactory answer to the "question of the genetic connection between the human and the anthropoid animals."[141] Reproaching "Darwin's zealous successors"[142] for too hastily pronouncing human ape ancestry, it seems that he took more issue with the way Darwinian theory was interpreted and popularised than with the theory as such. Twenty years later, writing his biography, Ecker stood by this differentiation of Darwinian theory as a mere hypothesis from its advocates, stating that the latter had left the spheres of fact far behind and "become more Darwinian than Darwin."[143]

Ecker did not separate race from culture or mental capacity, when he emphasised the importance of craniology as a means to compare "the intelligence of the different races" and to investigate how the different races' brains related to different levels of intelligence. This then led to the comparison of their cultural achievements. In this respect, Ecker defined "the lowest human races" as "the most important investigation material"[144] that, to his dismay, was quickly diminishing. A few years later, shortly after the founding of the German Anthropological Society in 1870, Ecker emphasised the significance of physical anthropological over ethnological enquiry, arguing that "tribal and racial differences"[145] were scientifically evident in human skulls whose "introduced

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[137] Ibid., 4.

[138] Ibid., 3.

[139] William M. Montgomery, "Germany," in *The Comparative Reception of Darwinism*, ed. Thomas Glick (Chicago: University of Chicago Press, 1988), 8.

[140] Foerster, *Alexander Ecker*, 33.

[141] Ecker, "Bestimmung des Archivs," 3.

[142] Ibid.

[143] Ecker, *Freiburger Professoren-Familie*, 144.

[144] Ibid.

[145] Ecker, "Zwecke der Deutschen Gesellschaft," 43.

'disturbances' to the race character"[146] such as age, individuality and race mixing could be eliminated by the statistical evaluation of large series of skulls. In this context, he again emphasised the significance of the skull as a "bony container of our most important organ," lamenting that "we know nearly nothing about the brain conformation of the lowest races (Tasmanians, Australians etc.)."[147] Fearing that they soon approached extinction, he showed some relief that from their skulls "we can at least draw some approximate conclusions about the content."[148] This inferred content, in Ecker's view, shed light on "the different mental talents of the races" in their extreme manifestations exemplified by Australian Aborigines and Germans. The only reliable signifiers for intelligence were thus the stable characteristics of the human skull, in contrast to the merely "external manifestations" of the intellect in the form of cultural practices.[149] In other words, as Zimmerman has noted about the reasons that "made the skull the paradigmatic object of anthropology," Ecker stripped race skulls off their flesh, rendering them "absolutely naked, unconcealed by culture."[150]

It becomes apparent in his 1871 presentation about "the struggle for existence in nature and the life of the races"[151] that race had quite something to do with culture and civilisation, and that a specific part of Darwinist concepts of race did appeal to Ecker. He presented this paper in a public lecture shortly after the Prussian war against France, arguing in a social-Darwinist vein for the cultural and intellectual superiority of the Germans over the French in the natural "struggle of all against all".[152]

First, he elaborated on the way every species secures its existence through the overproduction of individuals of its next generation, which in turn is checked by every species' enemies following the principle: "the individuals are mortal, but the species is immortal." However, as Ecker pointed out, the second part of the sentence could not be regarded as certain "as Darwin's doctrine aims to prove;"[153] namely species could become extinct as a result of the struggle for existence, based on the natural laws of both

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[146] Ibid. See also Ecker, "Krümmung des Schädelrohres," 289n1.

[147] Ecker, "Zwecke der Deutschen Gesellschaft," 43.

[148] Ibid.

[149] Ibid., 44.

[150] Andrew Zimmerman, *Anthropology and Antihumanism in Imperial Germany* (Chicago: University of Chicago Press, 2001), 86.

[151] Alexander Ecker, *Der Kampf um's Dasein in der Natur und im Völkerleben. Ein öffentlicher Vortrag* (Konstanz: Otto Ammon, 1871).

[152] Ibid., 3.

[153] Ibid., 7.

the inheritance of characteristics and the variability of characteristics in a species' offspring and their significance for natural selection.[154]

In short, after explaining the principles of Darwinian evolution for flora and fauna, Ecker extended the principle of the struggle for existence to the human world. Accordingly, "within humanity 'natural selection' takes place, i.e. the accumulation of good characteristics is acquired in the struggle for existence."[155] He agreed, however, with Alfred Russel Wallace (1823-1913) that in the human "this selection only applies to the intellectual and moral characteristics but not the physical"[156] ones. He then elaborated on the struggle for existence between human races, arguing that it was the task of *Anthropologie* and *Ethnographie* to investigate how these natural laws applied to humanity. Natural peoples, such as Native Americans, Australian and Tasmanian Aborigines and Pacific Islanders, were the most exposed to these laws, which made them particularly vulnerable in the struggle for existence and especially enlightening for anthropological investigation. Their demise was inevitable, Ecker argued, caused by the struggle for existence between "the cultural people of the Europeans and these natural peoples."[157] The struggle was realised by the obvious consequences of colonisation – the violent competition for resources, imported illnesses and alcohol. But, "a further very important factor" was the necessity for slow evolution from the state of a natural people to that of a cultural people. This "natural law" made it impossible for the former to transform into the latter in one step. They must succumb physically and mentally, eventually only capable of "awaiting the last days of their race with fatalistic resignation." This, Ecker concluded, "we can lament infinitely, but it is a natural law that is executed with iron strictness: the mentally higher race conquers and displaces the lower standing one in the struggle for existence."[158] Eventually, he turned to the main purpose of his presentation, the portrayal of the recent German victory over France as the rightful outcome of a struggle of existence between two civilised nations that followed the same natural laws.[159]

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[154] Ibid., 8–10.
[155] Ibid.,14.
[156] Ibid.,14–15.
[157] Ibid., 17.
[158] Ibid., 20.
[159] Ibid., 20–31.

Based on this publication Ecker has only lately been labelled a "leading [pre-Nazi-] theorist of Social Darwinism and *völkisch* race ideology" whose investigation of Germanic skulls was praised by his successor, the Nazi race hygienist Eugen Fischer, as the foundation for German race science and the definition of the "Nordic race."[160] Mareen Kästner et al. have recently described Ecker as Darwinist who just as Ernst Haeckel and Hermann Schaffhausen "supported Darwin's concept of evolution."[161] Similarly, Frank Spencer has listed Ecker as one of the German Anthropological Society's "leading Darwinists" together with Karl Vogt, Karl Ludwig Büchner, Ernst Haeckel and Hermann Schaaffhausen.[162] Spencer refers to Montgomery for this information; however Montgomery does not mention Ecker in his article on German Darwinists. Nevertheless, maybe Ecker could be seen as what Montgomery has referred to as a number of German "individuals who accepted evolution without becoming Darwinists."[163]

Unlike Haeckel, Vogt and Schaaffhausen who were outspoken Darwinists, Ecker did not refer to himself as such. He credited the publication and debate of Darwin's *Origin of Species* with the revival of physical anthropological interest in Germany since Blumenbach's foundational work.[164] This is definitely true for his own physical anthropological and anatomical investigations. However, while the Social Darwinist argument seems to have appealed to him politically in relation to "the struggle for existence" among human races and nations (at a time when emotions were running high after the Franco-Prussian War and German unification only a few months earlier), he appears to have retained a cautious, non-committal, seemingly agnostic approach to the issue in his physical anthropological and anatomical researches. While the struggle-of-existence argument also seemed to "explain" the seemingly inevitable extinction of "lower races", Ecker argued in his scientific investigations either against the pivotal Darwinian argument for a genetic human-animal-relation or limited his investigation to stating the facts.

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[160] Kommission zur Überprüfung der Freiburger Straßennamen," *Abschlussbericht der Kommission zur Überprüfung der Freiburger Straßennamen*," 22. See also Frank Zimmermann, "Johann Alexander Ecker war ein Wegbereiter der nationalsozialistischen Ideologie," *Badische Zeitung* November 14, 2016. http://www.badische-zeitung.de/freiburg/johann-alexander-ecker-war-…-wegbereiter-der-nationalsozialistischen-ideologie--129789679.html (accessed September 2, 2017).

[161] Mareen Kästner et al., "The Alexander Ecker Collection in Freiburg," *Documenta Archaeobiologiae* 8 (2010): 276.

[162] Frank Spencer, "Germany," in Spencer, *History of Physical Anthropology*, 428.

[163] Montgomery, "Germany," 86.

[164] Ecker, "Zwecke der Deutschen Gesellschaft," 42; Ecker, *Freiburger Professoren-Familie*, 121.

In 1878, for example, in a study about "so called hairy humans"[165] (or *Haarmenschen,* that is, people with hypertrichosis) who were presented as sensational freaks around Europe, Ecker argued against the Darwinian explanation of unusually strong hair growth in individuals as evolutionary relapses into the animal form. Refuting the existence of such atavisms in general, Ecker regarded these people as a result of an individual formative inhibition (*Bildungshemmung*) that lead to an abnormal "continued formation of the embryonic hair into a real fur coat."[166] While acknowledging "the very plausible assumption" that the phenomenon was "an inheritance of our ancestors," he argued this interpretation "remains indeed a matter of faith; because until now we rather lack the positive facts which prove this." Also, on this occasion, Ecker dismissed what he thought was Darwin's interpretation of similarities between hair growth on human and ape arms; that is, proof for an "apish forefather."[167] He rejected this idea, arguing the same could be said about dog hair. This example shows that Ecker, besides declaring Darwinian theory unproven, explained phenomena cited by Darwinists in support of their theory as individual developmental or pathological abnormalities. As Zimmerman has shown in relation to Virchow's treatment of the Neanderthal remains as pathologically misshapen, "the most important criticisms of the monkey doctrine in German anthropology took the form of demonstrating and debunking what appeared to be evidence for the descent of humans from apes."[168] With regard to "freaks", such as the *Haarmenschen*, Zimmerman has added that "anthropologists' accounts of freaks as pathologies rather than atavisms competed with popular Darwinism that framed the shows."[169]

In 1879, Ecker published a short note on "certain residues of embryonic forms in the area of the tailbone in the unborn, newly born and adult human"[170] with a focus on

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[165] Alexander Ecker, "Ueber abnorme Behaarung des Menschen, insbesondere über die sogenannten Haarmenschen," *Globus* 33, no.2 (1778): 177.

[166] Ibid., 222.

[167] Ibid., 223. Darwin was actually more cautious about this, stating that "it must not be supposed" that the resemblance of hair growth in humans and apes, and other similarities, were "all necessarily the result of unbroken inheritance from a common progenitor, or of subsequent reversion" but were "probably due to analogous variation, which follows ... from co-descended organisms having a similar constitution, and having been acted on by like causes inducing similar modifications. With respect to the similar direction of the hair on the forearms of man and certain monkeys, as this character is common to almost all anthropomorphous apes, it may probably be attributed to inheritance; but not certainly so, as some very distinct American monkeys are thus characterised." Charles Darwin, *The Descent of Man, and Selection in Relation to Sex*, Vol 1 (London: John Murray, 1871), 194.

[168] Zimmerman, *Anthropology and Antihumanism*, 70.

[169] Ibid., 74.

[170] Alexander Ecker, "Ueber gewisse Ueberbleibsel embryonaler Formen in der Steissbeingegend beim ungeborenen, neugeborenen und erwachsenen Menschen," *Archiv für Anthropologie* 11 (1879): 281–84.

the formation of anatomical structures that resembled a tail. Ecker here made it very clear that their description as "tail" in embryos could only be based on an analogy of external appearance. Probably referring to [Haeckelian] Darwinist ideas of human ape relations, he added: "Whether this tail-shaped appendix is a phylogenetic inheritance, whether it corresponds to an ape tail; to answer this question must for the time being be left to each individual's belief."[171] In a more detailed elaboration on the topic, published a year later, he explained his choice to talk about a "tail-shaped appendix" rather than a tail, in order "to counter right from the start any accusation of tendentious naming." As he further stated, "in more harmless pre-Darwinian times" this would not have been an issue; however, "after the great Fall one has to weigh up one's words more, in particular because the great swarm of popular presenters of the new theory throw themselves with great desire into anatomical facts that could serve their means."[172]

With regard to the interpretation of the "tail question," Ecker claimed to be "quite cool" about the matter and acknowledged that it depended on the interpreters' point of view. He advised it should be left to "every one's taste" whether to follow von Baer's concept of a generalised embryonic development or "to voice that the higher forms indeed evolve from the lower" forms and that individual development merely repeated a species' evolution. At this point, Ecker struck a different tone, which makes him appear somewhat irritated by a certain kind of anti-Darwinian sentiment that obliged him to be so cautious about his choice of words: "However, I cannot sufficiently understand, why nobody takes offence to accept that the human embryo presents gills in its skeletal structure, but then resists to call the tail-shaped appendix a tail. ... It seems that it is only the close relatives, that embarrass the elevated cousin; he is not ashamed of his distant [cousins]. I should think, though, that if the moral teacher willingly accepts that the human carries the beast *within* ... then we natural scientists should not be even more embarrassed and acknowledge that he also carries [the beast] *on* him"[173] (original emphasis). Despite this acknowledgement of the possibility of Darwinian ape cousins, Ecker never outright interpreted anatomical features in this way.

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[171] Ibid., 284.

[172] Alexander Ecker, "Der Steisshaarwirbel (vertex coccygeus), die Steissbeinglatze (glabella coccygea) und das Steissbeingrübchen (foveola coccygea), wahrscheinlich Ueberbleibsel embryonaler Formen in der Steissbeingegend beim ungeborenen, neugeborenen und erwachsenen Menschen," *Archiv für Anthropologie* 12 (1880): 142.

[173] Ibid., 144.

Ecker argued in a similar vein a year later in a German popular science journal, exploring the question whether humans and apes should be considered two-handed or if this category should be reserved for the human species. In short, he argued on morphological and physiological grounds against "Huxley and the strictly Darwinian school"[174] that "only Man has hand and foot."[175] But, while he again labelled the Darwinian debate as "tendentious" and invited his readers to make up their own mind about the pro and contra of the different views, he also referred to apes as "this pestering relation, that is already beginning to be embarrassing to many."[176]

5.3 Ecker's subsequent utilisation of Australian Aboriginal skeletal remains

Female skulls, Germanic and Australian

In 1866, Ecker aimed to raise awareness of a "characteristic peculiarity in the form of the female skull" in order to eliminate individual characteristics from the interpretation of the human races' "typical skull shapes."[177] Especially for "researches of comparative and historical anthropology"[178] (that is, in later terminology, physical anthropology and prehistory), it seemed important to recognise the "influences of the sex" on the "modification" of human skulls. Ecker contended that the female skull was more childlike in a variety of characteristics, such as its bigger size in relation to the body or its facial oval shape and relative smallness to the brain case. The female "peculiarity" that Ecker made out in the female skull related to the "lesser height of the braincase"[179] in combination with its "greater flatness of the skull cap," especially at the front. This resulted in a relatively square angle between the female skull roof and its (again childlike) "perpendicu-

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[174] Alexander Ecker, "Hand und Fuß des Menschen," *Westermanns Jahrbuch der Illustrierten Deutschen Monatshefte* 50 (1881): 91.

[175] Ibid., 227.

[176] Ibid., 92.

[177] Alexander Ecker, "Ueber eine charakteristische Eigenthümlichkeit in der Form des weiblichen Schädels und deren Bedeutung für die vergleichende Anthropologie," *Archiv für Anthropologie* 1 (1866): 81. See also Alexander Ecker, "On a Characteristic Peculiarity in the Form of the Female Skull, and Its Significance for Comparative Anthropology," *Anthropological Review* 6, no. 23 (October 1868): 350. I have translated Ecker's *Volkes oder Stammes* as "human races" because even though early German physical anthropologists often verbally distanced themselves from the term "race" to describe distinct human groups, that was, in reality, exactly what they meant and did. Note that in the English translation the references to typical race skulls was omitted. As Honorary Fellow of the Anthropological Society of London, Ecker possibly translated the paper himself.

[178] Ecker, "Eigenthümlichkeit des weiblichen Schädels," 88.

[179] Ibid., 83.

lar position" of the forehead. This, in Ecker's view, elevated the female skull in Camperian terms to a "higher rank"[180] than the male, explaining the "noble"[181] beauty of the (naturally, European) female skull.

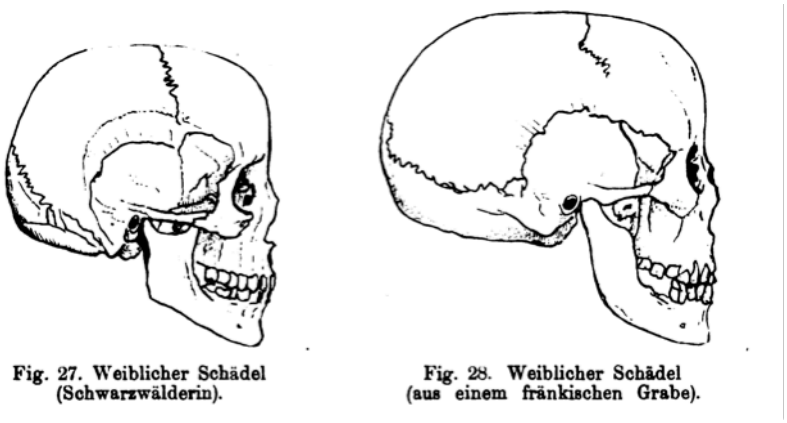

Figure 10 Ecker's beautiful German skulls (modern and ancient)[182]

Ecker found these peculiarities in his investigations of contemporary and ancient German skulls. In the context of the skullcaps' conformation, he noticed that the men of Germanic populations (dating, according to Ecker's estimation, from the fifth to the eighth centuries[183]) presented a relatively well-defined crest, running centrally from the front to the back of the skull. He had come across this feature five years earlier during his investigation of the Australian Aboriginal skeletons, when he noted that "the roof-shaped form of the skull cap is characteristic for the [Australian] skull."[184] (As I have cited earlier, Ludwig Becker, too, confirmed the "pyramidal shape" of the skullcap as a race characteristic.[185]) The crest on Ecker's female *Australier* skullcap, however, was "not as sharply marked"[186] as that of the young man. Remembering this, he assumed that this difference in skull shape signified a "constant difference of the sexes" that occurred in "the races which have a particularly well-developed sagittal crest."[187]

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[180] Ibid.

[181] Ibid., 84.

[182] Ibid., 86.

[183] Chris Manias, *Race, Science, and the Nation. Reconstructing the Ancient Past in Britain, France and Germany* (New York: Routledge, 2013), 132.

[184] Ecker, "Kenntnis der Eingebornen Südaustraliens," 347.

[185] Select Committee of the Legislative Council, Victoria, *Report on the Aborigines*, 88.

[186] Ecker, "Kenntnis der Eingebornen Südaustraliens," 358.

[187] Ecker, "Eigenthümlichkeit des weiblichen Schädels," 84.

Es wäre sehr interessant, zu erfahren, ob bei Raçen, bei welchen der sagittale Kamm besonders entwickelt ist, sich in dieser Beziehung ein constanter Geschlechtsunterschied findet. Ich möchte dies fast vermuthen; unser Museum besitzt zwei Skelette von Eingeborenen Südaustraliens, aus der Gegend des Murray-river, ein männliches und weibliches, die ich der Gefälligkeit eines früheren Schülers, des Dr. Vogt in Greenock (Südaustralien) verdanke. Beide gehörten jungen Personen ungefähr des gleichen Alters an. Der Schädel des Mannes besitzt eine sehr ausgeprägte sagittale Erhebung, während diese beim weiblichen Schädel fast ganz fehlt. Es schliesst sich dies an die bekannte Thatsache, dass der weibliche Gorilla-Schädel sich vom männlichen gerade durch die Abwesenheit des Kammes auszeichnet und an mehrere andere analoge an.

A. Fig. 26. B.

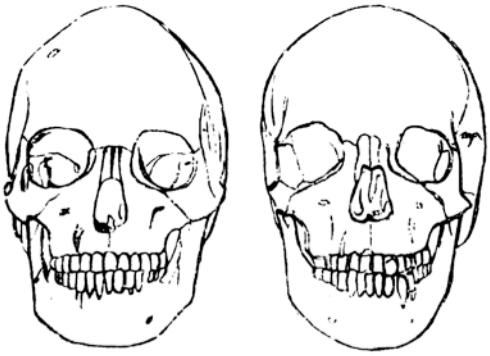

Fig. 26. Schädel von Eingeborenen Südaustraliens. Mann. Weib.

Figure 11 Ecker's cranial crests in male and female "Natives of South Australia"[188]

He exemplified the male "very pronounced" and the female "nearly wanting" crest feature with the skulls of "two young persons of approximately the same age" from the South Australian Murray River, and proceeded to link this without further explanation to ape anatomy: "This is connected, among other analogues, to the well-known fact that the female gorilla skull is distinguished from the male precisely by the absence of the crest."[189] Thus, this cranial feature, in Ecker's opinion, signified some sort of apishness in Australian Aboriginal women as representatives of the "lower races" whereas it contributed to the "noble" perpendicular facial profile of European (or rather, German) women.

Ecker's reference to ancient Germanic skulls points to one of his main interest in *Anthropologie*, namely its prehistoric and paleo-anthropological division which combined the scientific investigation of ancient human physical remains and prehistoric cultural evidence. In 1870, Ecker presented his definition of *Anthropologie* to the members of the German Anthropological Society, in an extended version of his 1866 introduction to the *Archiv für Anthropologie*. But he now exemplified the "lower races" with Australia's indigenous inhabitants, linking them to Europe's prehistoric population. Agree-

[188] Ibid. Compared to Ecker's 1861 depiction of the young Australian Aboriginal man's skeleton and skull, shown in this thesis in figure 7 [Taf. V., Fig. 2.], it appears he used the same skull or drawing for the above illustration (figure 11). The depiction representing the female skull, however, appears to be from the second skeleton sent to Ecker by Vogt – unless he had meddled with the woman's age and the extent of her sagittal crest.

[189] Ibid.

ing with Charles Lyell's and Charles Darwin's idea that both the earth and its organisms had undergone continuous developments throughout vast periods of time, Ecker conjured an image of Europe's past inhabitants that drew parallels to the characteristics of the *Naturvölker*, predominantly the *Australier*. He regarded Cuvier's catastrophism hypothesis as out-dated and therefore accepted that humans had existed alongside now extinct animals.[190] These European prehistoric humans were "wretched savages of the Stone Age"[191] which had "continuously worked [their] way upwards throughout a long childhood and in a harsh struggle for existence, from the stage of the most barbarous savage that we can today still find in the Australians and the Fuegians to today's civilisation."[192]

The notion of Europe's origin from "barbaric savages" hardly discomforted Ecker. Rather than finding it "humiliating" to have emerged from an existence that was "not better, perhaps even worse than the natives of Australia – upon whom we look down, if not with disdain but nevertheless with pity," modern Europeans should see their trajectory as a sign of continuing human progress and achievement. This was an argument against contemporaneous theories of human degeneration, according to which some human races had degenerated throughout time from a (more) perfect to a lesser state of civilisation. Ecker found it inconceivable that humans should have forgotten the knowledge and skills of culture once they had acquired them. The theory that "the savage is just a human gone feral" was simply disproven by the lack of civilisation in the *Naturvölker*: "It is quite clear that what is valid for the savages of the primeval times must also apply to today's [savages], and if the Negros, Australians and so on were degenerated savages, traces of a former culture would have to be discoverable in their lands. But that is not the case."[193]

These passages show that Ecker saw Australian Aborigines as living representatives of the European Stone Age. On the basis of cultural evidence, he portrayed them (at times in conjunction with Africans and "Fuegians") as having remained in the same "poor state of existence" as their prehistoric European counterparts. Although Ecker here employed the Darwinian terminology of the struggle for existence, he did so in a purely cultural-environmental context. Prehistoric Europeans had emerged from their

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[190] Ecker, "Zwecke der Deutschen Gesellschaft," 50–51.
[191] Ibid., 50.
[192] Ibid., 51.
[193] Ibid., 52.

original savage state of existence on the basis of their "genius" which allowed them to acquire the knowledge and tools necessary to achieve what the human "was destined for, to become the master of the creation surrounding him."[194] In light of Ecker's earlier elaborations about racial intelligence, the *Australier*'s brain seemed just not capable of creating civilisation.

Prehistoric tibias

In the same year, there occurred the debate between the physical anthropologists Paul Broca (1824-1880) and Franz Ignaz Pruner-Bey (1808-1882) about the recent discovery of prehistoric human bones in France. The Cro-Magnon skeletal remains of five humans were discovered in 1868 among fossil animal remains and prehistoric artifacts, proving the co-existence of humans with these extinct animals. Their interpretation as a long-headed human race eventually replaced theories of the displacement of originally broad headed European races by longheaded Asians.[195] While it is beyond the scope of this thesis to go into further detail on the contemporary debate of these hominid fossils, Ecker's intervention sheds additional light onto his utilisation of Australian Aboriginal skeletal remains. In summary, he agreed with the French eminent anthropologist Broca who thought the Cro-Magnon remains belonged to a hitherto unknown human race that presented "a peculiar combination of high and low characteristics." Their "attributes of a higher position" included a big skull with strongly developed forehead and straight upper facial profiles, which indicated advanced brain functions, whereas protruding lower jaws with strong bones "point[ed] to a savage, violent and barbarous race."[196] The lower extremities presented similarly contradicting characteristics. According to Broca, these ambiguities placed the Cro-Magnon humans between "the savage races and the anthropomorphic apes."[197]

Ecker was particularly interested in the interpretation of their tibias. According to Broca, in cross section the Cro-Magnon tibias (like those of previously discovered prehistoric human skeletal remains) had a more elliptical shape than modern human triangular shinbones.

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[194] Ibid.

[195] Alexander Ecker, "Die Höhlenbewohner der Rennthierzeit von les Eyzies," *Archiv für Anthropologie* 4 (1870): 109; Fred Smith and Frank Spencer, "Cro-Magnon," in Spencer, *History of Physical Anthropology*, 298–301.

[196] Ecker, "Höhlenbewohner der Rennthierzeit," 118.

[197] Ibid., 117.

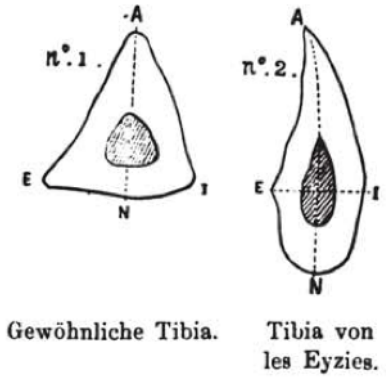

Figure 12 **Ecker's "normal tibia" (triangular) and elliptical Cro-Magnon tibia**[198]

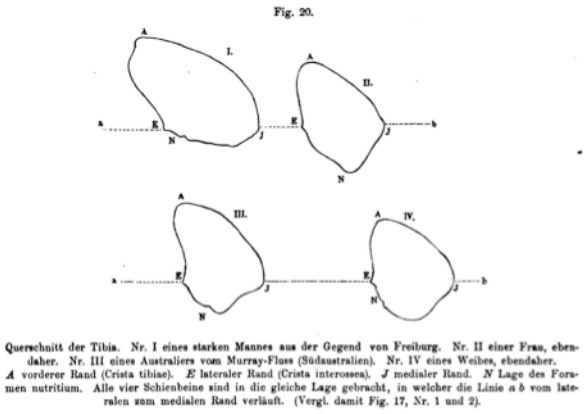

Figure 13 **Ecker's less elliptical German and more triangular *Australier* tibias**[199]

Thereby they approximated those of great apes.[200] Pruner-Bey dismissed Broca's race classification, arguing the tibias were merely distorted by rickets.[201] Agreeing with Broca that the tibias were not rachitic, Ecker at the same time questioned the juxtaposition of triangular and elliptical shinbones. His own comparison of German with Australian Aboriginal tibias, he argued, showed that there existed both shapes and all sorts of transitions in between. The shinbone cross-sections of a "strong" man and a woman from Freiburg were more similar to those of the ancient humans than those of the male and female *Australier* from the Murray River: "Therefore it is at least possible that the respective divergences in form are at least in part individual, and therefore it is advisable

[198] Ibid.
[199] Ibid., 122.
[200] Ibid., 117–18, 121.
[201] Ibid., 119.

to await further finds [of prehistoric skeletal remains]."[202] In other words, reversing the common logic behind contemporaneous physical anthropological interpretation, the shinbones of the low race of the *Australier* could not be regarded as a race trait because they were both less prehistoric and less apish than European shinbones. With regard to the race classification of the Cro-Magnon skeletal remains, Ecker remained cautious. Resorting to his solution for all problems of skeletal and racial ambiguity, he suggested limiting the investigation to their description.

Torus Occipitalis transversus

In 1878, Ecker examined a bulge at the lower back of the skull (which he labelled *Torus occipitalis transversus*) with special attention to its occurrence and development in "non-European race skulls."[203] This work responded to an investigation by the Göttingen anatomist Friedrich Sigmund Merkel (1845-1919) who had drawn attention to a "typical, constantly recurring feature"[204] in a number of "lower standing human races,"[205] namely *Papua, Neuholländer* (probably Blumenbach's[206]), *Kaffern*, *Congoneger* and some "American tribes."[207] While the bulge appeared less developed in *Malayen* and South Sea Islander skulls,[208] Merkel rarely found it on the skulls of "genuine Negroes," and the "Asiatic and European races."[209] Stating that gorillas, orang-utans and chimpanzees presented a similar bulge, he suggested in a Darwinian vein a hierarchical series of evolutionary development.[210] Accordingly, apes and *Urmenschen*[211] (original

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[202] Ibid., 121.

[203] Alexander Ecker, "Ueber den queren Hinterhauptswulst (Torus occipitalis transversus) am Schädel aussereuropäischer Völker," *Archiv für Anthropologie* 10 (1878): 117.

[204] Friedrich Merkel, *Die Linea Nuchae Suprema. Anatomisch und anthropologisch betrachtet* (Leipzig: Wilhelm Engelmann, 1871), 16.

[205] Ibid.

[206] Merkel investigated skulls held in the anatomical and anthropological collections in Munich and the Göttingen anatomical institute, where he worked at the time. Ibid., iii–iv. He stated that most of the *Neuholländer* skulls were in a "bad state" making the determination of the bulge difficult. Ibid., 17n4.

[207] Ibid., 16.

[208] Ibid.

[209] Ibid., 17–18.

[210] Although Merkel did not refer directly to Darwin's theory, his interpretation clearly reverberated Darwinian evolutionary mechanisms. His reference to the occurrence of the "original, strongly prominent bulge" in its "ur-form" as a "stepping backwards metamorphosis" also suggests his Darwinian approach, (although he does not use the term "atavism" commonly used by outspoken Darwinists for the phenomenon of reoccurring animal traits). Similarly, Merkel's lament that there existed a lack of "very ancient human remains" and his conclusive call for the "detailed examination of a sufficient number of skulls from the different developmental stages of the humankind" point to his Darwinian evolutionary interpretation of human skulls. Ibid., 19–20.

[211] Ibid., 19.

humans) presented the bulge's "tremendous"[212] *Urform*,[213] which was created by their strong animal musculature. Eventually the bulge was diminished at its "highest stage of development"[214] by an increase in *Cultur*.[215] The "most human acquisition"[216] of the rear skull was evident in Europeans by two parallel, narrow bony lines. Represented by Blumenbach's Caucasian skull, these diversified connection points enabled the neck musculature to perform more fine-tuned movements than their animal forebears. It seems that Merkel followed a model of racial degeneration, as he claimed the occurrence of the bulge pointed to a "retrograde metamorphosis" into the *Urform*.[217]

Ecker found the bulge in a variety of skulls belonging to those human groups investigated by Merkel, among them some "American races," *Australier*, Fijians, *Papuas* (including Torres Strait Islanders and one he suspected to be Tasmanian), Asians and Africans. Similar to his colleague, he found that the feature was most prominent in Native American, Australian Aboriginal and Fiji Islander skulls in contrast to "its wanting or less prominence in the remaining races, even – as e.g. among the Negros – in skulls with in other respects quite low standing form."[218] Ecker regarded the bulge neither as related to individual nor sexual formations but as a "race peculiarity ... that possibly has a deeper cause"[219] because it occurred in both sexes in his American and Australian samples – although, as it appears, these were also the only skeletal remains samples that actually contained female skulls: Among his *Australier* skeletons and skulls were the only confirmed female skeletal remains, whereas he defined four of his American skulls as belonging to women because they were smaller and the rest of his "race skulls" seemed to have belonged to men.[220]

Consistent with his rejection of Darwinian evolutionary schemes of human ape descent, Ecker declined to engage with Merkel's link between ape and human characteristics, stating this "would distract [him] too far from the given task."[221] But he, cautiously,

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[212] Ibid., 18.
[213] Ibid., 20.
[214] Ibid., 19.
[215] Ibid., 18.
[216] Ibid., 19.
[217] Ibid.
[218] Ecker, "Hinterhauptswulst," 121.
[219] Ibid.
[220] Ibid., 117.
[221] Ibid., 122.

pointed to the "greater significance" of the feature, if it could be confirmed that it only occurred in "so-called lower races." Ecker emphasised the internal rather than external forces that created the bulge. Instead of strong neck and back musculature, he suggested the bulge had been created by a stronger and more pointed shape of the rear brain lobe, indicated in particular by his "Australier-Nr. 1" (although another of these skulls indicated no such correlation). Until further evidence emerged from the future investigation of sufficient numbers of the "skulls and brain casts of the lower races,"[222] Ecker remained satisfied to merely draw attention to the issue.

Chapter Conclusion

Ecker was a prominent first generation, liberal, physical anthropologist. He made significant contributions to the establishment of *Anthropologie* as an independent discipline, emphasising its natural scientific approach. His commitment to empirical-inductive methodology not only caused him to criticise Darwin's theory as speculative hypothesis but also led him to claim that he merely gathered the physical facts without drawing wider conclusions from his physical anthropological investigations. Ecker's utilisation of Australian Aboriginal remains, however, shows that already existing notions of their lowliness penetrated his anthropological research. Although Ecker in his 1861 investigation refrained from providing interpretations of his measurements, these notions become apparent through his frame of reference that invoked ape analogies for "lower races" as represented by Africans and Australians.

Whereas his view of Darwinian theory does not feature in this first physical anthropological investigation, Ecker throughout his life engaged with the debate. His approach seems to have changed over time, from distancing anthropological research by default from Darwinian evolution as a hypothetical concept to accepting specific parts of the theory. The concept of a struggle for existence appears to have appealed to him, in particular when applied to the realms of "vanishing lower races". He continuously rejected both academic and popular scientific attempts of "zealous Darwinists" to establish a genetic relation between humans and apes. Although Ecker in later years also, at times, referred to apes as humanity's "cousins", he never referred to himself as a follower of Darwinian evolutionary theory. While he pointed out, that different interpretations of particular anatomical features were possible (according to the interpreter's theoretical

[222] Ibid.

affiliation), he tended to opt for the pathological or individual explanation in publications – especially in publications that were directed at a natural scientific audience. His utilisation of Australian Aboriginal skeletal remains in some of this anatomical research after 1861 shows that he remained within the paradigm of assigning Australia's indigenous people a low stage within the commonly assumed hierarchy of human races.

6 Gustav Lucae's *Australneger*

Simultaneously with Ecker, another leading figure in German *Anthropologie,* Johann Christian Gustav Lucae (1814-1885), undertook research on Australian Aboriginal skeletal remains. He was a prolific member of the Frankfurt scientific society, the Senckenbergische Naturforschende Gesellschaft (from hereon referred to as Senckenberg Society), in whose proceedings he published many of his physical anthropological and comparative anatomical studies. His research included pathology, zoology, ethnography, morphology and physical anthropology.[1] Praised by Virchow posthumously for his "arduous and astute studies of detail,"[2] the anti-Darwinian Lucae is remembered mainly as the inventor of a geometric drawing device, the *Lucae'scher Orthograph*.[3] He introduced the apparatus to German anthropologically interested scientists in two publications.

After illustrating the significance of Lucae's drawing device, I shall investigate Lucae's reference and/or utilisation of Australian Aboriginal skulls in these two publications. In 1844, he referred twice to Australian Aborigines. First, he used available information about the *Neuholländer* to classify the skulls of a *Javanese* and a *Papu*; and second, Lucae included Australian Aboriginal skulls (and plaster casts thereof) in an investigation about the possible link between head symmetry and race. By 1861, the Senckenberg Society had received the skulls of six Australian Aborigines, which Lucae used to demonstrate his drawing apparatus and to promote new ways of anthropological measurement and its interpretation, especially with a view to the facial angle.

I argue that Lucae, a prominent first generation German physical anthropologist with strong anti-Darwinian convictions, drew on existing ideas about supposedly higher and lower human races. In his earlier publication, he reiterated statements about the alleged savage nature and low stage of Australian Aborigines, based on the descriptions published in the then latest contemporary French travel narrative, Jules-Sébastien-César

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[1] Julius Pagel, "Lucae, Johann Christian Gustav," in *Allgemeine Deutsche Biographie*, ed. Historische Kommission bei der Bayrischen Akademie der Wissenschaften 52 (1906): 111.

[2] Rudolf Virchow, "[Obituary] Gustav Lucae," *Zeitschrift für Ethnologie* 17 (1885): Sitzung vom 21. Februar, 54.

[3] Christine Hanke, *Zwischen Auflösung und Fixierung. Zur Konstitution von 'Rasse' und 'Geschlecht' in der physischen Anthropologie um 1900* (Bielefeld: Transcript, 2007), 241n, 298.

Dumont d'Urville's *Voyage de la corvette l'Astrolabe exécuté pendant les années 1826-1827-1828-1829*, published in the early 1830s[4]. In 1861, in his explanation of his drawing device, Lucae chose Australian Aboriginal skulls as representations for the cranial conformation of "lower" races.

6.1 Projecting the skull's "truth and reality"

Developed with the aim to objectively project three-dimensional physical objects onto flat paper, the Lucaesian apparatus was one of a variety of drawing devices constructed by anatomists and artists for the purpose of creating geometrical, rather than perspectival, representations of bodies.[5] As I have already mentioned, Lucae demonstrated the apparatus at the Göttingen Meeting, which was concerned with the discussion of measurement techniques and their standardisation. He saw his invention as a way to transform "ethnographic craniology"[6] into a natural science discipline that would progress beyond Blumenbach's and Camper's merely descriptive insights.[7] According to Lucae, the non-standardised skull measurement of both the exterior (with, for example, callipers) and the interior (by means of filling it with liquids or grains)[8] were imprecise and unsuitable for comparative investigation. Rather than stating "strict scientific"[9] facts, these methods merely reiterated assumption-based generalisations and untested opinions.[10] For the "safe foundation"[11] of proper physical anthropological science, Lucae claimed, his apparatus democratised anthropological practice by providing a simple drawing method that (through the publication of its images) would enable access to the

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[4] Jules-Sébastien-César Dumont d'Urville, *Voyage de la corvette l'Astrolabe exécuté pendant les années 1826-1827-1828-1829 sous le commandement de J. Dumont d'Urville* (Paris: J. Tastu, 1830-1834).

[5] Hanke, *Zwischen Auflösung und Fixierung*, 191, 192. On the mechanism of Lucaesian geometrical drawing and the debate regarding geometrical versus perspectival projection see Andrew Zimmerman, *Anthropology and Antihumanism in Imperial Germany* (Chicago: University of Chicago Press, 2001), 99–107; Andrew Zimmerman, "Looking Beyond History. The Optics of German Anthropology and the Critique of Humanism," *Studies in History and Philosophy of Biological and Biomedical Sciences* 32, no.3 (2001): 385–411. Lucae referred to a legacy of drawing devices developed by, among others, Samuel Morton, Samuel Thomas Soemmerring, Gustav Carus and Peter Camper. Johann Christian Gustav Lucae, "Geometrische Abbildungen interessanter Schädel," in *Zur organischen Formenlehre* (Frankfurt: Frank Varrentrap, 1845), 29–30.

[6] Johann Christian Gustav Lucae, "Zur Morphologie der Rassen-Schädel. Einleitende Bemerkungen und Beiträge. Ein Sendschreiben an ... den Akademiker Carl Ernst v. Baer in St. Petersburg," *Abhandlungen der Senckenbergischen Gesellschaft, Frankfurt am Main* 3 (1861): 499.

[7] Ibid., 504.

[8] Ibid., 502–3.

[9] Ibid., 499.

[10] Ibid., 500.

[11] Ibid., 499.

cranial data stored in the collections throughout Germany. More importantly, it was supposed to generate drawings that made "the truth and the reality"[12] of skull and brain characteristics measurable and comparable.

As Christine Hanke has pointed out, the application of drawing machines for the construction of "objectivity" in racial science, such as Lucae's, enabled anthropologists to project a multitude of angles and other geometrical lines from the skull onto paper.[13] Thereby, they created geometrical relations between a variety of defined morphological reference points of the skull – as Hanke has put it: "through these procedures morphology is geometricised."[14] For example, drawings of skull profiles created in this way were used to determine facial angles signifying "strong hierarchisations of humans, animals and different 'races'"[15] that were developed from and went far beyond Camper's aesthetically racialising categorisations.[16] Such an apparatus's "dictum of mechanical objectivity"[17] validated its operator's claim to generate truly scientific representations of the study object.[18] This supposed objectivity was, however, often achieved through manipulative intervention by, for example, the shifting of reference points; especially, when the two-dimensional projection of the skull failed to represent pre-existing assumptions and agreements about race morphology. Hanke has shown, by the example of the projection of chin profiles, how physical anthropologists at times used different vertical lines to achieve the "right" projection of the chin shape. As she has critically explained, "this 'manipulation' is undertaken in the services of anthropological truth .... The (mechanical) visualisation thus does not 'by itself' depict the true expression of the body but must be changed by correctives."[19] As a result, "according to the configuration and ordering of the different elements of such graphical visualisations, quite different things can be made visible and existent/evident."[20]

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[12] Ibid., 521.

[13] Hanke, *Zwischen Auflösung und Fixierung*, 192. See also Zimmerman, *Anthropology and Antihumanism*, 100–6.

[14] Hanke, *Zwischen Auflösung und Fixierung*, 193.

[15] Ibid.

[16] Ibid. Lucae in fact regarded his apparatus as an improved means to achieve geometrical anatomical depiction as demanded by "the genial Camper." Lucae, "Morphologie der Rassen-Schädel," 488. See also Johann Christian Gustav Lucae, *Zur organischen Formenlehre* (Frankfurt: Frank Varrentrap, 1845), Vorwort.

[17] Hanke, *Zwischen Auflösung und Fixierung*, 192.

[18] Ibid.

[19] Ibid., 198.

[20] Ibid., 201.

Lucae introduced a largely unnoticed version of his invention in 1844,[21] claiming it "shall by means of exact and thorough depiction fulfil all of science's demands."[22] His 1861 explication of an altered apparatus was published in the context of von Baer's attempts to initiate the "joint handling of ethnographic craniology,"[23] becoming von Baer's final incentive to instigate the Göttingen Meeting.[24] The apparatus initially generated controversy in the nascent anthropological community, but it was eventually agreed upon as the standard drawing device in the early 1870s.[25] Ecker, for example, used it for the depiction of "Australier-Nr. 1" in his investigation of the rear skull bulge referred to in the previous chapter.[26] In this context, Zimmerman has convincingly analysed the Lucaesian apparatus as an important step in the antihumanist establishment of *Anthropologie*. Firstly, the eventual agreement on its use for the purpose of methodological standardisation was required for the unification of the German physical anthropological community. Secondly, the apparatus's geometric, that is, "perspectiveless vision,"[27] enabled German anthropologists to rid themselves of the historicist subjectivity they rejected in the humanist tradition and, therefore, to regard themselves as objective operators of natural science.[28] However, as Zimmerman has stated, rather than "really achieving objectivity," the founders of German physical anthropology gained from the Lucaesian apparatus merely "a particular optic effect" which they equated with (natural scientific) truth.[29]

Lucae's two explications of his drawing device aimed at representing such truths, not only about its utility but also the depicted object. They also exemplify the shift that

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[21] Lucae, "Morphologie der Rassen-Schädel," 493.

[22] Lucae, *Zur organischen Formenlehre*, Vorwort.

[23] Lucae, "Morphologie der Rassen-Schädel," 483.

[24] Karl Ernst von Baer and Rudolph Wagner, *Bericht über die Zusammenkunft einiger Anthropologen im September 1861 in Göttingen zum Zwecke gemeinsamer Besprechungen* (Leipzig: Leopold Voss, 1861), 7. See also Helmke Schierhorn, "Der Briefwechsel zwischen Karl Ernst von Baer (1792-1876) und Johann Christian Gustav Lucae (1814-1885)," *Gegenbaur's Morphologisches Jahrbuch* 123, no. 3 (1977): 360–64.

[25] Zimmerman, *Anthropology and Antihumanism*, 100. See also p. 104; Uwe Hoßfeld, *Geschichte der biologischen Anthropologie: Von den Anfängen bis in die Nachkriegszeit* (Stuttgart: Franz Steiner Verlag, 2005), 172.

[26] Alexander Ecker, "Ueber den queren Hinterhauptswulst (Torus occipitalis transversus) am Schädel aussereuropäischer Völker," *Archiv für Anthropologie* 10 (1878): 119n1. He also used the apparatus in another investigation of African skulls. Alexander Ecker, "Ueber die verschiedene Krümmung des Schädelrohres und über die Stellung des Schädels auf der Wirbelsäule beim Neger und beim Europäer," *Archiv für Anthropologie* 4 (1870): 311 (Erklärung der Tafeln 2 und 3).

[27] Zimmerman, *Anthropology and Antihumanism*, 106.

[28] Ibid., 105–6.

[29] Ibid., 105.

occurred in physical anthropological practice and methodology between their publication dates: from the descriptive, travel-narrative based representation of Australian Aborigines at the German Naturalists Association conventions to the utilisation of their skulls and bones for natural scientific physical anthropology.

6.2 Lucae's *Neuholländer* skulls and (a)symmetrical heads (1844)

In 1844, Lucae published a collection of three morphological studies, titled *Zur organischen Formenlehre*[30] (On organic morphology), the last two of which were based on his drawing method. In the second chapter, he demonstrated his apparatus, providing "geometrical depictions of interesting skulls."[31] These included the skulls of two representatives of German civilisation – namely, the "poetic genius" Johann Jacob Wilhelm Heinse (1749-1803) and the "excellent surgeon" and anatomist Christian Heinrich Bünger (1782-1842)[32] – and a *Chinese*, a *Grönländer*, a *Neger*, a *Nubier*, a *Javanese*, an "inhabitant of the Island Floris" and a *Papu*. This selection reflected largely Blumenbach's five varieties by two cranial representatives each (except for the three originating from the continually racially confusing South Seas). For the identification of the *Papu* skull Lucae referred to information about Australian Aborigines available to him at the time; that is, the recently devised classification of the South Sea's populations by Jules-Sébastien-César Dumont d'Urville (1770-1842) whose division of the Pacific into Polynesia, Melanesia and Micronesia has survived to this day.[33]

According to the narrative of the famous French explorer (as delineated by Lucae), the South Seas were inhabited by two main races; the first exhibited light skin colour, pleasant bodies and faces and was civilised to the degree that nations or monarchies were formed. This race was subdivided into Polynesians, Micronesians and Malays, ex-

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[30] Johann Christian Gustav Lucae, *Zur organischen Formenlehre* (Frankfurt: Frank Varrentrap, 1845).

[31] Johann Christian Gustav Lucae, "Geometrische Abbildungen interessanter Schädel," in *Zur organischen Formenlehre*, 28–47.

[32] On the inclusion of Heinse's skull into hagiographical celebrations of famous people see Michael Hagner, "Skulls, Brains, and Memorial Culture: On Cerebral Biographies of Scientists in the Nineteenth Century," *Science in Context* 16, no. 1/2 (2003): 195–218. Heinse was a friend of Soemmerring, who exhibited the skull next to his poetry collection in his library. Sünne Juterczenka, "'Chamber Moors' and Court Physicians. On the Convergence of Aesthetic Consumption and Racial Anthropology at Eighteenth-Century Courts in Germany," in *Entangled Knowledge. Scientific Discourse and Cultural Difference,* ed. Klaus Hock and Gesa Mackenthun (Münster: Waxmann Verlag, 201), 172.

[33] On Dumont d'Urville's racial categorisation of Oceanians see Bronwen Douglas, "Foreign Bodies in Oceania," in *Foreign Bodies: Oceania and the Sciences of Race 1750-1940*, ed. Bronwen Douglas and Chris Ballard (Canberra: ANU Press, 2008), 9.

isting in varying degrees of amicability and civilisation. The second race consisted of Dumont d'Urville's fourth sub-category, the "sooty-coloured" uncivilised Melanesians. They were "barbarians" with "unpleasant" faces, "disproportionate limbs" and mental capacities that were "immeasurably" far removed from those of all other Pacific islanders. Inhabiting a number of islands including New Guinea, their "actual core" was found in New Holland.[34] Dumont d'Urville differentiated the New Guinean representatives of this race into further three classes: *Papus* had the most pleasant features and lived along the coast. They were governed by the small group of more civilised (but also uglier) *Mestizen,* made up from a mix of *Papus* and *Malaien*. The "worst"[35] and "savage"[36] original inhabitants of New Guinea were the *Harfurs* (or *Alfurus*[37]) that most resembled Dumont d'Urville's "genuine type of the Australian and New Caledonian."[38]

Despite these categorisations, Lucae remained indecisive about the classification of his *Papu* skull (figure 14). He thought the skull was "marked by its animal shape" and, while it reminded him "surely and lively … of the orang-utan," Lucae also described the head as "beautifully symmetrical."[39]

Figure 14 Lucae's *Papu* skull – *Mestize* or *Harfur*?[40]

[34] Lucae, "Geometrische Abbildungen interessanter Schädel," 43–44.
[35] Ibid., 47. These are my translations of Lucae's German translations of d'Urville's French descriptions.
[36] Ibid.
[37] Lucae, "Morphologie der Rassen-Schädel," 535.
[38] Lucae, "Geometrische Abbildungen interessanter Schädel," 47.
[39] Ibid., 46.
[40] Ibid., plate xi.

Comparing it to the illustrations of living New Guineans, published in Dumont d'Urville's *Atlas Historique 1* (figures 15 and 16), he found that, rather than belonging to a "genuine *Papu*,"[41] the skull was that of a *Mestizen*, or "maybe even more so a *Harfur*'s."[42] He supported this assumption by likening the skull to the heads of the indigenous inhabitants encountered by the Frenchmen on the southern coasts of Western and Eastern Australia. On the other hand, Lucae thought, the skull had little resemblance with Blumenbach's two drawings of *Neuholländer* skulls from Botany Bay.[43]

Figure 15 Dumont d'Urville's "Mokoré" (King Georges Sound)[44]

Figure 16 Dumont d'Urville's "Djacamel" (Jervis Bay)[45]

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[41] Ibid., 47.

[42] Ibid.

[43] Ibid.

[44] Jules-Sébastien-César Dumont d'Urville, *Voyage de la corvette l'Astrolabe exécuté pendant les années 1826-1827-1828-1829 sous le commandement de J. Dumont d'Urville, Atlas historique 1* (Paris: J. Tastu, 1833), plate viii (detail: figure 6).

[45] Ibid., plate xii (detail: figure 7).

Figure 17 **Blumenbach's *Novo-Hollandi*[46]**

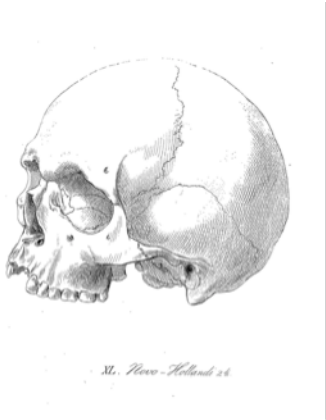

Figure 18 **Blumenbach's *Novo-Hollandi 2di*[47]**

It must be noted that, unlike the first part of Lucae's 1844 publication, the other two parts were purely textual. They did not contain any depictions of skulls. Lucae did not provide the above images for comparison, possibly because, by his own standards, they were not comparable with the "very true geometrical contours"[48] he aimed to achieve with his apparatus. Firstly, the engravings relating to Dumont d'Urville's New Hollanders depicted several encounter scenes and individuals – for example, the portraits of "Mokoré" from King Georges Sound in today's Western Australia (figure 15) and "Djacamel" from Jervis Bay in New South Wales (figure 16). Considering that they depicted humans, so to speak, "in flesh and blood," they were not comparable to Lucae's

[46] Johann Friedrich Blumenbach, *Decas Tertia collectionis suae Craniorum diversarum gentium illustrata* (Göttingen: Johann Christian Dieterich, 1795), plate xxvii.

[47] Johann Friedrich Blumenbach, *Decas Quarta collectionis suae Craniorum diversarum gentium illustrata* (Göttingen: Johann Christian Dieterich, 1800), plate xl.

[48] Lucae, "Geometrische Abbildungen interessanter Schädel," 29.

geometrical drawing of the *Papu* skull. Secondly, Blumenbach's skulls were drawn with a perspectival view and from different angles (figures 17 and 18).

Aside from these methodological problems, these depictions contradicted not only the French explorer's own narrative of unpleasant Australians (and Tasmanians), whom he regarded as "the primitive and natural state of the Melanesian race"[49] but also the image Lucae conveyed on the basis thereof. While it cannot be ascertained if these discrepancies occurred at all to Lucae, it does seem inconsistent that he did not supply any of the images. He provided "geometric depictions" for most of the "interesting skulls" in his first paper; among them both the geometrical drawings (in two perspectives) and, for comparison, a (non-geometrical) portrait of each of the living counterparts of the German skulls. Space limitations thus do not seem to have been the issue. And with regards to Blumenbach's *Neuholländer* skulls, Lucae had access to them and most probably geometrically drew them for the other cranial investigation published in *Zur organischen Formenlehre*.

That investigation of the "skulls of different races regarding their symmetrical shape"[50] had emerged from his doctoral thesis on the symmetry of animal skulls, which revealed to him that animal heads were symmetrical whereas human skulls were not.[51] Inspired by these "symmetry disturbances," Lucae investigated 762 human skulls (including plaster casts) to determine whether they reflected the racial scale of humankind, "perhaps as a gradation ... from the lowest peoples to the intellectually most developed nations." Lucae conceded outright that, empirically, the situation was "different,"[52] because the presupposed link between asymmetrical skulls and poor mental capacity did not exist. First of all, the reality created by his drawing apparatus demonstrated that there existed no truly symmetrical heads – even those that appeared "completely symmetrical" to the human (perspectival) eye, turned out to be not so when "drawn precisely" with his *Geometer*.[53] As a result, most skulls were not symmetrical, including those of Europe's most intelligent representatives such as the German poets Friedrich Schiller (1788-1805) and Wilhelm Heinse (whose skull he had already used in the previous in-

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[49] Jules-Sébastien-César Dumont d'Urville, "Sur les îles du Grand Océan," *Bulletin de la Société de Géographie* 17 (1832): 14–15 quoted in and translated by Douglas, "Foreign Bodies in Oceania," 10.

[50] Johann Christian Gustav Lucae, "Tabellarische Zusammenstellung der Schädel verschiedener Racen rücksichtlich ihrer symmetrischen Form," in *Zur organischen Formenlehre*, 48–60.

[51] Ibid., 48. See also Schierhorn, *Briefwechsel*, 370n4.

[52] Ibid.

[53] Lucae, "Schädel verschiedener Racen," 48.

vestigation), or the great French naturalist Georges-Louis Leclerc Comte de Buffon.[54] By lumping "not quite symmetrical" and "symmetrical" heads into one category and contrasting them with "asymmetrical or uneven skulls," Lucae found he could at least limit the variability problem posed by humanity's (a)symmetrical skulls.[55]

Apart from these definitions, Lucae drew no conclusions from his symmetry comparisons – as he noted at the outset, "the evaluation of skulls according to their symmetrical form present[ed] more difficulties than could be expected." Documenting "what and how [he] found it," he drew up a twelve-page table and suggested the study presented "in any case a not useless base for future observations."[56]

608	Nov. Holland	Blmbch	35[b]		n. g. s.		
609	Nov. Holland	Blmbch	10		n. g. s.		
610	Nov. Holland	Berlin	10551		n. g. s.		
611	Nov. Holland	Hdlbg.	58[a]			asymm.	Gyps
612	Nov. Holland	Hdlbg.	58		n. g. s.		Gyps
613	Nov. Holland	Hdlbg.	57		n. g. s.		Gyps
614	Neuholländerin	Hdlbg.	59	s.			Gyps

Figure 19 Lucae's not quite symmetrical *Neuholländer* skulls[57]

[54] Ibid., 49. These he mostly measured on the basis of plaster casts.
[55] Ibid., 48.
[56] Ibid.
[57] Ibid., 57.

Schädel.	Zahl.	Symmetrisch.	Nicht g. symm.	Asymmetrisch.	
Summe der Schädeln	763	261 symm.	353 n. g. symm.	149 asymm.	Nr. 1 — 762
Schädel bekannter Personen . . .	17	4 symm.	12 n. g. symm.	1 asymm.	Nr. 1 — 17
Caucasische Schädel . . .	400	134 symm.	194 n. g. symm.	72 asymm.	Nr. 17 — 418
Mongolen	98	32 symm.	46 n. g. symm.	20 asymm.	Nr. 418 — 515
Chinesen	37	13 symm.	15 n. g. symm.	9 asymm.	Nr. 479 — 515
Südseeinsulaner	113	27 symm.	51 n. g. symm.	35 asymm.	Nr. 516 — 628
Javaner	40	6 symm.	22 n. g. symm.	12 asymm.	Nr. 516 — 555
Aethiopen	61	33 symm.	24 n. g. symm.	4 asymm.	Nr. 629 — 689
Neger	45	26 symm.	16 n. g. symm	3 asymm.	Nr. 629 — 673
Amerikaner	73	30 symm.	26 n. g. symm.	17 asymm.	Nr. 690 — 762
Peruaner	10	2 symm.	2 n. g. symm.	6 asymm.	Nr. 734 — 745
Brasilianer	11	6 symm.	5 n. g. symm.		Nr. 744 — 754
Nordamerikaner	29	11 symm.	12 n. g. symm.	6 asymm.	Nr. 692 — 720

Figure 20 Lucae's inconclusive skull symmetry comparison[58]

What these tables do show, however, is that within any human race (such as the New Hollanders in figure 19) and in the entire human kind (figure 20) the symmetry of skull shapes varied and therefore provided no useful measure to reflect racial difference. Lucae's symmetry study also shows that he did not eschew ordering human groups into racial hierarchies, in contrast to what historians arguing for an anti-racist liberal paradigm claim about early German anthropologist.[59] This is evident in the question he sought to answer, namely whether there existed a "gradation of the disturbances of the skull from the lowest peoples to the intellectually most developed nations" – a question that somewhat qualifies Lucae's assertion that he conducted his investigation "without any preconceived opinion."[60] At least this can be said about the distinction between the "lowest peoples" (among others, these were clearly New Hollanders) and the "highest nations" (that is, "Caucasians").

[58] Ibid., 60.

[59] See my discussion of the historiography on German *Anthropologie* in Chapter 1, esp. Chapter 1.1.

[60] Ibid.

6.3 Lucae's "real measure" of the facial angle and Aboriginal brains that sit "in the face"

In 1861, Lucae introduced his drawing apparatus anew in a study about "the morphology of race skulls."[61] It was prefaced by an epistle to Russia's self-declared *Antidarwinianer*[62] von Baer who, like Blumenbach, based his race classification on skull characteristics. Wondering why Blumenbach, who subsumed *Neuholländer* and *Papuas* with the *Otaheiten* under the Malay variety, did "not acknowledge the differences between the western and eastern inhabitants of the Great Ocean,"[63] von Baer devised a sixth class by dividing Blumenbach's fifth variety into "South Sea Negroes" and "Oceanic peoples."[64] In a paper published in 1859, shortly before Darwin's *The Origin of Species*, von Baer considered the possibility that environmentally-caused evolutionary processes led to human diversity.[65] Convinced of humanity's monogenetic roots,[66] he challenged polygenists to provide sufficient evidence for races that were considered to be so low that "the probability of a primary creation of humans became apparent, as e.g. in New Holland."[67] Such proof, however, according to von Baer was inconceivable.[68]

He became one of the most prominent German-language critics of Darwin's evolutionary theory.[69] Firstly, insisting on the presence of teleological processes in organic life[70] (including human racial diversification[71]) he rejected both the mechanism of ran-

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[61] Johann Christian Gustav Lucae, "Zur Morphologie der Rassen-Schädel. Einleitende Bemerkungen und Beiträge. Mit zwölf Tafeln. Ein Sendschreiben an ... den Akademiker Carl Ernst v. Baer in St. Petersburg," *Abhandlungen der Senckenbergischen Gesellschaft, Frankfurt am Main* 3 (1859–61): 483–535.

[62] Karl Ernst von Baer to Johann Christian Gustav Lucae, 31 May-12 June 1875, published by Schierhorn, *Briefwechsel*, 377.

[63] Karl Ernst von Baer, *Über Papuas und Alfuren. Ein Commentar zu den beiden ersten Abschnitten der Abhandlung Crania Selecta Ex Thesaurus Anthropologicis Academiae Imperialis Petropolitanae* (St. Petersburg: Buchdruckerei der kaiserlichen Akademie der Wissenschaften, 1859), 9.

[64] Jane M. Oppenheimer, "Baer, Karl Ernst von (1792-1876)," in Spencer, *History of Physical Anthropology*, 155–56.

[65] Von Baer, *Ueber Papuas and Alfuren*, 73–78. See also Oppenheimer, "Baer, Karl Ernst von (1792-1876)," 156; Schierhorn, *Briefwechsel*, 367n1; and Alexander Vucinich, *Darwin in Russian Thought*, (Berkeley: University of California Press, 1988), 95.

[66] Von Baer, *Ueber Papuas and Alfuren*, 78; Oppenheimer, "Baer, Karl Ernst von (1792-1876)," 156.

[67] Von Baer, *Ueber Papuas and Alfuren*, 78. Vucinich has argued that von Baer was primarily "interested in articulating a generalized argument against the possibility of a full scientific explanation of evolution" and, therefore, his rejection of Darwinism "was part of a general war against scientific materialism." See Vucinich, *Darwin in Russian Thought*, 93, 96.

[68] Von Baer, *Ueber Papuas and Alfuren*, 78.

[69] According to Schierhorn, von Baer spent the last ten years of his life engaging with the philosophical ramifications of Darwin's theory. Schierhorn, *Briefwechsel*, 363.

[70] On von Baer's "teleo-mechanic" response to Darwinian evolutionary theory, including his rejection of natural selection and his own "strongly anti-Darwinian" theory of "limited evolution" (pg. 248) see Timo-

dom natural selection[72] and the idea of all organisms' genetic relation. Secondly, von Baer insisted on empirical induction as the only truly scientific method.[73] Similar to Ecker, he respected Darwin in general as a scientific, empirically working scholar (who was, however, too quick with generalisations), but he detested the popularisation of unproven, unscientific "speculations" and "hypotheses and presumptions" by German "vociferous"[74] Darwinists; in particular regarding their suggestion of human descent from apes.[75]

When Lucae, in admiration of von Baer's achievements in craniology, published the first part of "Zur Morphologie der Rassen-Schädel," the ramifications of Darwin's *Origin of Species* for the study of humanity were already hotly discussed in Germany.[76] He immediately took sides, commending particularly von Baer's preference for the empirical-inductive method.[77] Throughout the following two decades, Lucae joined anti-Darwinian ranks, agreeing with von Baer's anti-materialism and teleological approach to the nature of life[78] and he engaged in concerted attempts to refute the "Haeckelian swindle"[79] of human ape descent through his anatomical-anthropological investigations.[80] In 1865, he argued against Huxley's claim[81] that the genetic relation between humans and apes (that is, gorillas) was proven by their shared anatomical differentiation

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thy Lenoir, *The Strategy of Life. Teleology and Mechanics in Nineteenth-Century German Biology* (Chicago: University of Chicago Press, 1982), Chapter 6.

[71] Oppenheimer, "Baer, Karl Ernst von (1792-1876)," 156.

[72] Lenoir, *Strategy of Life*, 248–924; Vucinich, *Darwin in Russian Thought*, 93; Oppenheimer, "Baer, Karl Ernst von (1792-1876)," 156; Schierhorn, *Briefwechsel*, 373n1.

[73] Vucinich, *Darwin in Russian Thought*, 93–96.

[74] Von Baer to Lucae, 31 May-12 June 1875, published by Schierhorn, *Briefwechsel*, 378. See also Vucinich, *Darwin in Russian Thought*, 93, 95.

[75] Von Baer, *Ueber Papuas and Alfuren*, 76. As Lenoir has pointed out, von Baer had already heard of Darwin's imminent publication when he stayed in London during one of his anthropological journeys in 1859. Lenoir, *Strategy of Life*, 246.

[76] Lucae and von Baer probably met for the first time at the German Naturalists Association's annual meeting in Karslruhe in 1858. Schierhorn, *Briefwechsel*, 359.

[77] Lucae, "Morphologie der Rassen-Schädel," 483.

[78] Johann Christian Gustav Lucae to Karl Ernst von Baer, 24 March 1876, published by Schierhorn, *Briefwechsel*, 379.

[79] Ibid.

[80] William M. Montgomery has listed Lucae as one of Germany's first generation "opponents of [Darwinian] evolution" alongside Rudolf Wagner, Hermann Burmeister and Rudolf Virchow. William M. Montgomery, "Germany," in *The Comparative Reception of Darwinism*, ed. Thomas Glick (Chicago: University of Chicago Press, 1988), 86–87.

[81] Thomas Henry Huxley, *Evidence as to Man's Place in Nature* (New York: Appleton 1863).

of hands and feet.[82] When he found anatomical differences in the elbows of Europeans and Africans, he, on the one hand, stated that the latter resembled those of anthropoid apes but, on the other, qualified this statement by emphasising the degrees of individual variation in Europeans and Africans. Lucae cautioned that this elbow similarity was neither a "typical difference between the European and the Negro" nor could it be interpreted "anew as an indication for the genetic relation between the Negro and the gorilla."[83] In 1870, in yet another publication aimed at rebuking Darwinist arguments for human ape descent, he summed up his Darwinist colleagues' position (and with an anti-humanist attitude) by writing that they were "showing *naturphilosophische* orientations regarding the origin of humankind."[84]

As Zimmerman has noted, the eventual agreement on Lucae's apparatus as the standard device for measurement thus also "institutionalized anthropologists' rejection of Darwinism"[85] because it was regarded as a means to gather, in Lucae's words, "more extensive "and "the correct"[86] anthropological data. Lucae's 1861 explanatory use of six Australian Aboriginal skulls occurred in this context. Although it was not his foremost aim to define Australian Aboriginal skull characteristics, he reproduced a number of ingrained racialising judgements about the *Australneger*, despite his generation's constant claim that the empirical-inductive method demanded to postpone conclusions until "everything" was known.

Sent as donations to the Senckenberg Society by the merchant, immigration agent and German consul in Sydney, Karl Ludwig Wilhelm Kirchner (1814-1893), these skulls had been dug up on one of his properties next to the Clarence River in the colony of New South Wales (possibly even at his residence in Grafton).[87] Kirchner provided some information about the individuals they belonged to, which gives a clear indication that their remains were deliberately plundered from their known burial sites for the pur-

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[82] Johann Christian Gustav Lucae, "Die Hand und der Fuss. Ein Beitrag zur vergleichenden Osteologie der Menschen, Affen und Beutelthiere," *Abhandlungen der Senckenbergischen Naturforschenden Gesellschaft* 5 (1864–1865): 275–332.

[83] Johann Christian Gustav Lucae, "Die Stellung des Humeruskopfes zum Ellenbogengelenk beim Europäer und Neger," *Archiv für Anthropologie* 1 (1866): 275–76.

[84] Johann Christian Gustav Lucae, "Der Fuss eines Japanischen Seiltänzers," *Archiv für Anthropologie* 4 (1870): 313.

[85] Zimmerman, *Anthropology and Antihumanism*, 88.

[86] Lucae, "Morphologie der Rassen-Schädel," 484.

[87] Ibid., 507. On Wilhelm Kirchner's biography see Jürgen Tampke, "Pre-War German Settlement in Eastern Australia," in *The Australian People: An Encyclopedia of the Nation, its People and their Origins*, ed. James Juppe (Cambridge: Cambridge University Press, 2001), 367.

pose of donating them to his hometown's scientific society. According to his information, they belonged to a woman, "Babys Mutter" (Baby's mother), and five men living in the Clarence River region. According to Lucae, the woman's skull "show[ed] destruction by syphilis" and two of the men, called "Jomey" and "Billey", had been "killed in battle."[88]

Lucae was not interested in the skulls as those of actual persons or their lives and deaths. Unlike Ecker, who claimed to look at the skeletons of individuals, he simply declared his *Australneger* (skulls) as race representatives that "very much match[ed] the descriptions and illustrations of other authors"[89] such as Blumenbach and Ludwig Becker. Occasionally referring to them as *Australier* or *Neuholländer*, he predominantly used the term *Australneger*. Similar to "Oceanic Negros" used by British anthropology, this word in its original translation means "southern black," referring to the dark-skinned populations of the South Pacific region in general and differentiating them from "black" Africans. Von Baer, for example, used both the terms *Australneger* and *Südsee-Neger* to describe the dark-skinned western Pacific Ocean populations.[90] The former came to denominate the dark-skinned inhabitants of New Guinea (or "Papuans"),[91] the latter eventually referred exclusively to Australian Aborigines (sometimes including, sometimes excluding those from Tasmania) although it would vanish from anthropological literature in Germany by the turn of the twentieth century. While, by using the term *Australneger*, Lucae did not refer to its African connotation,[92] he did invoke ape imagery by citing some of his Anglophone colleagues. Namely, he quoted the American James Aitken Meigs (1829-1879), who thought of an Australian Aboriginal skull in the former collection of George Samuel Morton as "a truly animal head"[93] whose facial profile "almost degenerate[d] into a muzzle,"[94] and the English naturalist William Charles

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[88] Lucae, "Morphologie der Rassen-Schädel," 535.

[89] Ibid., 508.

[90] Von Baer, *Papuas und Alfuren,* passim.

[91] Chris Ballard, "'Oceanic Negroes': British Anthropology of Papuans, 1820-1869," in *Foreign Bodies: Oceania and the Sciences of Race 1750-1940*, ed. Bronwen Douglas and Chris Ballard (Canberra: ANU Press, 2008), 157–201.

[92] Lucae did not mention Ecker's work, possibly because his own work appeared only shortly after Ecker's.

[93] Lucae, "Morphologie der Rassen-Schädel," 509. On James Aitken Meigs see Ann Fabian, *The Skull Collectors. Race, Science, and America's Unburied Dead* (Chicago: University of Chicago Press, 2010), 128–30.

[94] Lucae, "Morphologie der Rassen-Schädel," 509. Lucae cited from James Aitken Meigs, *Catalogue of Human Crania, in the Collection of the Academy of Natural Sciences of Philadelphia* (Philadelphia: J. B.

Linnaeus Martin (1798-1864), who contended that Australian cranial eyebrow regions "remind[…] us of some of the larger Apes."[95] He also referred to "Herr Ludwig Becker" and his "very splendid pictures of the New Hollanders,"[96] namely Becker's skull illustrations. Citing almost Becker's entire notes on the skulls, Lucae was particularly interested in that of "King John." As Becker had stated, it represented "the peculiar character of the Australean [sic] race" and so it was a "companion piece"[97] to Lucae's skull no. XXII 10 (the skull of "Jomey"). Unlike Ecker, Lucae did not comment on Becker's irregularities in the facial angle measure, even though that was what he was mostly concerned with in his own morphological investigation.

Lucae's single remark about "something ape-like"[98] in the Australian Aboriginal skulls related to the facial bones. While he did not further elaborate the association, this remark concerned the main issue of his paper, that is, the investigation of the "indeed founded differentiation of skulls in prognathous and orthognathous."[99] That is why Lucae chose the skulls of six *Australneger* and a *Papua* to compare them with those of ten Europeans as representatives of the facial angle "in the most extreme skull forms of the so-called lowest and highest human races."[100] The *Papua* skull was the same "interesting" *Papu* skull Lucae had classified in 1844 as that of an *Alfuro*. However, in agreement with von Baer's deliberations on the differentiation of *Papuas* and *Alfuren*, he revised his earlier classification. Having been "induced by Dumont d'Urville's depictions to take it for an *Alfuren*,"[101] he now relabelled it as a *Papua*. Its resemblance with Dumont d'Urville's New Hollander heads, however, appeared to be confirmed by Lucae's *Australneger* skulls. Together with the skulls from New Guinea they represented Lucae's "lowest human races" with prognathous faces.

Lippincott & Co., 1857), 97. Meigs also thought that this skull was "the nearest approach to the Orang type that [he had] ever seen."

[95] Lucae, "Morphologie der Rassen-Schädel," 509. Lucae cited from William Charles Linnaeus Martin, *A General Introduction to the Natural History of Mammiferous Animals, with a Particular View of the Physical History of Man, and ... Quadrumana, or Monkeys* (London: Wright and Co. Printers, 1841), 312.

[96] Lucae, "Morphologie der Rassen-Schädel," 508.

[97] Ibid., 509.

[98] Ibid., 528.

[99] Ibid., 520.

[100] Ibid., 516.

[101] Ibid., 535.

Lucae's "highest" races were represented by a "European" sample consisting of the skulls of more or less famous and infamous Germans: again the Romantic "genial poet" Heinse and the philosopher Schiller, the "German Robin Hood" Johannes Bückler aka Schinderhannes (1779-1803), a former sergeant and writer named Zwick (who "as leader of the students fell at the storm of the main police fort" in the 1833 Frankfurt nationalist, anti-Napoleonic uprising), a man named Schumacher (who "murdered the judge and injured several judicial clerks out of mean vindictiveness"), another man called Klaenke (driven to suicide by "slovenliness and alcoholism") and three unnamed men identified only by their collection numbers plus one Hessian woman.[102] Accused by his skull-measuring colleague Hermann Welcker (1822-1897) of choosing "skulls of distinction" rather than "normal" skulls from the anatomical collection,[103] Lucae explained this choice with their documented provenance.[104] I shall not analyse his use of these German skulls in detail, but another reason why he chose the skulls of convicted criminals and highly esteemed "interesting personalities"[105] could have been that these were signifiers for respectively "lower" and "higher" brain and face development. Correlations of German social standing with skull and brain configurations, however, did not become evident in Lucae's measurements. In fact, the acclaimed poet Heinse's skull presented quite unfavourable traits[106] whereas the murderer Schuhmacher turned out to have the best shape.[107]

Lucae's investigation focussed on three areas of the skull, which, he argued, determined the real measure of prognathism and orthognathism: the facial profile, the size and shape of the forehead and the brain as the latter's shaping agent. The data proved ambiguous, presenting "conspicuous individual differences."[108] Although he began his description of his Australian skulls by stating that "on the whole they all can be regarded as … prognathous skulls,"[109] Lucae saw in the first instance that "the prognathous

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[102] Ibid.

[103] Hermann Welcker, *Untersuchungen über Wachsthum und Bau des menschlichen Schädels. 1. Theil* (Leipzig: Verlag Wilhelm Engelmann, 1862), xi.

[104] Johann Christian Gustav Lucae, "Zur Morphologie der Rassen-Schädel. Einleitende Bemerkungen und Beiträge. Zweite Abtheilung. Ein Sendschreiben an ... den Akademiker Carl Ernst v. Baer in St. Petersburg," *Abhandlungen der Senckenbergischen Gesellschaft, Frankfurt am Main* 5 (1864–65): 20n12.

[105] Lucae, "Morphologie der Rassen-Schädel," 523.

[106] Ibid.

[107] Ibid., 514, 532.

[108] Ibid., 511, 524.

[109] Ibid., 507.

form [was] by no means equally strongly developed" and the Australian facial profiles ranged from "nearly orthognathous" to "the highest degree of prognathism."[110] Additionally, forward-jutting jaws were manifest in his European sample.[111] Facing this ambiguity, Lucae undertook to propose his own "real measure"[112] for the determination of the facial angle.

He criticised the eminent Virchow for his correlation of the *Sattelwinkel* (slope at the base of the skull)[113] with the nasal angle and the forehead conformation. Virchow argued that skulls with a steep base slope presented a higher degree of prognathism occurring, for example, in (lower) "race skulls."[114] According to this rule, Lucae's Australian Aboriginal skulls could be expected to have small, whereas the German skulls should have large *Sattelwinkel*.[115] Lucae's measurements, however, showed that the angle varied in both the German and the Australian sample without relevance to their facial profiles.[116] Consequently, he proposed to include the curvature of the forehead in relation to a vertical line, against which to measure the facial angle: "Maybe thereby measurements will emerge that approximate the truth and correspond better with reality."[117] In other words, he undertook two manoeuvres to establish the "reality" of Australian prognathism (and German orthognatism). First, he insisted on their racially forward jutting jaws despite his contrary findings; and, in a second step, he corrected the measurement parameters so as to "truly" represent this already adjusted reality.

As a result, he compiled a table "that on the whole very truly follow[ed] nature's conditions."[118] Nature in fact showed that there were variations in both European and Australian skull shapes:[119] a number of Australian foreheads "approximat[ed] the most perfect of the Europeans" and some of the European jaws "joined with the least progna-

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[110] Ibid., 508.

[111] Ibid., 524.

[112] Ibid., 520.

[113] Saddle angle, i.e. the angle between the frontal and rear edges of the skull base.

[114] Rudolf Virchow, *Untersuchungen über die Entwicklung des Schädelgrundes im gesunden und krankhaften Zustande und über den Einfluss derselben auf Schädelbau, Gesichtsbildung und Gehirnbau* (Berlin: G. Remer Verlag, 1857), 75.

[115] Lucae, "Morphologie der Rassen-Schädel," 517.

[116] Ibid., 520.

[117] Ibid., 521.

[118] Ibid., 523.

[119] Ibid., 524.

thous of the Australians."[120] On the whole, however, these variations were now in its table format subsumable under the racial categories established from the outset of Lucae's study. Accordingly, "the maximum forehead expansion occur[red] in our Europeans, but the maximum of the jaws in the Australians."[121] His disparate findings nevertheless led him to suggest that "the pro- and orthognathism of a skull is not always based on the absolute size of the forehead or the jaw, but in a correlation between forehead and jaw; because we see skulls with a favourable forehead conformation become prognathous through a more protruding jaw, and less favourable forehead shapes gain an orthognathous conformation by a less protruding jaw."[122] In effect, Lucae again levelled out the ever-present individual variations through this parameter change, rendering them into racial features that remained within their type. Thus, supposedly well-developed, more spherically curved foreheads could ameliorate the negative effects of the *Australneger*'s disadvantageous jaw-profiles into less prognathism or, conversely, their orthognathous faces potentially lifted their lower foreheads. Consequently, it becomes clear that Lucae's "lower race" was intricately linked with "lower" skull features. In particular, the size and shape of the foreheads pointed directly to the quantity and thus intellectual quality, of the organ that formed them. Consistently, Lucae would not be shaken in his conviction that size differences were the direct result of the frontal lobes.

Thus interested in the "interior skull surface of race heads," Lucae proposed to investigate the skull-shaping forces of the brain by creating glue models, mocking those physical anthropologists that "reject[ed] a simple means of gaining a rich lesson, in order to not damage the precious relic-like skull." Unlike Ecker, he had no qualms about cutting through skulls in order to "go directly" to the "core."[123] Praising Richard Owen's "formidable image of a sawn-through skull of an *Australneger*,"[124] Lucae used the two skull halves as moulds to make "a substitute for the missing brain"[125] in order to estimate its capacity. Made from dehydrated glue, these brain models could be weighed,

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[120] Ibid.

[121] Ibid., 523.

[122] Ibid., 524.

[123] Ibid., 500.

[124] Ibid., 510 (emphasis added). Owen depicted the "bisected skull of a male Australian Papuan" and a "horizontal section through the superorbital ridge of the skull of a male Tasmanian Papuan." Richard Owen, "Osteological Contributions to the Natural History of the Chimpanzees (Troglodytes) and Orangs (Pithecus), Part IV," *Transactions of the Zoological Society London* 4 (1853): 87, plate xxx.

[125] Lucae, "Morphologie der Rassen-Schädel," 502.

measured and drawn, both in their entirety and in their different compartments.[126] Thereby made comparable for the determination of their actual and intellectual volume, they also supplied, when drawn with his *Geometer* so Lucae claimed, even more reliable data than the original natural brains lost to science.[127] Consistently, Lucae referred to his models simply as "brains." Comparing the glue brain models, he extended the link between forehead and jaw line to the interior of the skull, thereby implicitly correlating mental capacity (signified by the size and position of the frontal lobe) to the facial angle.[128] Again, nature demonstrated the individuality of human anatomy as Lucae recorded "plenty of differences"[129] in the Australian brain models. Additionally, he had to admit "not without some disconcertion"[130] that in the European sample there were brain shapes similar to those of the Australians. On the whole, the glue brain models of Australians and Europeans were quite similar.

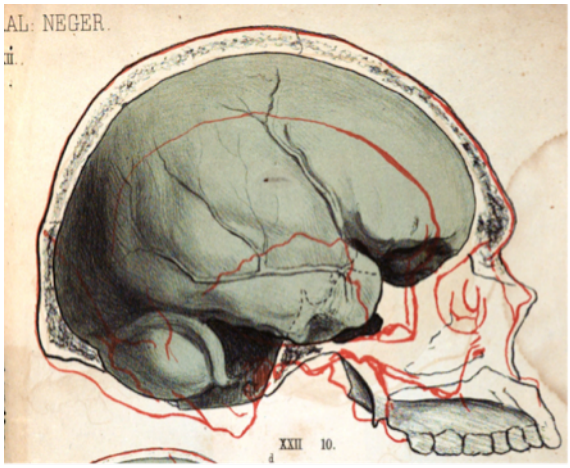

Figure 21 "Jomey"– *Australier* brain in the face[131]

Clarifying that "for a well-developed forehead apart from the height the protruding of the middle and upper regions of the front lobe are of particular importance,"[132] he asserted "that the entire profile of the frontal lobe lies in the European more to the front,

[126] Ibid., 502–3.

[127] Thus, although his apparatus was developed to measure and depict skulls with a non-invasive method (Hanke, *Zwischen Auflösung und Fixierung*, 191), Lucae used it to investigate these brain models that were made possible only by the sawing through of skulls.

[128] Lucae, "Morphologie der Rassen-Schädel," 511.

[129] Ibid.

[130] Ibid., 513.

[131] Ibid., plate xii.

[132] Ibid., 526.

but in the Australians more to the rear."[133] Respectively, the latter brain's rear region was larger than the former's.[134] That was why "the brain profile in the Europeans ascends in a longer and stronger curve, but in the Australians runs flatter and shorter, sooner to the rear."[135] In addition to this discovery, Lucae emphasised the significance of the brain's position in the facial part of the skull, arguing that European brains sat above the eye sockets, whereas Australian brains were "sunk between the eye cavities, even beneath the cheekbone." Not only were *Australneger* brains smaller and positioned more to the rear but they were also "in the face,"[136] prohibiting the formation of favourably developed, high, spherically curved foreheads. And, whereas the European "more perfected from" was caused by their better developed frontal lobes, even those Australian skulls that appeared to be well-developed, resulted from a "higher thickness of the frontal bone, which in these races contributes to the enlargement of the forehead."[137]

Chapter Conclusion

When Lucae demonstrated the mechanics of his drawing apparatus using Aboriginal skulls, he, too, was already convinced of their low status. In 1844, he created an image of savage Australian Aborigines as a by-product of classifying other South Sea inhabitants. This image was based on a mix of negative references to Australian Aboriginal physical appearance and state of civilisation, conveyed by European naturalist travellers' perceptions and evaluations. Similar to Ecker, he was confronted with stubbornly contradictory material in 1861. His investigation perpetually showed that he dealt with the idiosyncrasies of the skulls of individuals, both in his Australian Aboriginal and German sample. Finding more or less projective faces in both groups, he changed the parameters of his measurements, suggesting new points of measurements and ratios. The same can be said about his creation and comparison of Aboriginal and German glue brain models. Puzzled at their similar sizes, Lucae switched to different categories for their assessment, claiming that the German glue brain was not only heavier but also differently positioned. When he noticed that the *Australneger* had quite some brain mass at the front, he found evidence that the German's resided in a far more advanced and advantageous position.

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[133] Ibid.
[134] Ibid., 514.
[135] Ibid., 526.
[136] Ibid.
[137] Ibid., 527.

Like Alexander Ecker, Gustav Lucae was a prominent foundational member of natural scientific *Anthropologie* in Germany. He was a lot more outspoken about his anti-Darwinian beliefs than Ecker, arguing in the majority of his physical anthropological and comparative anatomical work against the theory of human descent from apes. His utilisation of Australian Aboriginal skulls in his major work on human race skulls demonstrates that he rarely provided an interpretation of the measurements he conducted. All of this reflects his characterisation as a "typical" liberal German anthropologist of the first generation that has been described by historians suggesting a liberal paradigm in German *Anthropologie*. However, this does not indicate that he did not subscribe to the hierarchical ordering of humanity. As his interest in the correlation of skull symmetry with race and his utilisation of the Australneger skulls sufficiently shows, he operated within the paradigm of "higher" and "lower" races. Gustav Lucae can therefore not be regarded as an "anti-racist" German anthropologist.

7 Rudolf Virchow's *Stirnfortsatz*

In 1875, the eminent pathologist, liberal politician, pioneer anthropologist and Germany's most prominent anti-Darwinian Rudolf Virchow (1821-1902) took issue with the (Darwinist) "conviction, that appears to have become more and more common, that there exist human races or tribes [*Menschenrassen oder Stämme*] of lower organisation and lesser capacities, and others of more perfected organisation and higher capacities."[1] He questioned Darwin-inspired researchers' "expectation" to find "an ascending line from lower to higher tribes or races" and then interpret it as a signifier for both the linear development of humanity from lower to higher stages and modern "lower" races' representativeness of prehistoric humans. Criticising the "increasingly common" idea of a genetic relation between "the lowest human races and the highest mammal species," Virchow called into question the "factual foundations" of these ideas.[2] While he conceded that "the so-called theory of descent"[3] appeared to be "undoubtedly persuasive," he criticised its followers as working on the basis of "insufficient material and often preconceived opinions." Insisting on the statistics-based inductive method, he cautioned against prematurely drawing conclusions that were based on insufficient samples and unclear definitions of what could be regarded as a race characteristic, rather than individual or pathological abnormalities: "Only then will it be permissible to draw conclusions from particular individual cases, not only regarding the higher or lower character of the race or tribe they belong to, but also regarding the developmental trajectory [*Entwickelungsgang*] of humanity in general."[4]

With this objective in mind, he investigated the temple region of human skulls, with the aim to establish "some characteristics of the lower human races," most importantly Australian Aborigines.

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[1] Rudolf Virchow, "Ueber einige Merkmale niederer Menschenrassen am Schädel," *Abhandlungen der Königlich Preußischen Akademie der Wissenschaften Berlin. Physische Klasse 2te Abtl.* (1875): 1. I have translated terms relating to culturally and physically diverse human groups, such as *Rasse* (race), *Völker* (peoples), *Stämme* (tribes) as "race" as Virchow used these terms interchangeably in this investigation.

[2] Ibid., 2.

[3] Ibid., 5.

[4] Ibid., 8.

7.1 Investigating "some characteristics of the lower human races"

In 1835, the Britain's leading anatomist, Richard Owen (1804-1892), compared the skulls and skeletons of chimpanzees with orang-utans in search for their similarities with, and differences from, human anatomy. He found that, in general, the chimpanzee's morphology was closer to that of humanity with the exception of three morphological features in which the great ape presented "a nearer resemblance to Man."[5] Based on these observations, Owen argued that Georges Cuvier erred in thinking that "the Chimpanzee ought to rank above the Orang in a descending series."[6] One of the latter's more human characteristics, Owen argued, was the structural composition of the temple region; namely the way in which the frontal, temporal, parietal and sphenoid bones connected to each other. Unlike his chimpanzees, whose temple bones adjoined the frontal bones,[7] two of his orang-utan skulls exhibited a direct connection between the sphenoid and the parietal bones, thereby "separat[ing] the frontal from the temporal bone, as in Man."[8]

Although he pointed out that this was "one of the few osteological differences in which the Orang ha[d] closer approximation to the human structure than the chimpanzee,"[9] he immediately qualified this finding in a corresponding footnote: "This affinity is of less value from the fact of some of the inferior races of Man occasionally presenting the same arrangement of the sutures as the Chimpanzee. I have observed the junction of the temporal with the frontal bone in the cranium of a native of Australia, and in more than one negro."[10] The leading British comparative anatomist, who would in the future staunchly object to Darwin's suggestion of the emergence of new species through natural selection, already then argued against "the supporters of the theory of progressive development and transmutation of species."[11] Consistently, his comparison of the skeletal anatomy of chimpanzees and orang-utans aimed at emphasising the differences between human and ape anatomy. That is why he qualified both the occurrence of the

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[5] Richard Owen, "On the Osteology of the Chimpanzee and the Orang Utan," *Transactions of the Zoological Society of London* 1 (1835): 369.

[6] Ibid., 369.

[7] Ibid., 347.

[8] Ibid., 357.

[9] Ibid., 357.

[10] Ibid., 357n1.

[11] Ibid., 370.

"human feature" in apes and of the "ape feature" in human skulls as "occasional," thus insignificant.

In 1875, Owen's observation of the feature prompted Virchow to undertake an investigation into "some characteristics of lower human races in the skull," aiming to establish whether it was justifiable to associate it with lower races.[12] Since Owen's investigation, it had been described by the leading (comparative) anatomist in St. Petersburg at the time, Wenzel Gruber (1814-1890), as occurring "only seldom" in human skulls. Gruber described the "unusual connection between the temporal bone and the frontal bone" as the result of a "more or less long or short, usually broader process" emanating from the temporal bone. He found the phenomenon predominantly in orang-utans and therefore regarded it as "an ape form" but he did not clarify in which human skulls it occurred.[13] According to Virchow, other investigations, which specified the racial affinity of their material, suggested that there was "a prevalence" of the feature "in the coloured races."[14]

Defining the feature as an extension of the temple bone to the front, Virchow named it *Stirnfortsatz* or *processus frontalis* of the temple bone.[15] Whereas Owen had regarded the resulting separation of the (lateral wing) of the sphenoid from the parietal bone as an insignificant abnormality that he had seen in one Australian skull, Virchow interpreted this observation as an indication that it might be demonstrated as a feature that occurred more regularly "in the Australians," regarding them as among "the supposedly lowest standing races" of humanity.[16]

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[12] Thomas Theye, *Ethnologie und Photographie im deutschsprachigen Raum: Studien zum biographischen und wissenschaftsgeschichtlichen Kontext ethnographischer und anthropologischer Photographien (1839-1884)* (Frankfurt a. M.: Peter Lang, 2004), 244–6.

[13] Wenzel Gruber, *Abhandlungen aus der menschlichen und vergleichenden Anatomie* (St. Petersburg: Buchdruckerei der Kaiserlichen Akademie der Wissenschaften, 1852), 6.

[14] Virchow, "Merkmale niederer Menschenrassen (1875), 11.

[15] Ibid., 9. See also Theye, *Ethnologie und Photographie*, 244.

[16] Virchow, "Merkmale niederer Menschenrassen (1875)," 11.

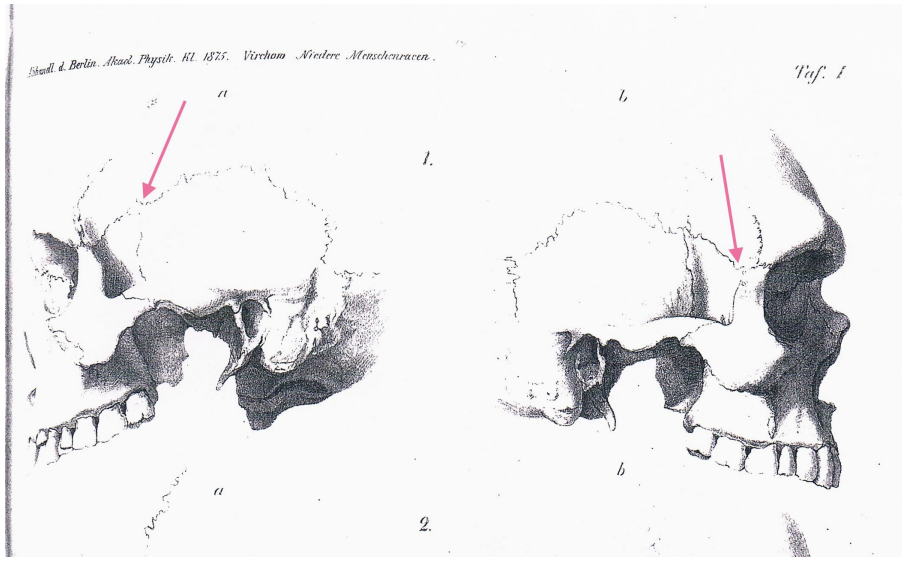

Figure 22 ***Processus frontalis*** **("Australian from New South Wales")**[17]

Searching through the scientific literature for the "defective conformation of the temple region"[18] (including Ecker's and Lucae's investigations of Australian Aboriginal skulls), Virchow interpreted the research of his British counterparts and the few existing German investigations of the phenomena as indicative of the *Stirnfortsatz*'s more frequent occurrence in Australian Aboriginal skulls. He also personally investigated twelve Australian Aboriginal skulls, finding the feature in five of his sample. Then examining skulls of other races "assumed to be the lowest standing" – such as "Negritos", "Melanesians" and "Malayans" – and of representatives of the "higher tribes regarded as white," Virchow gained somewhat ambiguous results.[19]

His investigation confirmed that, in general, the *processus frontalis* was very uncommon in human skulls but he also regarded its occurrence as significant: Whereas it was only very occasionally found in German(ic) skulls,[20] "the 'exception' is a rare one in particular races, in others [it is] a more frequent one."[21] Thus there appeared to be a prevalence of the feature in "the savage tribes and distant islanders"[22] whose skulls Virchow investigated.

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[17] Ibid., plate 1 (detail: figure 1).
[18] Ibid., 25.
[19] Ibid., 13.
[20] Ibid., 40, 51.
[21] Ibid., 49–50.
[22] Ibid., 22.

Virchow's investigation of European brachycephalic skulls indicates that he suspected there was some correlation between the supposedly ape-like *Stirnfortsatz* and a low cultural stage. The *Stirnfortsatz* delineated the short-headed European populations subsumed under "the Finnish race"[23] in the reverse order to their agreed state of civilisation. On the one hand, those races with "the highest capability of culture, the Magyars [Hungarians] and the genuine Finns [stood] closer to the Australians, the Melanesians and the Malayans" with regard to the frequency of the *Stirnfortsatz*. On the other hand, it was absent in the Estonians and Laplanders, which according to Virchow, were usually "position[ed] on a far lower stage." He explained these inconsistencies by stating that these were the skulls of individuals, suggesting "more detailed knowledge about their psychological characteristics could somewhat alter our opinion."[24] In other words, the European skulls exhibiting the feature could have belonged to less cultured individuals and thus possibly did not represent the genuine Finns' higher stage, and vice versa.

In conclusion of his investigation, Virchow stated there was not enough evidence that the *Stirnfortsatz* presented an atavism (which would have pointed to Darwinian evolutionary significance of the feature). He did, however, classify the elongated temporal bone as an ape-like *Theromorphie*, that occurred more frequently in "certain races ... none of which appear[ed] to belong to the Aryan race."[25] Although Virchow cautioned repeatedly against the drawing of conclusions based on the limited samples available to scientists at the time, he attempted to find meaning in the "reduction of the temporal region"[26] that he thought resulted from the *processus frontalis*. Turning from the skulls' exterior to their "interior configuration," he drew attention to the impact it might have on the development of important areas of the brain. As Virchow pointed out, these were the lateral brain regions thought to be significant "for both the examination of microcephaly and the determination of the differences between human and ape brains."[27] Regretting that the knowledge about human brain functions was yet too scarce to draw conclusions with certainty, Virchow expressed his wanting simply to "draw attention to this special aspect of ethnic encephalography."[28] He, nevertheless, used the assumed effect of the *Stirnfortsatz* on the brain to propose its relevance as a race charac-

[23] Ibid., 22.
[24] Ibid., 25.
[25] Ibid., 59.
[26] Ibid., 50.
[27] Ibid., 58.
[28] Ibid., 58.

teristic: "The not yet proven but surely to be assumed defective conformation of the lateral brain regions appears to justify to regard the *Stirnfortsatz* as a characteristic of the lower, but by no means the lowest races."[29] That means, Virchow assumed the *Stirnfortsatz* had a direct effect on brain development, similar to the reduced mental function of microcephalics. Suggesting that this was the reason for regarding it as a characteristic of "lower races," points to a fundamental conflation of the physical with the mental spheres in Virchow's investigation.

7.2 Debating the statistics of race

Virchow's deliberations met with criticism. In 1879, the anatomist at the University of Dorpat (today's Tartu in Estonia), Ludwig Stieda (1837-1918) questioned the validity of Virchow's conclusions on the basis of his methodology.[30] Stieda agreed that the *Stirnfortsatz* could be interpreted as characteristic of ape cranial morphology but dismissed Virchow's evaluation of human skulls with that morphology as lower. He challenged him to prove that this ape feature was indicative of simpler organised, and thus ape-like, brains.[31] He further took issue with Virchow's conclusion "that the Finns and Magyars stand lower than the Germanics and Slavs!" by positioning them "side by side to the Malayans and the Australians." Had Virchow applied proper statistical methods, based on samples of "huge masses of skulls, hundreds or thousands," Stieda argued, only then would he have been able to present valid conclusions.[32]

Stieda went on to investigate the skulls in two (then) Russian anthropological collections, in order to prove that Virchow's calculations and conclusions had "not the slightest value."[33] In short, he observed the *processus frontalis* in a number of German skulls (thus contradicting Virchow's statement that it was not found in "Aryan races"). He also found that far fewer Australian Aboriginal and Finnish skulls exhibited the feature. Breaking these findings down to percentages, he stated that the *processus frontalis* occurred twice as often in German skulls as in Virchow's "genuine Finns". On the basis of these calculations, argued Stieda: "I could, with the same justification with which

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[29] Ibid., 59. See also Theye, *Ethnologie und Photographie*, 245.

[30] Ludwig Stieda, "Ueber die Bedeutung des Stirnfortsatzes der Schläfenschuppe als Racenmerkmal," *Archiv für Anthropologie* 11, no. 1 (1879): 107–123. See also Theye, *Ethnologie und Photographie*, 244–6.

[31] Stieda, "Bedeutung des Stirnfortsatzes," 118.

[32] Ibid., 119.

[33] Ibid.

Virchow concluded that the Magyars and the Finns, with regard to the defective conformation of the temple region, approximate the Malays and the Australians, say the same about the Germans."[34] Pointing to the premises of statistical calculation, according to which "the percentage of the occurrence [of a feature] decreases with the increase of the research material,"[35] Stieda played around with the varying quantitative (amount of skulls) and qualitative (race of skulls) content of his collections. This resulted in varying percentages of the *Stirnfortsatz* in equally varying combinations of race skulls. For example, in the St. Petersburg collection the *Stirnfortsatz* was not present in Australian or Finnish skulls, thus suggesting the opposite from what Virchow had found in his sample. Such interpretations, however, were not permissible based on the insufficient amounts of skulls investigated. The only possible interpretation on the basis of inconsistent and small samples was: "The *Stirnfortsatz* occurs as an exception in all human races, that is, in all that have hitherto been investigated"[36] with view to the feature.

Virchow responded, in a second paper about "some characteristics of lower human races and about the application of the statistical method in ethnic craniology."[37] With regard to the latter, Virchow accepted that his sample was small. But he defended his approach on the basis of its representativeness despite the reality that "comprehensive material"[38] was either not yet available or, in the case of Australian and Tasmanian skulls, simply impossible to obtain.[39] Apart from outlining necessary pragmatic approaches to physical anthropological investigation and contributing to the discussion about the statistical method in physical anthropology, Virchow offered "new facts"[40] about the "relative frequency"[41] of the *Stirnfortsatz* in different human races. He now discovered "individual cases in the Aryan tribes"[42] but, based on his calculations, insisted on both his distinction of the Finnish from the "Aryan tribes" and the even "starker contrast" of the "coloured races against the Aryans."[43] He also found that in the five ad-

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[34] Ibid., 119.
[35] Ibid., 120.
[36] Ibid., 121.
[37] Rudolf Virchow, "Ueber einige Merkmale niederer Menschenrassen am Schädel und über die Anwendung der statistischen Methode in der ethnischen Craniologie," *Zeitschrift für Ethnologie* 12 (1880): 1-26.
[38] Ibid., 4.
[39] Ibid., 9.
[40] Ibid., 10.
[41] Ibid., 7.
[42] Ibid., 25.
[43] Ibid., 17.

ditional Australian skulls in his possession no sign of the *Stirnfortsatz* could be established. While this weakened his statistics, it did not impact on his argument, because the limitations of a small sample could be "compensated for through extensive literary backing"[44] provided by the analyses of physical anthropological publications. Thereby, Virchow was able to reconfirm the *Stirnfortsatz*'s principally higher frequency in 16% of Australian Aboriginal skulls.[45]

Maintaining that this specific configuration of the temple region was a *Theromorphie*, Virchow positioned the Australian skull between the orang-utan (29.2%) and the gibbon (12,5%). This reaffirmed his 1875 "thesis that the skull of the Australian is an extraordinarily pithecoid one .... From the comparison of the aforementioned material it becomes fully evident how far a gulf opens up between them and the Aryan races."[46] He then turned to the question of atavisms, this time openly arguing against Darwinian ideas of human ape descent on the basis of the inconsistent occurrence of the *Stirnfortsatz* in great apes: As the feature was typical only in the gorilla, the matter became "complicated" because

> in this regard it can no longer be claimed that the gorilla is the highest anthropoid ape. If this were the case, the reduction of the *Stirnfortsatz* in humans must be regarded as a lower state and its existence as a higher state. Given that the *Stirnfortsatz* is most frequently absent in those human races that have arisen as the carriers of the highest culture, whereas it is developed most frequently in the Australians – who indeed have remained on the lowest level of culture and even after contact with the Whites showed not the least inclination for higher civilisation – we surely cannot discern a characteristic of progressive development in [the *Stirnfortsatz*]. Thus, the human kind has by no means picked up and continued the developmental trajectory of the gorilla, but, provided that [human's] relation to the anthropoid apes is assumed, he would with regard to the conformation of the temple bones be linked to the lower anthropoid apes.[47]

As I have alluded to in the introduction of this thesis, these comments on Australian Aboriginal skulls have been interpreted by historians of German *Anthropologie* who emphasise a liberal, non-racist tradition, as an example of the rare conflation of the physical and the cultural sphere of anthropological investigation. Benoit Massin (who

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[44] Ibid., 5.
[45] Ibid., 18–20.
[46] Ibid., 25.
[47] Ibid., 25–26.

has mistaken the *Stirnfortsatz* as "brow ridges"[48] which indeed was another prominent character that fascinated physical anthropologists), has cited Virchow's study as an example for German liberal anthropologists' acceptance of the "progressive linear framework" of cultural hierarchies. Accordingly, in the context of the investigation of *Naturvölker*, cultural stages of a race were correlated to physical characteristics. Nevertheless, as Massin has emphasised, although "the implicit hierarchy was simply taken for granted" liberal anthropologists were "too cautious"[49] to construct definite representations of these implicit racial hierarchies and evaluations. Similarly, Massin has stated that Virchow "somewhat reluctantly, admitted that the orbital arch of the Australians could be considered as a 'pithecoid' or 'simian' character."[50]

Andrew D. Evans has similarly indicated that liberal physical anthropologists were not as strict with their categorical separation of race from culture, stating that "at times, such assumptions of cultural hierarchy crossed into physical and racial categorizations."[51] Accordingly, he also has interpreted Virchow's comments about the "carriers of the highest culture" and the Australians' "lowest levels of culture" as an indication that Virchow "was not immune" to linking race with culture. However, Evans has taken Virchow's view of the *Stirnfortsatz*'s counter-indication for "progressive development" out of its anti-Darwinian context of human evolution. Accordingly, he has analysed it as "a statement which ultimately questioned any connection between physical type and cultural advancement."[52]

Following my analysis of Ecker's and Lucae's investigations, I would argue that Virchow's view of Australian Aborigines was not the exception. It rather was the general view of Australian Aborigines as a lower race that was then common among European anthropologists. It contradicts the view of him as the epitome of and guardian over the liberal-humanist tradition in late-nineteenth-century German anthropology. His investigation and his conclusions show that only some of the elements defining this tradi-

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[48] Benoit Massin, "From Virchow to Fischer. Physical Anthropology and 'Modern Race Theories' in Wilhelmine Germany," in *Volksgeist as Method and Ethic: Essays on Boasian Ethnography and the German Anthropological Tradition*, ed. George W. Stocking (Madison, Wisconsin: University of Wisconsin Press, 1996), 97.

[49] Ibid., 99.

[50] Ibid., 98. As mentioned, Virchow referred to the *Stirnfortsatz*, not the eye brow region (which nevertheless was also commonly considered as an ape characteristic).

[51] Andrew D. Evans, "A Liberal Paradigm? Race and Ideology in Late-Nineteenth-Century German Physical Anthropology," *Ab Imperio* 8, no. 1 (2007): 130.

[52] Ibid.

tion can be discerned in Virchow's deliberations about the characteristics of supposedly lower races. He insisted on the application of the statistical inductive method, albeit acknowledging that his investigation was inevitably flawed by the inaccessibility of comprehensive "material" – especially with regard to the skeletal remains of Australia's indigenous populations. Reluctant to draw clear conclusions, Virchow repeatedly asserted the provisional nature of physical anthropological investigations and their findings until the discipline had worked out its methodology and statistical basis. Regarding the separation of race and culture, however, Virchow's 1875 and 1880 investigations of the "characteristics of the lower races" show that he did not reject the establishment of racial hierarchies. Quite the opposite, the distinction between "lower" and "higher" races was a premise for the choice of his samples, their investigation and the interpretation of his findings.

8 Hermann Klaatsch's "Australoid" common ancestors

At the turn of the century, Darwinian evolutionary theory still was not widely accepted among Germany's physical anthropologists. In the late nineteenth century and in the first decade of the twentieth, a variety of hominid fossil remains were unearthed, which Darwinists presented as the proof for human evolution from one or another form of primates. Despite their constant demand for such empirical evidence, German anti-Darwinian critics around Virchow continued to reject that, for example, the skeletal fossils of Java Man in Indonesia (1891/1892) or the Neanderthaloid remains discovered in Croatia (1899-1905) could be interpreted as "the missing link".

One of those who, so to speak, in succession of Schaaffhausen, came into conflict with the anti-Darwinian establishment was Hermann Klaatsch (1868-1916), an outspoken Darwinist, who believed the human species had gradually evolved from a primate mammal ancestor on a vanished continent in the southern hemisphere. Based on this hypothesis and his physical anthropological investigations of hominid fossils as well as the skeletal remains of predominantly Australian Aborigines, Klaatsch travelled to Australia from 1904 to 1907 in search of the origins of humankind. According to Klaatsch, Australia's pre-human inhabitants presented the "Australoid root" of all human races whose closest relatives were Australian Aborigines, still carrying its anatomical residues in their bodies.

In this chapter I shall investigate Klaatsch's physical anthropological investigations of Australian Aboriginal human remains and their utilisation for his theory on human evolution and racial diversification before, during and after his Australian journey. I shall first show how Klaatsch continued the work of Ecker and Lucae by investigating, (albeit on a larger and international scale) the skeletal remains of Australian Aborigines that had by then been appropriated for German and other European anthropological institutions. Unlike Ecker, Lucae and most of his German compatriots, Klaatsch was particularly interested in those skulls and bones as material evidence for his hominisation

theories, making it a "necessity"[1] for him to leave the arm chair and travel to Australia. In the second part of this chapter, I shall explore Klaatsch's approach to the *Ur-Australier* while he was in Australia, with a particular focus on his encounters with Aboriginal people. I shall argue that Klaatsch's apparent ambivalence about reducing human beings to scientific material and, at the same time, acknowledging their social existence as worthy of respect and protection, did not present a lasting contradiction within the work of the enquiry-driven scientist. I shall show that, throughout a diverse set of experiences, Klaatsch regarded Aborigines foremost as anthropological "material", delivering bodily evidence for his definition of the original, genuine *Australier* type and its assumed original stage in human evolution. In the last section, I shall outline how Klaatsch utilised both his "material" and his experiences with living Australian Aborigines for his further anthropological work.

8.1 Before Australia – Klaatsch's *Neue Anthropologie* and the "most interesting material" of the *Australier* skeleton

Klaatsch's Gegenbaurian methodological approach

A medical student in Heidelberg in the early 1880s, Klaatsch became one of Karl Gegenbaur's (1826-1903) students, absorbing his teacher's approach to the investigation of anatomy.[2] Gegenbaur, "surely one of the most important morphologists"[3] of the time, had worked together with Haeckel in Jena; both embraced and quickly adopted Darwin's ideas into their own fields of research.[4] Based on the comparative method, their program of "Darwinian Morphology" aimed at finding "the evolutionary laws of form."[5] Gegenbaur sought to explain similarities in vertebrate organisms by gradual change

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[1] Bruno Oetteking, "Hermann Klaatsch," *American Anthropologist* 18 (1916): 423.

[2] Lynn K. Nyhart, *Biology Takes Form. Animal Morphology and the German Universities, 1800-1900* (Chicago: University of Chicago Press, 1995), 211. For references by Klaatsch to Gegenbaur see e.g. Hermann Klaatsch, "Die Stellung des Menschen in der Reihe der Säugetiere. Speciell der Primaten und der Modus seiner Herausbildung aus einer niederen Form. Teil 2," *Globus* 76, no. 22 (9 December 1899): 354; Hermann Klaatsch, "Die wichtigsten Variationen am Skelet der freien unteren Extremität des Menschen und ihre Bedeutung für das Abstammungsproblem," *Ergebnisse der Anatomie und Entwickelungsgeschichte* 10 (1900): 607; Hermann Klaatsch, "Entstehung und Entwickelung des Menschengeschlechtes," in *Weltall und Menschheit*, ed. Hans Kraemer (Berlin: Bong & Co., 1902), 26; Hermann Klaatsch, "Kraniomorphologie und Kraniotrigonometrie," *Archiv für Anthropologie* 36/n.s. 3 (1909): 123; Hermann Klaatsch, "Die Aurignac-Rasse und ihre Stellung im Stammbaum der Menschen," *Zeitschrift für Ethnologie* 42 (1910): 520.

[3] Nyhart, *Biology Takes Form*, 22.

[4] Ibid., 150.

[5] Ibid.

through processes of Darwinian adaptation.[6] Accordingly, the investigation of modern organisms provided information about their ancestral forms, based on the assumption that anatomical characteristics represented evolutionary stages. Thereby, the course of, for example, the evolution of skeletal features became traceable, from an ancient, primitive form to a modern, higher developed one.[7] On these premises, Gegenbaur aimed at determining the evolutionary trajectories of all vertebrates from one common ur-form.[8] Although comparative anatomy was traditionally concerned with animal biology, Gegenbaur included the human as a vertebrate mammal into his research. Regarding his "program of vertebrate evolutionary morphology"[9] as crucial for the instruction of physicians (such as Klaatsch), he emphasised the genetic connection of the human to the animal world.[10]

Klaatsch's scientific career has been described as divided into two phases, beginning with his training and work in comparative and descriptive anatomy and then shifting to physical and paleo-anthropology and human prehistory.[11] Until the late 1890s, Klaatsch's work concerned vertebrate morphology,[12] tracking the evolution of the extremities and the spinal skeleton and musculature according to Gegenbaur's scheme.[13] As he combined such investigations with arguments based on paleontological and geological reading, for Klaatsch, a link between vertebrate anatomy and human evolution seemed not far to draw. Consequently, unlike most disciples of the Gegenbaur School who remained in the area of animal investigation, he "moved away from the broad comparative anatomy of the vertebrates to focus on human anatomy"[14] and human evolution. From the late 1890s onwards, Klaatsch applied the Gegenbaurian method to the investigation of living and extinct primates, human fossil remains and modern humans. In his endeavour to determine humanity's and the apes' common ancestor, he developed an interdisciplinary methodological approach to physical anthropology, or *Neue An-*

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[6] Christian Mitgutsch, "On Carl Gegenbaur's Theory on Head Metamerism and the Selection of Taxa for Comparisons," *Theory in Biosciences* 122 (2003): 217.

[7] Nyhart, *Biology Takes Form*, 154, 210, 220.

[8] Ibid., 154; Mitgutsch, "Carl Gegenbaur's Theory," 219.

[9] Nyhart, *Biology Takes Form*, 216.

[10] Ibid., 221.

[11] Richard Wegner, "[Obituary] Hermann Klaatsch," *Anatomischer Anzeiger* no.23 (1916): 613.

[12] Ibid., 613–15.

[13] Dietrich Wegner and Heinz Klaatsch, "Hermann Klaatsch gegen Rudolf Virchow: Ein Berliner Wissenschaftler verhilft der Neandertalerforschung in Deutschland zum Durchbruch," *Acta Praehistorica et Archaeologica* 35 (2003): 140–42.

[14] Nyhart, *Biology Takes Form*, 211.

thropologie[15] (new physical anthropology). His aim was to bring Gegenbaur's evolutionist "comparative anatomical research in connection with the newest results from palaeontology and physical anthropology,"[16] as well as geology and embryology.

With this methodological approach, Klaatsch not only positioned himself decidedly in the tradition of first generation Darwinists, who emphasised human animal descent (such as Huxley or Haeckel and, eventually, Darwin himself).[17] But he also criticised the physical anthropologists' preoccupation with skulls as restricted and out-dated. Demoting craniology into an ancillary method in a much broader field of physical anthropological investigation, Klaatsch complained that its classificatory and metric results had not answered the questions of racial differentiation of the human kind. Instead, he called for the most detailed measurements of entire bodies, skeletons and soft tissue of both fossil and modern humans and apes.[18] (As I shall show below, notwithstanding his apparent criticism of craniology, Klaatsch himself searched for signs of animal ancestry in Australian Aboriginal skulls.) According to Klaatsch, it was the task of the "young, Darwin-educated generation"[19] among Germany's physical anthropologists to investigate the nature and origin of the common ancestor. Its anatomical past, in his view, had been retained as collective race traits in "uncivilised races" and as non-functional residual organs (atavisms) in individuals.[20]

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[15] For example Klaatsch, "Skelet der unteren Extremität," 607–9; Hermann Klaatsch "Ueber die Variationen am Skelete der jetzigen Menschheit in ihrer Bedeutung für die Probleme der Abstammung und Rassengliederung," *Correspondenzblatt der Deutschen Gesellschaft für Anthropologie, Ethnologie und Urgeschichte* 33, no. 11/12 (November/December 1902): 133-134, 146, 152; Hermann Klaatsch, "Die Fortschritte der Lehre von den fossilen Knochenresten des Menschen in den Jahren 1900-1903," *Ergebnisse der Anatomie und Entwicklungsgeschichte* 12 (1902): 643; Klaatsch, "Kraniomorphologie und Kraniotrigonometrie,"101.

[16] Hermann Klaatsch, "Die Stellung des Menschen in der Reihe der Säugetiere. Speciell der Primaten und der Modus seiner Herausbildung aus einer niederen Form. Teil 1," *Globus* 76, no. 21 (2 December 1899): 329, 330; Hermann Klaatsch, "Der kurze Kopf des Musculus biceps femoris und der Tennuissimus – Ein stammesgeschichtliches Problem," *Morphologisches Jahrbuch* 29 (1900): 273; Hermann Klaatsch, "Die fossilen Knochenreste des Menschen und ihre Bedeutung für das Abstammungsproblem," *Ergebnisse der Anatomie und Entwicklungsgeschichte* 9 (1899): 423–38.

[17] Throughout his career he frequently referred to the ideas and scientific approaches of Charles Darwin, Thomas Huxley, Ernst Haeckel and his teacher Karl Gegenbaur.

[18] Klaatsch, "Musculus biceps femoris," 244.

[19] Hermann Klaatsch, "Der gegenwärtige Stand der Pithecanthropus-Frage," *Zoologisches Centralblatt* 6, no. 7 (4 April 1899): 226.

[20] Klaatsch, "Stellung des Menschen (1899)," 330.

Pithecanthropus and *Proanthropus*

Klaatsch asserted the relevance of such races as bearers of ancestral residues for the first time in 1899, reviewing the contemporaneous discussion of the Java Man remains.[21] These famous fossils were discovered in 1891/1892 by the Dutch paleo-anthropologist Eugène Dubois (1858-1940) who specifically searched for Haeckel's hypothetical ape-man.[22] Haeckel had postulated an "important intermediate form"[23] in his evolutionist genealogical trees that linked anthropoid apes to the human kind,[24] naming these upright-walking creatures "speechless Ur-humans (*Alali*)"[25] or *Pithecanthropus Alalus* ("speechless ape-man"[26]). This intermediate form was supposed to be anatomically human with the exception that it had no larynx and a small animal brain. It thus was neither capable of speech nor had it human reason.[27] Haeckel suggested the creature lived on a sunken continent called Lemuria, located in the South-Asian region, from where he believed the human species to have originated. Unlike the sceptics of Darwinian modes of human evolution, who called for the ossified proof of the missing link, he saw no need for fossilised evidence. To him, comparative linguistics was "positive proof"[28] for the existence of his hypothetical ape-man, alongside his recapitulation theory (based on his embryological and comparative morphological findings).[29] Dubois, in contrast, was convinced that the missing link remained mere theory unless direct paleontological proof was provided.[30] The Java fossils' anatomical features pointed to the creature's relatively large brain and its upright posture. Dubois named it *Pithecanthropus erectus* (or "upright-walking ape-man"[31]), classifying it as a transitional species that linked the

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[21] Klaatsch, "Stand der Pithecanthropus-Frage." The article resulted from a lecture held in Heidelberg. Wegner, "Hermann Klaatsch," 616.

[22] Bert Theunissen, *Eugène Dubois and the Ape-Man from Java. The History of the First Missing Link and its Discoverer* (Doordrecht: Kluwer Academic Publishers, 1989), 53–54.

[23] Ernst Haeckel, *Anthropogenie. Keimes- und Stammes-Geschichte des Menschen* (Leipzig: Wilhelm Engelmann, 1874), 491.

[24] Ibid., 491; Ernst Haeckel, *Natürliche Schöpfungsgeschichte*, 4th augm. ed. (Berlin: Georg Reimer, 1873), 590–91.

[25] Haeckel, *Natürliche Schöpfungsgeschichte*, 590.

[26] Ibid.

[27] Ibid., 590–91; Haeckel, *Anthropogenie*, 491.

[28] Haeckel, *Natürliche Schöpfungsgeschichte*, 591.

[29] Theunissen, *Ape-Man from Java*, 13.

[30] Ibid., 31.

[31] Ibid., 1. Based on his erroneous computation of the creature's smaller cranial capacity Dubois initially regarded the remains as belonging to an upright-walking man-ape (*Anthropopithecus erectus*) but he eventually reversed his finding, tending towards humanness rather than apishness through the label. Ibid., 58–60.

human kind closer to animal relatives than any of the previously unearthed human(like) fossils.[32]

In his review, Klaatsch recapitulated the international debate caused by Dubois's postulation of an ape-man species that combined human with apish features.[33] To some, the finding appeared contradictory, leading them to declare the creature as either an ape or a human, or to assign the different fossil parts to two individual creatures, one human, one animal. Klaatsch accordingly distinguished among Dubois's opponents between *Pithecisten* and *Anthropisten*[34] and called for the acceptance of the (Darwinian) "middle position."[35] Whereas he dismissed the creature as a direct predecessor of the modern human species, he suggested it was a gibbon-like ancestral creature[36] that represented one of many unsuccessful "attempts at becoming human."[37] This classification resulted from his theory of hominisation, which he promoted at the German Anthropological Society's meetings and published in a number of scientific and popular science journals between 1899 and 1901.

Klaatsch denounced as too simplistic the idea that the human species was directly related with anthropoid apes or had evolved from one or another of the great apes.[38] He proposed (on the basis of Darwinian evolution principles and Gegenbaur's "Darwinian Morphology") that the separation of the eventually human form and the ancestors of monkeys and apes had occurred at the lowest primate level of a "pro-simian."[39] This ancestral mammal had evolved from an ur-mammal, presenting a generalised morphology of "primitive" features that were not specialised to perform specific tasks; for example, its hands and feet, according to Klaatsch, had opposable first digits for the purposes of grabbing and climbing.[40] Arguing that human hands and feet represented the

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[32] Ibid., 58.

[33] Dubois claimed the fossils (a skull cap, a femur and two molar teeth) belonged to one individual.

[34] Klaatsch, "Stand der Pithecanthropus-Frage," 226.

[35] Ibid.

[36] Ibid., 222.

[37] Ibid., 227.

[38] Klaatsch, "Stellung des Menschen Säugetiere (1899)," 329–30, 354; Klaatsch, "Fossilen Knochenreste des Menschen," 492.

[39] Hermann Klaatsch, "Die Stellung des Menschen in der Primatenreihe und der Modus seiner Hervorbildung aus einer niederen Form," *Mittheilungen der Anthropologischen Gesellschaft in Wien* 30/n.s. 20 (1900): 89.

[40] Ibid.; Klaatsch, "Stellung des Menschen (1899)," 332.

"age-old state"[41] of the mammal common ancestor, Klaatsch distanced himself from the popular science Darwinian notion that there (had) existed a missing link which directly connected the human to an anthropoid ape.[42] In Klaatsch's scheme, the ur-ape and the ancestral human form had evolved in separate lines from the pro-simian.[43] The ape line, which, among others, eventually produced the anthropoid apes, developed more physical specialisations; most importantly, in the process of their struggle for survival, some of their body parts evolved into weapons for fight and tools for flight.[44] Their facial anatomy, for example, changed through the transformation of their dentition into a weapon, resulting in the specialisation of canine teeth[45] which then enlarged and projected the jaw forward.

Unlike the ape descendants of the pro-simians, the *Proanthropos* line did not experience the pressure for such specialisation. Klaatsch argued that it existed under conditions in which the mechanisms of natural selection and the struggle for existence did not apply,[46] fostering the physical transformation of a larger brain that otherwise would not have survived: "The first steps towards a dominant brain development could only have been taken in a mild consistent climate, where the loss of fur could have occurred, in a region, that was not inhabited by too fierce enemies."[47] Whereas human nakedness was the result of sexual selection, Klaatsch surmised that rather than fighting animal enemies, *Proanthropos* had struggled within its own and with other similar primate species.[48] These conditions had existed on extensive pre-ice age landmasses in the northern hemisphere in a still subtropical climate. There the pre-human species benefited from the increasing "mighty development of the brain"[49] while the rest of its body retained its original mammal characteristics. Accordingly, it retained the "primitive" mammal jaws and teeth; that is, its non-specialised, "indifferent"[50] dentition served for eating rather than defence and hunting.[51] Like their apish "cousins"[52] they had retained their "primi-

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[41] Klaatsch, "Musculus biceps femoris," 273.
[42] Klaatsch, "Stellung des Menschen (1899)," 354.
[43] Ibid.; Klaatsch, "Stellung des Menschen (1900)," 91.
[44] Klaatsch, "Stellung des Menschen (1899)," 354.
[45] Klaatsch, "Stellung des Menschen (1900)," 89.
[46] Ibid., 91; Klaatsch, "Fossilen Knochenreste des Menschen," 492.
[47] Klaatsch, "Stellung des Menschen (1900)," 91.
[48] Ibid.
[49] Ibid., 89.
[50] Ibid., 90.
[51] See also Klaatsch, "Musculus biceps femoris," 857–58.

tive" mammal hands and feet for grabbing and climbing, moving around in a "climbing, half-erect gait."[53] From this posture, however, the transformation of a "grabbing foot into a supporting foot remained the last step on their path to becoming human."[54]

Because the human and the anthropoid lines emerged from the same primitive ur-primate, "the human share[d] common traits with all primates."[55] Similarly, racial diversification in Klaatsch's scheme occurred only shortly after the separation of the ape's from the pre-human line: "As different pithecoid traits have been preserved in the main types of the races, the Negroids, Mongoloids and Europeans, the division of the races can be searched for not far from the branching off of the species *Homo* from the great ape species."[56] Consequently, as a result of the geological transformations of the earth, these pre-human races spread across the globe, acquiring different skin colours through sexual selection rather than the environment. Thus, in this polygenetic scheme, each modern configuration of these ancient racial trajectories still presented some of its not-yet-human predecessor's traits. It made "the search for pithecoid characteristics in the lower races ... doubly promising," in particular for those physical anthropologists who turned their "morphologically sharpened eye"[57] towards the deciphering of hominisation processes in the long gone past.

This search would only be successful, however, if physical anthropologists embarked on a "new evolutionary path"[58] by accepting, on the one hand, that humans had evolved from animals. On the other hand, they should focus less on the discovery of the missing link and search instead for its remnant traits in living "lower" human races[59] – otherwise, Klaatsch warned, race investigations only produced useless "dead material."[60] Additionally, they had to subscribe to Klaatsch's *Neue Anthropologie*, the comprehensive comparative investigation method that was not limited to single traits but

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[52] Klaatsch, "Stellung des Menschen (1899)," 354. See also Klaatsch, "Fossilen Knochenreste des Menschen," 492.

[53] Klaatsch, "Musculus biceps femoris," 274.

[54] Ibid.

[55] Klaatsch, "Stellung des Menschen (1900)," 89.

[56] Ibid., 91. See also Klaatsch, "Stand der Pithecanthropus-Frage," 227.

[57] Klaatsch, "Stand der Pithecanthropus-Frage," 228. See also Klaatsch, "Stellung des Menschen (1900)," 91.

[58] Klaatsch, "Stand der Pithecanthropus-Frage," 228.

[59] Klaatsch, "Stellung des Menschen (1900)," 91.

[60] Klaatsch, "Stellung des Menschen (1899)," 355.

considered "exactly the combinations of different characteristics"[61] in the bodies and organs of "primates and the human types in their varietal conformations and race specialisations [which] provide[d] gigantic material for this"[62] endeavour. As an example, Klaatsch cited the British anatomist David Hepburn (1859-1931) who compared *Pithecanthropus*'s fossilised thighbone with those of "various modern races, both savage and civilised,"[63] including "Maori," "Aboriginal Australian" and "several dozens of European and British femora."[64] While Hepburn concluded the fossil thighbone characteristics remained within the boundaries of human variation, he also pointed to their predominance in particular races. For example, after devising an index for measuring the cross section of the femoral lower end, he emphasised that "from the frequent occurrence of the condition among certain races, one would suppose that at least the Australian aborigines [sic], Andamans, Bushmen, and some other tribes, are not far removed from the original possessors of this characteristic."[65] To Klaatsch, Hepburn's investigation highlighted some "new aspects for the evaluation of the lower races' states,"[66] supposedly confirming that through the comparison of their anatomy with that of fossil hominid remains "the apparent gap between *Pithecanthropus* and *Homo europaeus* is reduced."[67] In other words, Klaatsch regarded "lower races" as genetically connected to a creature that represented an extinct hominisation failure.

Klaatsch's review of the *Pithecanthropus* debate is thus indicative of the significance he assigned to the comparison of the skeletal features of hominid fossils and "lower races" for the tracing of the common primate ancestor. Published in a zoological journal, this article was Klaatsch's first physical anthropological piece, in which he aired his ideas on human evolution, racial diversification and the appropriate methodology for determining the bodily signifiers for these processes. At this point in time, the "lower races" comprised the already established conglomerate of human groups labelled evolutionary primitive, such as "Bushmen," Africans, Andamans, Australian Aborigines and

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[61] Klaatsch, "Stand der Pithecanthropus-Frage," 231.

[62] Klaatsch, "Stellung des Menschen (1900)," 91.

[63] David Hepburn, "The Trinil Femur (Pithecanthropus Erectus), Contrasted with the Femora of Various Savage and Civilised Races," *Journal of Anatomy* 31/n.s. 11 (1896): 1.

[64] Ibid., 4.

[65] Ibid., 10. Hepburn further speculated "one is forcibly reminded of the theory which, from the weapons, domestic implements, folk-lore, and rock-drawings, ascribed to these tribes a common ancestry on a continent now submerged in the Indian Ocean."

[66] Klaatsch, "Stand der Pithecanthropus-Frage," 224.

[67] Ibid.

so on. In the following years, however, Klaatsch increasingly focussed on Australian Aborigines whose bodies, he thought, revealed ape-like or otherwise "primitive" ancestral characteristics.[68] Thereby, according to Klaatsch, they told the story of humankind's "physical prehistory"[69] on its evolutionary trajectory from the primate ur-form to the "crown"[70] of the mammals, the human species.

Whereas his "zoological" publication went largely unnoticed, Klaatsch ignited a lot of opposition with his theory only a few months later, when he presented it to the physical anthropologists attending the German Anthropological Society's annual convention. Much to his surprise, Darwinian evolutionary theory was still not well received in the anthropological community. As Klaatsch told the readers of the popular science journal *Globus* several months after he presented his paper in Lindau, he expected Darwinian theory and especially Ernst Haeckel's argument had "smoothed the way" for the acceptance of "Man's animal descent." Therefore, he was "amazed" at "the most vehement" criticism that his elaborations incited. After Klaatsch finished his presentation, the first holder of a university chair of anthropology in Germany, the Munich professor Johannes Ranke, protested, shouting "This is not science, this is fantasy."[71] This rejection prompted Klaatsch to spend the following years zealously publishing evolutionist comparative morphological studies with the aim to establish his theory (and methodology) against "Virchowpithecus"[72] and his school.

Klaatsch's "Australoid root" and the *(Ur-)Australier*

Klaatsch had been interested in physical anthropological questions since he attended the annual meeting of the German Anthropological Society two years earlier,[73] where he befriended Otto Schoetensack (1850-1912).[74] A lecturer for prehistory at Heidelberg University, Schoetensack undertook archaeological excavations in the hope of finding

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[68] Klaatsch emphasised the difference between "primitive" and "pithecoid" (apelike); "primitve" referred to original ancestral mammal characteristics and they needed not occur as resemblances to anthropoid or other ape features. Klaatsch, "Skelet der unteren Extremität," 711.

[69] Ibid., 606; Klaatsch, "Stellung des Menschen (1899)," 354; Klaatsch, "Entwickelung des Menschengeschlechtes," 72.

[70] Klaatsch, "Stellung des Menschen (1900)," 89.

[71] Klaatsch, "Stellung des Menschen (1899)," 329.

[72] Wegner and Klaatsch, "Klaatsch gegen Virchow," 144.

[73] Ibid., 143.

[74] Ibid.; Corinna Erckenbrecht, "Vom Forschungsziel zur Sammelpraxis," *Kölner Museums-Bulletin. Berichte und Forschungen aus den Museen der Stadt Köln*, no. 3 (2006): 3; Wegner and Klaatsch, "Klaatsch gegen Virchow," 142, 143.

human fossil remains.[75] Convinced by Darwinian evolutionary theory and sharing an interest in primate anatomy and hominid fossils, Klaatsch and Schoetensack soon after discussed questions of human evolution.[76] From 1901 onwards, Schoetensack proposed a theory that put emphasis on "the significance of Australia for the evolution of the human from a lower form"[77] which made significant references to Klaatsch's physical anthropological investigations.[78] While Klaatsch and Schoetensack aired their views independently in separate publications, each of them referred to the other's work, and Klaatsch was "stimulated" to travel to Australia on the basis of Schoetensack's theory.[79]

In Schoetensack's "Out-of-Australia"[80] scheme, it was the Southern Hemisphere that provided for the processes of hominisation[81] after a conjectural horde of prehumans had reached a hypothetical Indo-Australian continent via still existing land bridges.[82] Australia, the "ur-germ cell of humanity"[83] (*Urkeimzelle der Menschheit*), welcomed the hypothetical creature with its mild climate, special landscape, flora and fauna.[84] While Schoetensack mainly drew on ethnological information about Australia's

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[75] Wolfgang Schoetensack and Jürgen Schoetensack, "Das Leben von Prof. Dr. Otto Schoetensack. 12. Juli 1850 - 23. Dezember 1912," in *Homo Heidelbergensis von Mauer. Das Auftreten des Menschen in Europa*, ed. Günther A. Wagner and Karl W. Beinhauer (Heidelberg: Universitätsverlag C. Winter, 1997), 66–68. Schoetensack finally succeeded and discovered the famous Mauer jaw fragment near Heidelberg in 1907 (*Homo heidelbergensis*). Erckenbrecht, "Vom Forschungsziel zur Sammelpraxis," 27.

[76] Wegner, "Hermann Klaatsch," 615; Wegner and Klaatsch, "Klaatsch gegen Virchow," 142.

[77] Otto Schoetensack, "Die Bedeutung Australiens für die Heranbildung des Menschen aus einer niederen Form," *Zeitschrift für Ethnologie* 33 (1901): 127–54; Otto Schoetensack, "Erläuternde Bemerkungen zu meiner Abhandlung 'Über die Bedeutung Australiens für die Heranbildung des Menschen aus einer niederen Form'," *Zeitschrift für Ethnologie* 34 (1902): Verhandlungen, 104. Schoetensack published his 1901 article anew with slightly amended content in 1904, having presented it as his inaugural lecture for his new post as professor at Heidelberg University. Otto Schoetensack, "Die Bedeutung Australiens für die Heranbildung des Menschen aus einer niederen Form," *Verhandlungen des Naturhistorisch-medizinischen Vereins zu Heidelberg* n.s. 7 (1902-1904): 105–13. I refer to the 1901 article.

[78] Wegner and Klaatsch, "Klaatsch gegen Virchow," 142, 143; Corinna Erckenbrecht, *Auf der Suche nach den Ursprüngen. Die Australienreise des Anthropologen und Sammlers Hermann Klaatsch 1904-1907* (Köln: Wienand Verlag, 2010), 27–28, 49–50; Lothar Schott "Monophyletische oder polyphyletische Abstammung der Menschheit? Zu den Auseinandersetzungen um entsprechende Gedankengänge von Ernst Haeckel, Rudolf Virchow und Hermann Klaatsch," *Ethnographisch-Archäologische Zeitschrift* 14 (1973): 120.

[79] Hermann Klaatsch, "Ueber die Ausprägung der specifisch menschlichen Merkmale unserer Vorfahrenreihe," *Correspondenzblatt der Deutschen Gesellschaft für Anthropologie, Ethnologie und Urgeschichte* 32, no. 10 (October 1901): 106, 107.

[80] Erckenbrecht, "Vom Forschungsziel zur Sammelpraxis," 27.

[81] Klaatsch, "Merkmale unserer Vorfahrenreihe," 106; Klaatsch, "Skelet der unteren Extremität," 719; Klaatsch, "Entwickelung des Menschengeschlechtes," 202–6.

[82] Schoetensack, "Die Bedeutung Australiens," 131, 133, 136. This was, of course, reminiscent of Haeckel's Lemuria, but neither Klaatsch nor Schoetensack referred to Haeckel in this context.

[83] Hermann Klaatsch, "Nachruf auf Otto Schoetensack," unpubl. obituary, quoted in Erckenbrecht, "Vom Forschungsziel zur Sammelpraxis," 28.

[84] Schoetensack, "Die Bedeutung Australiens," 133 (enemies), 146 (eucalyptus).

original inhabitants, Klaatsch looked at the "anatomical-physiological side of the problem,"[85] reiterating the hominisation trajectory from a semi-upright walking and climbing pro-simian with opposable thumbs and big toes into a two-handed pre-human with a supportive, plantar foot structure that enabled the upright gait.[86] On this occasion, Klaatsch for the first time referred to Australian Aborigines (alongside Vedda peoples) to demonstrate the preservation of pre-human characteristics in "the lower races." Exemplifying the ancient opposable nature of the primitive big toe, he argued both races were "still" able to use the first two toes as a grabbing tool, pointing out that Australian Aborigines "carry their spears in this way and the Veddas ... draw the bow with the foot."[87] Inspired by Schoetensack's idea, that the pre-humans in Australia's landscape of scattered trees existed as partly tree- and partly ground-dwelling creatures,[88] Klaatsch differentiated the "climbing mechanism"[89] of the human predecessor from that of the apes. As the climbing of free-standing trees demanded a different anatomy than the apish locomotion in primeval forest, he suggested the transformation of the grabbing foot structure into one more suited to climbing scarcely branched (eucalyptus) trees occurred gradually; namely through the "pressing"[90] of the inner sole onto the trunk while pushing the erect upper body upwards.[91] Such "gymnastic"[92] activity resulted not only in a decreasing relevance of the big toe's opposition,[93] but also in the "peculiar human development of the arm and breast muscles"[94] and the curves of the human spine. To demonstrate this (I would argue rather Lamarckian) mechanism that was preparatory for the eventual upright walk of the truly human species, Klaatsch presented an image published by Schoetensack, depicting "a climbing *Australier*" (figure 23).

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[85] Klaatsch, "Merkmale unserer Vorfahrenreihe," 106.

[86] Ibid., 102–5.

[87] Ibid., 105.

[88] Hermann Klaatsch, "Bericht über einen anthropologischen Streifzug nach London und auf das Plateau von Süd-England," *Zeitschrift für Ethnologie* 35 (1903): 877n2.

[89] Klaatsch, "Merkmale unserer Vorfahrenreihe," 106.

[90] Ibid.

[91] Ibid., 106–7.

[92] Ibid., 106.

[93] Ibid.

[94] Ibid., 107.

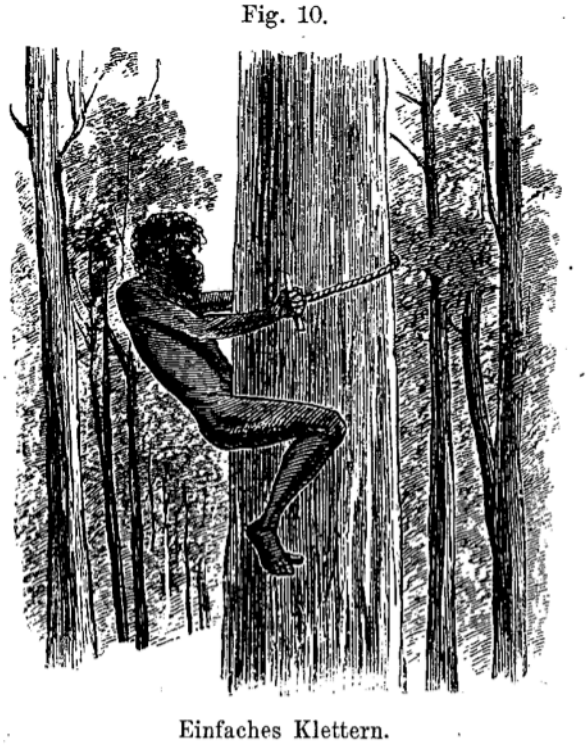

Figure 23 "Easy climbing" ***Ur-Australier***[95]

Based on his methodology of comparing complexes of traits in human fossils with those of modern human races, Klaatsch investigated their arm and leg bones, always urging for more investigations of the skeletal remains of "the lower races."[96] Between 1901 and 1903, he visited a variety of German and European physical anthropological collections[97] in search of the "primitive" and "pithecoid characteristics"[98] of both hominid remains (such as the Neanderthal fossils) and modern humans. Investigating "race skeletons,"[99] he found that those "of the native Australians turned out to be the most interesting material" because they presented "a range of variation" that was "a lot broader and at the same time lower than in the higher races."[100]

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[95] Schoetensack, "Bedeutung Australiens," 148. According to Schoetensack, he replicated this image from the German translation of Carl Lumholtz's account of his travels in Australia. On Lumholtz see H. J. Gibbney, "Lumholtz, Carl Sophus (1851-1922)," in *Australian Dictionary of Biography* Vol 5 (Melbourne University Press, 1974).

[96] See e.g. Klaatsch, "Skelet der unteren Extremität," passim.

[97] Hermann Klaatsch, "Das Gliedmassenskelet des Neanderthalmenschen," *Anatomischer Anzeiger* 19 (1901): 125, 151; Erckenbrecht, *Australienreise*, 51 (Leipzig); Klaatsch, "Skelete der jetzigen Menschheit," 133.

[98] Klaatsch, "Stellung des Menschen (1899)," 355.

[99] Klaatsch, "Gliedmassenskelet des Neanderthalmenschen," 125.

[100] Klaatsch, "Skelete der jetzigen Menschheit," 136. He undertook research on Australian Aboriginal skeletal remains in several German anthropological collections as well as in Paris, Leiden, and London.

This evaluation of variation range resulted from Klaatsch's solution to the problem, which all physical anthropologists (including Blumenbach, Ecker and Lucae) faced; that is, the "almost insurmountable difficulty" posed by the "individual variability in the human kind." Admitting that this caused an "enormous chaos of singular observations," Klaatsch insisted that this "apparent lawlessness"[101] in fact provided the pivotal proof for his theory of human evolution from an "Australoid root"[102] in the four parallel lines of "Mongoloids, Negroids and Europeans" and *Australier*.[103] Because, according to Klaatsch, skeletal characteristics represented either residues of bygone evolutionary stages or progressions and regressions from the common ur-ancestral stage,[104] all descendants of these lines retained "combinations of characteristics"[105] from their Australoid ancestral form. The make-up of these combinations, however, varied individually within a specific range; in other words, it was neither possible to infer a skeleton's race affinity from a particular characteristic or measurement, nor could it be expected to find such characteristics in every skeleton of a particular race.[106] Emphasising the importance of determining these complexes of race traits, he postulated a hierarchy within their variation ranges "of which the Australoid level in its higher conformations equals with the lower stages of the others."[107]

Based on his skeletal investigations, Klaatsch claimed to have found manifold complexes of characteristics in Australian Aboriginal skeletons that confirmed their inferior state, for example, with a view to their "lesser degree of adaptation to the erect posture"[108] in comparison with all other human races. Although the evolution of the human upright posture was initiated by a tree climbing and ground dwelling "Australoid root", modern *Australier* had failed to complete the process, at least with respect to morphology and possibly also function. In addition to their retarded foot structure, Klaatsch claimed that the Aboriginal leg bones he had investigated in European anthropological collections showed other markers for pre-upright walking constraints,[109] link-

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[101] Ibid., 134.
[102] Ibid., 137.
[103] Ibid., 137, 145.
[104] Ibid., 135.
[105] Ibid., 136.
[106] Ibid., 136–37.
[107] Ibid., 137.
[108] Ibid., 136.
[109] Ibid., 139.

ing them to the legs of Europe's Old Stone Age human species.[110] Accordingly, their leg musculature was "delicate," having remained in a "weak condition."[111] He further thought to have found evidence for "the inferior composition of the *Australier* spine,"[112] which he, again, associated with a not quite upright gait. Based on similar interpretations of "all other parts of the skeleton," Klaatsch declared that "the current remainders of the Australian ur-population present to us conditions, which stand closer to the animal forebears of our kind than any other race."[113] Consistently, while they were human and had evolved (a little bit) from humanity's common Australoid root,[114] Australia's indigenous population "ha[d] to be positioned on the lowest level of today's humanity."[115] This equating of pre-human with modern physical conditions clearly explains why Klaatsch used the terms *Australier* and *Ur-Australier* indiscriminately when relating to modern Australian Aborigines.

From Klaatsch's presentation of these investigations and interpretations at the German Anthropological Society's meeting in Dortmund, it becomes clear that by 1902 he focussed his research on comparing Australian Aboriginal bones and skulls with those of hominid fossils. Searching for complexes of "lower traits" in the former in order to understand the significance of similar characteristics in the latter, he spent most of 1902 and 1903 investigating such skeletal evidence in the anthropological departments across Europe. On these tours, he discovered a plethora of Australian Aboriginal features that, as he claimed, confirmed their low evolutionary stage, their affinity to or association with hominid fossil races or species and/or their retained Australoid anatomy. For example, in the collections of the Anatomical Institute of Leipzig's university and the ethnological museum Klaatsch discovered fourth molars (or potential spaces for them) in Australian Aboriginal lower jaws, reminiscent of anthropoid dentition,[116] while a skeleton in Leiden confirmed the *Australier*'s "weak spine."[117] In Paris, Klaatsch was in-

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[110] Ibid., 141, 142; Klaatsch, "Fortschritte der Lehre," 636, 645.

[111] Klaatsch, " Skelete der jetzigen Menschheit," 139. While most were only structural insufficiencies, some nevertheless had functional implications, such as the preference of a squatting position, which Klaatsch saw as an outcome of a delicate leg musculature.

[112] Ibid., 145.

[113] Ibid.

[114] Ibid.

[115] Ibid., 136.

[116] Ibid., 135.

[117] Hermann Klaatsch, "Uittreksel uit een brief van Prof. Herm. Klaatsch, Heidelberg; deelnemer der excursie van het Duitsch Anthropologisch Genootschap door Nederland; van 9–14 Augustus 1902," *Rijks Ethnographisch Museum te Leyden* (1901-1902): 64.

trigued by the Tasmanian Aboriginal skulls deposited at the Jardin de Plantes,[118] musing about their "remarkable digression from the Australians" and their "astonishing uniformity."[119] They prompted him to inspect in detail the Tasmanian Aboriginal skeletons held in London's Hunterian Museum and Natural History Museum, which led Klaatsch to decide that the Tasmanians were a group from the same origin as the *Australier* but had specialised in a different direction.[120]

In general, Klaatsch reiterated the high variability of shapes in the Australian Aboriginal skulls in Europe's anthropological institutions.[121] There were highly curved skulls resembling the European type and "Neanderthaloid ... very animal-like skulls"[122] that featured the fossil's "mighty"[123] eyebrow region, "conveying to us anatomically through their forehead structure the beginnings of our kind."[124] Some of the skullcaps' curves approximated Dubois's *Pithecanthropus* rather than the Neanderthal type.[125] As was the case with the ambiguous skeletal traits, this pointed, in Klaatsch's view, to the closeness of the *Australier* to the common pre-human ancestor. Combining otherwise irritatingly divergent skull features, they, in this scenario, hinted at the "pre-Neanderthaloid and pre-Australoid" common ancestor skull shape.[126]

In summary, Klaatsch's investigations of Australian Aboriginal skulls and skeletons revealed an unusually high rate of variation, highlighting one of the fundamental problems of physical anthropological race examination: How to separate individual traits from race or other kinds of collective characteristics? Klaatsch rendered this conundrum into a crucial part of his methodology and hypotheses on human evolution, arguing that a race was not signified by single characteristics but by complexes of traits. Their variations were explicable only through his *Neue Anthropologie*, which combined palaeoanthropology, prehistory, physical anthropology and comparative and human anatomy. In short: "The most ancient [cultural] traces of humanity lead us to the physical problems of the evolution of mankind, and the fossil human remains instigate especially the

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[118] Hermann Klaatsch, "Anthropologische und paläolithische Ergebnisse einer Studienreise durch Deutschland, Belgien und Frankreich," *Zeitschrift für Ethnologie* 35 (1903): 94.

[119] Klaatsch, "Streifzug nach London," 876.

[120] Ibid., 891.

[121] Klaatsch, "Skelete der jetzigen Menschheit," 147; Klaatsch, "Brief van Prof. Klaatsch," 64.

[122] Klaatsch, "Skelete der jetzigen Menschheit," 147.

[123] Ibid., 149.

[124] Klaatsch, "Entwickelung des Menschengeschlechtes," 336.

[125] Klaatsch, "Skelete der jetzigen Menschheit," 149.

[126] Ibid.

investigation of the skeleton of today's humans,"[127] in particular the *Australier*. This approach enabled him, on the one hand, to accommodate seemingly untypical traits within the definition of a modern or paleolithic race. On the other hand, he turned the range of variation in Australian Aboriginal skeletal remains into a crucial argument for their approximation and indeed genetic relation to the human ur-form, the "Australoid root." In his view, a high degree of variation meant a low degree of specialisation; in other words, as a race Australian Aborigines had deviated less from Klaatsch's hypothetical generalised original form, whereas all other human races (that is, according to Klaatsch, Europeans, Asians and Africans) had specialised to higher degrees.[128]

His skeletal research in European anthropological collections led Klaatsch to think that Australian Aborigines had remained closest to the common apish ancestor because their skeletal morphology to him presented complexes of atavistic characteristics, resembling those of a diversity of mammal forms, apes and hominid fossils. Believing that their bones demonstrated the complete spectrum of pre-human, intermediate and eventually truly human traits, Klaatsch formed and exemplified his ideas on the modes of Australia-based hominisation, based on his investigations of Australian skeletons and skulls. This argument was the driving factor for his wish to travel to Australia in search of further physical evidence for the origin of the humankind.

8.2 In Australia – encountering the *Ur-Australier*

Anthropological specimens and the genuine Australian type

Klaatsch and Schoetensack's hypotheses on the mode and location of hominisation called for a closer investigation of the *Australier*. Hence, when the opportunity arose Klaatsch was quick to make his journey arrangements.[129] Equipped with his theoretical and scientific baggage he travelled along Australia's coastline by ship and on land, in effect circumnavigating the continent from March 1904 to February 1907. His objective was "to experience the original inhabitants of Australia first hand"[130] and to collect as

[127] Ibid., 136.

[128] Ibid., 137.

[129] Erckenbrecht, *Australienreise*, 52–53.

[130] Hermann Klaatsch, "Ergebnisse meiner australischen Reise," *Korrespondenzblatt der Deutschen Gesellschaft für Anthropologie, Ethnologie und Urgeschichte* 38, nos. 9/12 (September/December 1907): 79.

much data as possible before the race assumedly and inevitable became extinct.[131] Klaatsch spent the first months of his journey continuing the study of skulls and bones. On his way to Brisbane in March 1904 he was able to catch a short glance of the "beautiful skulls and skeletons of the Australian natives"[132] in Sydney's Australian Museum. In Brisbane he was introduced to Walter Edmund Roth (1861-1933), the protector of Aborigines in Queensland, who would be Klaatsch's most important informant and network facilitator for his initial time in Australia.[133] Roth invited him to investigate his private anthropological collection, comprising of ninety skulls and ten skeletons, among which Klaatsch discovered juvenile bones that reminded him of the Neanderthal remains, vertebrates approximating those of anthropoids and skull formations linked to *Pithecanthropus*.[134] Roth eventually facilitated the publication of these craniological investigations in Australia in 1908, through which Klaatsch's ideas became accessible in the Anglophone sphere.[135]

Apart from their bones, Klaatsch was interested in meeting Aborigines for his anthropological investigations. During the two months he spent with Roth his desire to "come into touch with living natives"[136] increased. Disappointed, he recounted that they had already been nearly extinguished in southern Queensland; the only Aborigines he encountered in Brisbane and other urban areas were "sad figures in torn European costume."[137] Regarding them as corrupted by European civilisation, wearing European clothes and having given up their traditional way of life, Klaatsch found they were not suitable for his studies. Expecting to find real Aborigines in the Aboriginal settlements of the Christian missions and in the Australian bushland, he embarked on a journey around Australia.

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[131] Ibid. On the discourse on Aboriginal extinction see Patrick Brantlinger, *Dark Vanishings: Discourse on the Extinction of Primitive Races, 1800-1930* (Ithaka: Cornell University Press, 2003), especially Chapter 6.

[132] Hermann Klaatsch, unpublished Manuskript II, 10 (transcription). I sincerely thank Corinna Erckenbrecht for allowing me to read some of her transcripts of Klaatsch's unpublished book manuscripts which she prepared for her publication on Klaatsch's ethnological interests in Australia (Erckenbrecht, *Australienreise*).

[133] Erckenbrecht, *Australienreise*, 57–58.

[134] Hermann Klaatsch, "Übersicht über den bisherigen Verlauf seiner Reise in Australien bis Ende September 1904," *Zeitschrift für Ethnologie* 37 (1904): 211.

[135] Ibid.; Klaatsch, unpublished manuscript, quoted in Erckenbrecht, *Australienreise*, 57.

[136] Klaatsch, unpublished manuscript, quoted in Erckenbrecht, *Australienreise*, 57.

[137] Ibid.

During the course of his stay, Klaatsch encountered Aboriginal individuals and their communities under a variety of circumstances. He travelled to remote coastal communities with the help of German missionaries and investigated some individuals living on their mission stations. He engaged Aboriginal men as guides and travelled on a Queensland government sailing boat in the company of an Aboriginal man working as deck help. In Western Australia Klaatsch encountered a number of imprisoned, and chain-ganged Aboriginal men. All of these encounters occurred in specific circumstances, most of which Klaatsch exploited with a view to his anthropological studies.

I have illustrated above that, to Klaatsch, the *Australier* signified human evolutionary primitiveness and primordiality. Accordingly, the occurrence of "primitive" traits in conjunction with a high variability of combinations of race traits proved to him that modern Australian Aborigines had remained closer to a common primate ancestor than all other races. Consequently, Klaatsch knew what he was looking for when he travelled to the geographical remains of the hypothetical Indo-Australian archipelago, home to the pre-human creature that would evolve into the Australoid root of all modern human races. The investigation of the living body, or the "somatic anthropology of the Australian,"[138] thus also potentially revealed residues of the stages of hominisation. Accordingly, Klaatsch examined, documented and classified Aborigines following these criteria wherever and whenever possible. As a consequence, he rendered these living human beings into "material" and "specimens", a mere source for anthropological data in his quest for the ur-form of the human kind. Piece by piece, Klaatsch put flesh on the bones of his previously examined skeletons, investigating, documenting and eventually defining the physical and evolutionary nature of the "ur-Australian."

As was the case for many anthropologists, missionaries facilitated contact with Aborigines for Klaatsch who set up his laboratory on their stations and undertook bodily measurements on every Aboriginal person he could get his hands and instruments on.[139] In Mapoon, for example, the German missionaries Nicolaus Hey (1862-1951) and Arthur Richter helped him "to make the natives obedient to the unusual scientific treatment"[140] of callipers and photographic documentation. Klaatsch, however, became disappointed with their quality and he complained that the station lacked strong men pre-

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[138] Klaatsch, "Ergebnisse meiner australischen Reise," 80.

[139] Hermann Klaatsch to Otto Schoetensack, 20 July 1904, quoted in Erckenbrecht, *Australienreise*, 66.

[140] Klaatsch, unpublished manuscript, quoted in Erckenbrecht, *Australienreise*, 72.

senting the Australian "original character."[141] He assumed that, because the Japanese pearl fishing industry had destroyed the original inhabitants, a population that had emigrated from other parts of the continent had developed into a new, but unoriginal, tribal configuration.[142] Hence, he could not be sure that what he found represented the pure ur-Australian type with its distinct ancestral characteristics.

During the course of his travel, more satisfying opportunities to bolster his theory with living evidence arose. As luck would have it, Klaatsch's desire to examine original, "completely uncivilised natives"[143] was quickly fulfilled by a visit to the about-to-be established mission outpost of Aurukun. To the distinguished members of the Tasmanian Royal Society, Klaatsch presented the Archer River people as "fine, athletically built men, and very intelligent", thus "good material for investigation."[144] Mamoos, for example, a man with whom he established closer contact, left the satisfactory impression of being "an original."[145] On another occasion, on Bailey Island, Klaatsch encountered an "entirely wild horde of 20 natives" who allowed him to take photographs and anthropometric measurements.[146] When Aligét, a "dark creature,"[147] climbed aboard the boat, Klaatsch experienced, as he wrote in his diary, "classic moments."[148] And a classic moment for his evolutionary theory it was, as Klaatsch excitedly described in a letter to Schoetensack how a "grinning" "black monster" with the facial composition of "a gorilla or a chimpanzee" boarded the boat.[149] Here Klaatsch's ideas about Australian original primitive and/or ape-like characteristics came alive and spilled out of his pen when he enthusiastically recounted this friendly welcoming of the man who "climbed aboard like a big black ape."[150]

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[141] Klaatsch, unpublished manuscript, quoted in Erckenbrecht, *Australienreise*, 74.

[142] Erckenbrecht *Australienreise*, 73.

[143] Hermann Klaatsch, "Schlussbericht über meine Reise nach Australien in den Jahren 1904-7," *Zeitschrift für Ethnologie* 39 (1907): 644n1.

[144] Hermann Klaatsch, "Australian Aborigines. Lecture by Dr. Klatsch," *Proceedings of the Royal Society of Tasmania* (1906-1907), 2 January 1907: xxvi.

[145] Klaatsch, unpublished manuscript, quoted in Erckenbrecht, *Australienreise*, 77. "Original" facial characteristics have been documented in a portrait drawing published in Erckenbrecht, *Australienreise*, 35.

[146] Klaatsch, "Übersicht Reise September 1904," 213.

[147] Hermann Klaatsch to Otto Schoetensack, 1-5 September, 1904, quoted in Erckenbrecht, *Australienreise*, 84.

[148] Hermann Klaatsch, Diary 28 August 1904, quoted in Erckenbrecht, *Australienreise*, 251.

[149] Hermann Klaatsch to Otto Schoetensack, 1-5 September 1904, quoted in Erckenbrecht, *Australienreise*, 251.

[150] Ibid.

Eventually, Klaatsch assessed the northern Australian Aboriginal population as "physically and mentally superior types"[151] to whom other Aboriginal groups had to live up. The Tiwis on Melville Island, living in "original savageness,"[152] even presented "the best type yet seen by [Klaatsch] in Australia."[153] Writing passionately to Schoetensack, he exclaimed that the visit to Bayley Island "was of such great value, because with these Blacks any thought of admixture of alien blood is cut short. They are the genuine, old ur-Australians, just as they lived hundreds of years ago."[154] Having remained in their original state culturally and, most importantly, physically, all these northern peoples emerged as the original and pure prototype of Klaatsch's *Ur-Australier*. They followed an original life style, uncorrupted by culture (because their ways of life did not represent true culture), wandering about in nakedness, thereby displaying original primitive body features and remaining pure from racially compromising blood mixture.

Klaatsch furthermore produced categories for an intra-Australian racial hierarchy from his encounters. While the Aborigines from Cooktown appeared inferior to those from the Gulf of Carpentaria,[155] Aboriginal tribes from Australia's north were in general superior to those from the south. He warned his German colleagues that photographs from the Northern Territory had been wrongly attributed to South Australia in a variety of German publications, leading to the misconception of the superiority of the southern tribes in extraordinary body build. In fact, he insisted, it was quite the opposite.[156]

Donghol's "hand-like feet" and the climbing ancestor

Physical evidence for primitive originality, however, was not only present in the form of collective, racially determined features in the living population of the Australian continent. In accordance with Klaatsch's theory, every single human being potentially had inherited primitive traits of the pre-human stages. Thus, individual characteristics were equally useful to prove Aboriginal ancientness. Such was the case among the superior

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[151] Hermann Klaatsch, "Some Notes on Scientific Travel amongst the Black Population of Tropical Australia, 1904, 1905, 1906," *Australian and New Zealand Association for the Advancement of Science Report* 11 (1907): 584.

[152] Klaatsch, "Schlussbericht Reise nach Australien," 674.

[153] Klaatsch, "Scientific Travel Black Population," 585.

[154] Hermann Klaatsch to Otto Schoetensack, 1-5 September 1904, quoted in Erckenbrecht, *Australienreise*, 85.

[155] Hermann Klaatsch to Otto Schoetensack, 17 November 1904, quoted in Erckenbrecht, *Australienreise*, 94n250.

[156] Klaatsch, "Schlussbericht Reise nach Australien," 674.

types of the Northern Territory where a "very interesting foot-formation"[157] awaited him in Darwin in 1906.

Similar to mission stations, prisons "supplied interesting and patient research material."[158] In Darwin, a man from Port Keats called Donghol (who had been imprisoned as a murderer) displayed a short big toe which, as Klaatsch explained, "proved the atavistic repetition of the ancestral stage of mankind in which the foot was hand-like."[159] This observation triggered Australia-wide speculations on the discovery of "a species of Darwinian missing link"[160] in the form of a "four-handed tribe."[161] Klaatsch vehemently refuted the Australian media's conclusions: Far from claiming to have discovered such a tribe, he emphasised that the formation represented the reoccurrence of an ancient trait in one single man.[162] Notwithstanding Klaatsch's annoyance with the publication of this "childish" and "ridiculous nonsense,"[163] these individual toes still served him as important evidence for his idea of the evolution of the human upright posture. As I have shown above, Klaatsch thought that the grabbing foot of the common ancestor transformed into a supportive structure for the human upright position. He now explained that this process occurred in two steps, demonstrated by Donghol's foot: after the big toe shifted from the opposable to the parallel position, it grew in length while the other toes shrank for maximum support function. According to Klaatsch, the toes of many Australian Aborigines had the same length, signifying the variational range of their race,[164] and therefore represented a different stage on Klaatsch's transformation trajectory.

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[157] Klaatsch, "Scientific Travel Black Population," 584.

[158] Hermann Klaatsch, "Reisebericht des Herrn Prof. Klaatsch aus Soerabaya, Java und Australien vom 1. Mai 1906," *Zeitschrift für Ethnologie* 38 (1906): 789. Klaatsch examined Aboriginal inmates in the prisons of Rottnest Island (where he also acquired human remains), Roebourne and Wyndham in Western Australia and Darwin in the Northern Territory.

[159] Klaatsch, "Scientific Travel Black Population," 584.

[160] Northern Territory Times and Gazette, 26 October 1906, 3; Sydney Morning Herald, 27 October 1906, 13; The Advertiser, 27 October 1906, 9; The West Australian, 27 October 1906, 12.

[161] *Sydney Morning Herald,* 8 December 1906, 12–13.

[162] *Sydney Morning Herald,* 14 December 1906, 6; Hermann Klaatsch, "Erklärung 9. Dezember 1906," *Zeitschrift für Ethnologie* 39 (1907): 184.

[163] Klaatsch, "Erklärung 9. Dezember 1906," 184.

[164] Klaatsch, "Schlussbericht Reise nach Australien," 670, 671.

Füße eines australischen Eingeborenen mit atavistischem Zustand des auffallend kurzen Hallux und relativ bedeutender Länge der anderen Zehen.
Klaatsch phot.

Figure 24 Donghol's "atavistic" climbing feet[165]

Others criticised Klaatsch's interpretation of the peculiar toe formation, stating that "it is no uncommon thing to see 'niggers' with feet like Donghol's" and that probably "no one (unless looking for it) would notice that his feet were any different from any other native."[166] Unique occurrence or not, these Aboriginal feet seemed to confirm Klaatsch's "climbing theory"[167] because they had, as Klaatsch saw it, remained in the not fully developed transitional stage. Photographs of the feet illustrated Klaatsch's subsequent publications on the evolution of the upright walk, based on the two-phase trajectory from climbing to walking tool (figure 24).[168] The atavism of Donghol's "hand-like"[169] feet demonstrated that in fact all human feet had to be regarded as transformed hands, the tools of the ancestral climbing locomotion.[170] While Klaatsch stressed that this evolutionary stagnation was merely a structural one, he could not refrain from stating that this

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[165] Hermann Klaatsch, "Die Entstehung und Erwerbung der Menschenmerkmale. II. Der Menschenfuß und der aufrechte Gang," *Fortschritte der naturwissenschaftlichen Forschung* 7 (1912): 232. The caption reads: "Feet of an Australian native with atavistic condition of conspicuously short hallux and relatively significant length of the other toes."

[166] "Is it the missing Link," *The Queenslander*, 9 February 1907, 7.

[167] Klaatsch, "Schlussbericht Reise nach Australien," 670.

[168] E.g. Klaatsch, "Erwerbung der Menschenmerkmale (Menschenfuß)," 232; Hermann Klaatsch, *Der Werdegang der Menschheit und die Entstehung der Kultur* (Berlin: Deutsches Verlagshaus Bong&Co., 1920), 47.

[169] Klaatsch, "Schlussbericht Reise nach Australien," 670.

[170] Klaatsch, "Entwickelung des Menschengeschlechtes," 46; Klaatsch, "Entstehung der Menschenmerkmale (Menschenfuß)," 232.

individual had also retained the "remarkable" ability to grab a stone with the help of his, to some extent, opposable big toe. Not surprisingly, Klaatsch also remarked that Donghol's face appeared "peculiarly primitive."[171]

Appropriating the bodies of the *Australier*

Klaatsch described his relations with indigenous communities and individuals predominantly as happy and friendly, especially when the "children of nature" appeared to have remained in their "ur-Australian" state.[172] His idea of the *Ur-Australier* type evolved from a combination of his pre-Australia-visit research and his interpretation of encounters with indigenous Australians. While his disappointment with allegedly culturally and/or racially corrupted Australian Aborigines immediately excluded those groups from his research scope, his first encounter at the Archer River triggered Klaatsch's imagination of a primeval race of noble savages, "lean proud figures of the wild masters of Australia, walking up and down majestically swaying spears and shields."[173] This idealised perception included individuals and groups that displayed what he regarded as apish and/or other primitive characteristics. Klaatsch's enthusiastic description of Aligét's purportedly monstrous apishness, for example, appears to have been expressed without contempt. Primitive features were not a contradiction to Klaatsch's high esteem of *Ur-Australier* intelligence and superior build.[174] Rather, they were constituent elements of his favourable vision of the genuinely intelligent Aboriginal race displaying a combination of a low but happy cultural state and a primitive physical primordiality similar to those of the European Palaeolithic races.

Happy relations were not always what Klaatsch experienced. Following the robbing of Aboriginal graves in Normanton, for example, he came "to know the 'lovely' Australians from another side."[175] In accordance with his new anthropological programme, the acquisition of anthropological data consisted of anthropometric measurements as much as of the appropriation of skulls, bones and soft tissue, such as brains or

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[171] Klaatsch, "Schlussbericht Reise nach Australien," 672.

[172] Hermann Klaatsch, "Brief aus Sydney vom 25. November [1906]," *Zeitschrift für Ethnologie* 39 (1907): 183; Klaatsch, "Schlussbericht Reise nach Australien," 670, 688, 689; Klaatsch, "Scientific Travel Black Population," 578, 584.

[173] Klaatsch, unpublished manuscript, quoted in Erckenbrecht, *Australienreise*, 76.

[174] Hermann Klaatsch, "Der primitive Mensch der Vergangenheit und der Gegenwart," *Verhandlungen der Gesellschaft Deutscher Naturforscher und Ärzte* 80 (1908): 108.

[175] Hermann Klaatsch to Otto Schoetensack, 5-15 October 1904, quoted in Erckenbrecht, *Australienreise,* 90.

arms and legs, for his detailed comparison. Klaatsch hoped, for example, to acquire the brains or extremities of recently deceased Aborigines.[176] Normanton seemed interesting as its hospital admitted Aborigines and thus the chance of acquiring their brains seemed promising. Whereas the hospital staff could not satisfy his request for soft tissue material, they directed him to the local Aboriginal graveyard, which he might take the pains to excavate.[177] Before plundering the gravesite he strategically created an amiable relationship with the local Aboriginal community by restraining from anthropometric procedures and generously paying for ethnographic items. Notwithstanding the precautions, his nightly activities of unearthing Aboriginal graves did not go unnoticed and local Aborigines threatened the German desecrator. Locking himself in his hotel room, he answered the demand for the return of their relatives' remains by deceptively offering animal bones and, when this proved unsuccessful, by threatening them with his firearm.[178] Klaatsch fled the scene on the next available ship, holding on to his "sack of bones."[179]

Klaatsch interpreted this encounter as some form of disenchantment, albeit quickly passing. As Erckenbrecht has shown, the incident initially shattered his romantic notions of Australian Aborigines and the rumour of his having been denounced to the police destroyed "all sympathy" for them.[180] At the same time, he claimed to be understanding of Aboriginal reverence to their dead and felt sorry that, for the sake of science, he "had to hurt the feelings of the blacks."[181] Back in Germany, Klaatsch recounted that the *Australier* did not tolerate the violation of their burial grounds: "I had to learn that very prominently, but I have respected my friends' piety highly and did not blame them for wanting to spear me."[182] Because Klaatsch's prime concern nevertheless remained the securing of his anthropological specimens, his "main regret was that [he] could not seize an even greater amount of skull material."[183]

Klaatsch's disenchantment with Aboriginal people did not curtail his ensuing dealings with them and he quickly regained his admiration for representatives of the genuine

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[176] Hermann Klaatsch to Otto Schoetensack, 5-15 Oct 1904, quoted in Erckenbrecht, *Australienreise*, 269.
[177] Erckenbrecht, *Australienreise*, 81.
[178] Ibid., 86.
[179] Klaatsch, unpublished manuscript, quoted in Erckenbrecht, *Australienreise*, 86.
[180] Erckenbrecht, *Australienreise*, 90.
[181] Klaatsch, unpublished manuscript, quoted in Erckenbrecht, *Australienreise*, 90.
[182] Klaatsch, "Der primitive Mensch," 107.
[183] Klaatsch, unpublished manuscript, quoted in Erckenbrecht, *Australienreise*, 90.

Ur-Australier type. He not only converted the experience into a practical lesson to be vigilant at future excavations,[184] but also devised deceptive strategies for the aims of appropriating more anthropological "material". After his flight from Normanton he undertook several excursions to the Bellenden Ker region and was quick to exploit the friendly relationship between the Aboriginal community and a local farmer, who had specifically been entrusted with the guardianship over their graves against anthropological excavation. The farmer obviously felt more obliged to Klaatsch's scientific pursuits than to the promise he had made and helped Klaatsch with unearthing Aboriginal human remains "with the utmost secrecy."[185]

Klaatsch then acquired the mummy of the "splendid type of the old Ur-Australians,"[186] Narcha (Barry Clarke or Ngadja[187]) and two skulls. Knowing that the acquisition of mummies was difficult due to "the natives' superstitious respect regarding the remains of the deceased,"[188] he was careful to first establish good relations, spending many evenings in the camp, attempting to learn the local language, and attending corroboree preparations.[189] He "managed to take the mummy off the Blacks in return for overly rich donations of tobacco, clothing and food"[190] in what he later referred to as a "quaint piece of comedy."[191] Arguing that Narcha wanted his children to be cared for and fed well, Klaatsch paid for the mummy, promising to deposit it in a holy hall and assuring it would be much better cared for there than in their camp. The next morning, hearing the demand for the return of the mummy, he "of course" did not, but instead pretended to return it in exchange for two more skulls. Klaatsch eventually kept the whole lot, "comforting the grieving relatives"[192] with more tobacco and food. Again, he left the area in a rush to prevent the "theft" of his "booty" or retaliation for his deceit.[193]

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[184] Klaatsch, "Australian Aborigines Lecture," xxvi.

[185] Hermann Klaatsch to Otto Schoetensack, 17 December 1904, quoted in Erckenbrecht, *Australienreise*, 97.

[186] Hermann Klaatsch, "Mumie aus Australien," *Zeitschrift für Ethnologie* 37 (1905): 773.

[187] Sandra Pannell, *Yamani Country. A Spatial History of the Atherton Tableland, North Queensland* (Cairns: Cooperative Research Centre for Tropical Rainforest Ecology and Management, 2005), 41, 45.

[188] Klaatsch, "Mumie aus Australien," 773.

[189] Erckenbrecht, *Australienreise*, 98.

[190] Klaatsch, "Mumie aus Australien," 773.

[191] [Klaatsch], "Australian Aborigines Lecture," xxvi.

[192] Klaatsch, "Mumie aus Australien," 773.

[193] Ibid.

Klaatsch rendered Australian Aborigines into scientific specimens and at the same time perceived them emphatically as intelligent social beings. He frequently lamented their unjust treatment by a biased British society and by a legal system that shifted the responsibility for atrocities unreservedly on to "the unhappy sons of the wilderness bearing their fate with patience and decency."[194] He regularly combined such proclamations of sympathy with harsh criticisms of specifically British colonisation, which threatened Australia's "black children of nature"[195] with destruction due to settlers' maliciousness, authorities' incompetence and racial mixture.[196] When he elaborated on Donghol's feet, for example, he sharply criticised the justice system. Stating that the man was "apprehended in a punitive police expedition for allegedly being responsible for the Bradshaw murders," Klaatsch questioned the legitimacy of the accusations. The incident, which left four white men slaughtered, remained largely unclear, but "as in all such cases, responsibility for the tragedy is directed towards the natives."[197]

Mere philanthropic compassion, however, hardly completely motivated Klaatsch's sympathy. As his utilisation of the example of Donghol's feet graphically shows, he seems to have been incapable of regarding Aborigines as other than predominantly research material. Donghol's body was too important as evidence for Klaatsch who, regardless of his sympathy, regretted that he had been unable to secure more than photographs of his feet as anthropological samples. In anticipation of Donghol's execution, Klaatsch declared that the whole body would have been much more useful for scientific purposes: "This interesting specimen of the genus homo should, if it is executed, be preserved for science. I undertook all possible steps in this regard towards the authority, … but, as I have recently learned my efforts were to no avail."[198]

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[194] Klaatsch, "Schlussbericht Reise nach Australien," 665.

[195] Klaatsch, unpublished manuscript, quoted in Erckenbrecht, *Australienreise*, 77.

[196] For Klaatsch's perception of the destruction of the Aboriginal population see also Hermann Klaatsch, "Die Erhaltung der schwarzen Rasse in Nord-Australien und die Missionen," *Die katholische Welt* 21 (1909): 270–74, 325–30 and Hermann Klaatsch, "Die Morphologie und Psychologie der niederen Menschenrassen in ihrer Bedeutung für die Probleme der Kriminalistik," in *Bericht über den VII. Internationalen Kongreß für Kriminalanthropologie. Köln am Rhein 9.-13. Oktober 1911*, ed. Gustav Aschaffenburg and H. Partenheimer (Heidelberg: 1912), 60–61.

[197] Klaatsch, "Schlussbericht Reise nach Australien," 669.

[198] Ibid., 672n1. Note the grammatical consistency in using "it" when Klaatsch refers to the execution, as if a scientific specimen could be tried and subjected to execution. The two prisoners charged for the murders, Cumbit and Donah (one of whom apparently was the interesting "specimen") were sentenced to death on 26 March 1907. "Palmerston Circuit Court, The Port Keats Murder," *Northern Territory Times and Gazette*, 29 March 1907, 3. On 19 June 1907, their sentence was commuted to lifelong imprisonment. "The Bulwarra Tragedy. Life sentences Imposed," *Sydney Morning Herald*, 20 June 1907, 8. It remains unclear whether Klaatsch knew of their imprisonment for life.

On many occasions, Klaatsch succeeded in acquiring anthropological data and material with the help of Australian authorities. Referring to anthropometric measurements and photographs of prisoners in Wyndham, he conceded that "the enormous injustice that Christianity and our civilisation do these poor creatures, at least in a scientific sense resulted in something good. The material which I received through it for investigation is unique."[199] Thus, for the benefit of science, Klaatsch regarded the collection of comparative anatomical data, be it from the living or the dead, under whichever circumstances as a justifiable means. His criticism of ill treatment and his calls for a reform of policies towards Australia's Aboriginal population therefore were voiced with his scientific objectives in mind.[200] "Unfavourable race relations"[201] between the white Australian colonisers and the indigenous population caused a loss for science. They hindered access to Aboriginal communities, which in the wake of these atrocities identified him as a dangerous accomplice to colonial violence and therefore complicated Klaatsch's research.[202]

In summary, Klaatsch's descriptions of his encounters provide insight into his seemingly contradictory perspectives on Australian Aborigines. He arrived in Australia expecting to experience the living equivalents to previously examined skulls and skeletons of Primitive Man. After dismissing disappointing, non-typical, "half-civilised" Aborigines from his research pool, Klaatsch established the typical ur-Australian's variable appearance through the investigation of "wild tribes" and integrated his findings into his existing theory on the significance of climbing mechanisms for human evolution. At the same time, his notion of Australian Aborigines ranged from noble to wild savages whose suffering from British colonial practice and missionaries' efforts to Christianise and civilise them called for immediate rescue efforts. Notwithstanding, such sympathetic insight, gained from his manifold experiences with Aboriginal individuals and communities, did not alter his overall objective of regarding Aborigines foremost as anthropological "material" delivering bodily evidence for their assumed primitive ancestral stage in human evolution.

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[199] Klaatsch, "Schlussbericht Reise nach Australien," 665. Klaatsch's remark on "our" civilisation bears a hint of self-criticism but it remained a minor reference. He predominantly blamed British colonisation.

[200] See also Erckenbrecht, *Australienreise*, 191.

[201] Klaatsch, "Schlussbericht Reise nach Australien," 688.

[202] Klaatsch, "Scientific Travel Black Population," 583; Klaatsch, "Australian Aborigines Lecture," xxvi.

8.3 Back from Australia – the "Australoid roots" of European civilisation

After arriving at his new professorial post in Breslau in April 1907, Klaatsch summed up what he had been able to acquire throughout his Australian journey. In addition to two mummies, which he had sent as ethnographic items to German museums, his collection comprised "a complete corpse, three complete heads, three isolated brains and material of extremities and so on" as well as the skulls and skeletal parts belonging to "approximately 100 individuals" plus data resulting from the investigation of "several hundred of the living."[203] As he asserted, its investigation would require years to be completed.[204]

Until his death in 1916 the origin of humanity remained Klaatsch's greatest interest. Following his morphological approach, he continuously engaged in the excavation and investigation of newly discovered hominid fossils and his Australian "material". Combining this research, Klaatsch further developed his ideas about human evolution into a scheme of two separate lines of human evolution. Additionally, he published on cultural and social topics with reference to these investigations and his experiences with the *Ur-Australier*.

When Klaatsch departed from Australia, he remained convinced that modern Australian Aborigines were more closely related to the Australoid root than all other human races. Whereas he maintained that his experiences with the living *Australier* and his subsequent physical anthropological research confirmed his hominisation climbing hypotheses in general,[205] Klaatsch eventually altered his scheme of the human kind's racial differentiation into a more overtly polygenetic scenario. While Klaatsch frequently emphasised that the hypothetical *Urhorde* on the vanished ancient southern continent indicated the unity of humankind, he had in fact always suggested polygenetic hominisation modes. The moment of unity lay back in ancient times, at the pre-human stage of transition from the common ancestor to the pre-human horde.[206] In other words, the basic race differences had already evolved before the not completely human *Urhorde* spread

[203] Klaatsch, "Ergebnisse meiner australischen Reise," 80.
[204] Ibid.
[205] Ibid., 80n1.
[206] Klaatsch, "Pithecanthropus-Frage," 227.

around the globe to diversify into the main races.[207] Klaatsch thought to find evidence for this speciation in the skulls and bones of modern and ancient human races, arguing that their complexes of race traits had evolved independently in separate, but sometimes morphologically and physiologically divergent lines – except for the *(Ur-)Australier* who did not specialise to a high degree.[208]

Klaatsch's ongoing investigation and classification of European hominid fossils strengthened his convictions regarding the evolution of truly human, but racially distinctive characteristics. Nevertheless, he refined his theory, now overtly polygenetic. In 1910, following the discovery of the Aurignac hominid fossils that differed significantly from the Neanderthal type, Klaatsch construed a theory of two racially and geographically distinct evolutionary paths.[209] The eastern human species[210] of *Homo Aurignaciensis*, as Klaatsch and the discoverer Otto Hauser (1874-1932) named the fossil, demonstrated a delicate build, like the *Australier*, and a more human skull than its western Neanderthal counterparts.[211] Klaatsch argued that this fossil race approached the characteristics of the Asian anthropoid, the orang-utan and the Australoid root,[212] while Africans, the gorilla and Neanderthal man seemed to be affiliated to an even higher degree.[213] Hence Klaatsch proposed a bi-genetic model of human origin by dividing the groups emerging from the pre-human horde into the Australian, the Asian Aurignac-orang-utan and the African Neanderthal-gorilla branches. The two latter divisions finally merged into the European type.[214]

The position Australian Aborigines occupied in this scenario did not dramatically change. They stayed closest to the *Urhorde* and their bodies continued to feature promi-

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[207] Hermann Klaatsch, "Occipitalia und Temporalia der Schädel von Spy verglichen mit denen von Krapina," *Zeitschrift für Ethnologie* 34 (1902): 408.

[208] Hermann Klaatsch, "Menschenrassen und Menschenaffen," *Korrespondenzblatt der Deutschen Gesellschaft für Anthropologie, Ethnologie und Urgeschichte* 41, nos. 9/12 (September/December 1910): 97.

[209] Klaatsch, "Die Aurignac-Rasse," 520; 561–63.

[210] On Klaatsch's classification of species rather than race see Klaatsch, "Die Aurignac-Rasse," 568.

[211] Klaatsch, "Menschenrassen und Menschenaffen," 92; Klaatsch, "Die Aurignac-Rasse," 68–69. What Klaatsch and the discoverer Hauser regarded as a new species is today regarded as belonging to the *Homo sapiens* group.

[212] Klaatsch, "Die Aurignac-Rasse," 529, 560, 568.

[213] Klaatsch, "Menschenrassen und Menschenaffen," 92–93; Klaatsch, "Die Aurignac-Rasse," 566; Klaatsch, "Morphologie und Psychologie," 71. Klaatsch increasingly presented the African as the inferior counterpart of all other races, especially of Australian Aborigines with regard to bodily appearance and the capability for education and civilisation, e.g. Klaatsch, "Morphologie und Psychologie," 71–72.

[214] Klaatsch, "Morphologie und Psychologie," 68, 70. When Klaatsch first published his ideas on the eastern and western branches, he thought it probable that Europeans had evolved from a third branch related to the chimpanzee. Klaatsch, "Die Aurignac-Rasse," 573.

nently as prime evidence for common ancestral traits.[215] Nevertheless, Klaatsch now interpreted their variability according to the Neanderthal-Aurignac dichotomy. Their lean bodies had been retained in the Aurignac species, while "plump" skeletal traits represented Neanderthal man's relation to the *Urhorde*.[216] As the *Australier*, according to Klaatsch, presented more similarities with the orang-utan, he established a direct link between the Aurignac branch and the Australoid root.[217]

Concurrently, Klaatsch now suggested an Australian-European link. But other than in the Australian case of primitive originality, the combined occurrence of Aboriginal traits in Europeans resulted from primeval racial mixture. Accordingly, the Neanderthal race and its more highly evolved, more intelligent Aurignac counterpart had met in the European arena during the last Ice Age.[218] Klaatsch claimed that their struggle for dominance resulted in the extinction of the inferior Neanderthals. Its females had been "appropriated" by the superior Aurignac males before the Neanderthal race finally succumbed.[219] Their mixed offspring, whose superior and pleasant traits were dominated by their paternal ancestry, eventually evolved into modern Europeans. Thereby a noble Aurignac inheritance directly linked the European to the ur-Australian, physically as well as intellectually.

Exploring the field of psychology in search of the "criminal brain,"[220] Klaatsch's comparison of the Aboriginal brains in his anthropological collection with those of anthropoids and hominid fossils "confirm[ed] the close European relation."[221] This connection not only allowed Klaatsch to explain the occurrence of the "Australoid nose"[222] in European children, resulting from the genetic combination of ur-Australians and Europeans. Of equal importance was that "psychology confirms what morphology teaches."[223] Klaatsch thus asserted that Australia's "natural children"[224] were closer to the Europeans than any other race. Referring to his experiences with Australia's "small hordes

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[215] Klaatsch, "Die Aurignac-Rasse," passim, (Aboriginal bones as evidence in his comparison of Neanderthal, Aurignac, Gorilla and Orang Utan), 560 (original state of Aborigines).

[216] Klaatsch, "Die Aurignac-Rasse," 572; Klaatsch, "Morphologie und Psychologie," 68.

[217] Klaatsch, "Morphologie und Psychologie," 58.

[218] Klaatsch, "Die Aurignac-Rasse," 572; Klaatsch, "Morphologie und Psychologie," 69.

[219] Klaatsch, "Die Aurignac-Rasse," 572.

[220] Klaatsch, "Morphologie und Psychologie," 72.

[221] Ibid., 59.

[222] Ibid., 67.

[223] Ibid., 60.

[224] Ibid.

of wild hunters in the naked state,"[225] he reapplied his notion of the *Ur-Australier* as a not merely physically but also morally noble savage: The *Ur-Australier* respected individual property, cared and loved their children and elders and demonstrated well-intentioned humour.[226] They even revered their dead, of which his Normanton experiences were graphic proof.[227] Their primitive intellectual organisation had inherently transformed through the "nobly formed Aurignac race"[228] into modern European intelligence. Accordingly, the ur-Australian "basic good character"[229] represented the intellectual Australoid root of European civilisation.

Chapter Conclusion

In conclusion, I maintain that Klaatsch's scientifically motivated journey in Australia produced within the scientist a whole set of attitudes, which may seem strangely contradictory. However, they eventually fit together when Klaatsch's theory and practice are investigated in all their complexity. Klaatsch set out to investigate the *Australier* as a primitive, original race in search for the origin of the humankind. The German scientist arrived in Australia equipped with preconceived ideas that were based on his skeletal investigations in European anthropological collections. Overcoming initial disappointments with what he perceived as corrupted, un-original Aborigines, Klaatsch during his subsequent journey perceived "the Ur-Australian" based on both his previously acquired skeletal expertise and his encounters with Aboriginal individuals and communities.

Despite his interest in cultural anthropological questions and his enthusiasm for Aboriginal original intelligence, he always pursued first and foremost his physical anthropological evolutionist objectives. His perception of Australia's indigenous peoples as noble savages, the praise of intellectual and moral capacities as well as the frequent criticism of the destructive impact of British colonisation, did not impact on his commitment to the main purpose of his endeavours: the search for human origin based on his Darwinist comparative anthropological method. In due course, Klaatsch's physical anthropological lens consistently projected Australian Aborigines first and foremost as human material, as potential evidence for his ideas about human evolution. Consequently, his encounters, as intriguing as they appeared to him, always served and justified his

[225] Ibid., 59.
[226] Ibid., 61–63.
[227] Klaatsch, "Der primitive Mensch," 107.
[228] Klaatsch, "Morphologie und Psychologie," 68.
[229] Ibid., 61.

scientific ends. That is why he appears capable of understanding their situation as a colonised people, experiencing and describing their cultural and physical originality in admiration and awe while, at the same time, repeatedly desecrating Aboriginal graves and cynically deceiving their "good nature" in order to acquire their ancestral remains as skeletal specimens.

Thesis Conclusion

In this thesis I have investigated the German physical anthropological discourse on Australian Aborigines from the late eighteenth century to the beginning of the twentieth. I have shown that German naturalists and physical anthropologists relied on, and continuously reinforced, the unsympathetic notions of Australian Aborigines as representatives of "the lower races" that had been conveyed from the beginning of European contact. Throughout the nineteenth century, their physical anthropological investigations further ingrained this image in the scientific sphere, creating a persistent body of assumed knowledge about Australian Aboriginal inferiority.

Based on William Dampier's frequently reiterated comments about Aborigines being the most miserable people in the world that appeared close to animals and were as despicable as were purportedly Africans, Germany's earliest and most eminent Enlightenment theorists on race, Immanuel Kant and Johann Friedrich Blumenbach, included the *Neuholländer* in their deliberations on the meanings, causes and possible categorisation of human diversity. Both "invented" crucial building blocks of the scientific concept of race and referred to each other's work and ideas. Kant was an early contributor to the biologisation of race through his idea of necessarily inheritable race traits that firmly linked physical difference to cultural, moral and intellectual potential and capacity. His thinking on race represents the age-old Eurocentric conviction of white European superiority. He simply regarded the New Hollanders as very savage South Sea inhabitants on the lowest level of humanity, whose animalist indulgence in hedonistic enjoyment indicated that they had not quite achieved the truly human stage of industriousness and self-discipline.

Blumenbach provided the scientific foundation for linking skull characteristics with definitions of racial diversity. To him, the South Sea inhabitants in general posed a challenge for classification due to their wide range of characteristics, namely the broad range of their skin colouration. At the time of his first attempt to classify human variation, in 1775, he had to rely on the descriptions of the New Hollanders provided by the travel literature available to him, such as Dampier and the published narrative of Cook's journeys to the Pacific. As I have argued, the famous anthropologist solved the problem of inconsistent information about skin colour by selecting his sources' perceptions of the

"darker" New Hollanders and positioning them next to the contemporaneously already vilified Ethiopian variety of humans. Once this position was determined, Blumenbach adhered to it in his ensuing classifications of the *Neuholländer*, which also included reference to their skulls. Despite his acknowledgement of skin colour as a malleable and transient feature, it was his skin colour palette that determined to a significant degree the position of both an imagined and the real Aboriginal skulls in his race nomenclature. Additionally, Blumenbach juxtaposed the dark and fierce *Neuholländer* with fairer-skinned, mildly dispositioned *Otaheitans*. This decision ignored the pictorial evidence that he cited but did not depict (and whose creator, Sydney Parkinson, had a far more positive and ennobling opinion of "the natives of New Holland" than Blumenbach).

My survey of the anthropological papers presented at the German Naturalists Association's meetings up to 1870 has shown that the racialising notion of the inferior *Neuholländer* or *Australier* was continuously perpetuated, and thereby sustained, throughout roughly the first half of the nineteenth century. These "early practitioners of physical anthropology" had no access to the skeletal remains of Australian Aborigines. They put forward a notion of Australia's indigenous inhabitants that was derived from a variety of eclectic sources and research approaches. On the basis of travel accounts, colonial narratives and mostly cranial physical anthropological investigations of other "lower human races" Australian Aborigines were allocated to the lower ranks of humanity. There existed a continuity with regard to the perception and representation of the *Neuholländer* or the *Australier* as part of a cluster of, mostly dark-skinned, human groups that were deemed to be on the lower scale of human development. Interestingly, the way Karl von Hügel's 1837 presentation differs from his unpublished journal manuscript shows how more positive personal experiences with Australian Aborigines could be transformed into a less favourable depiction for a scientific audience.

Informed by his reading of literature about the *Neuholländer*, von Hügel travelled to Australia with the expectation of encountering intellectually inferior natives. To his surprise, he dealt with intelligent, honest and peaceful humans whose physical appearance he likened to that of Europeans. While in Australia, the Austrian baronet took issue with the impoverished, dehumanising condition in which the Australian Aborigines lived under British colonial rule. However, when he reported his travel experience to the scientifically inclined audience of the German Naturalists Association, he conveyed a grim image of a race that was deprived by nature from the opportunity to rise to the full

human potential. In his scientifically based recollection, the *Neuholländer* now represented beastly savages that existed just one step above von Hügel's even more animal-like Andaman *Urstamm*.

Subsequent elaborations about Australian Aborigines similarly associated them, frequently alongside Africans, physically and intellectually with apes; in some cases, pre-Darwinian theorists of human evolution suggested a genetic relation of Australian Aborigines to apish animals. Most prominently, Hermann Schaaffhausen construed a theory of human ape ancestry, linking the *Australier* alongside Africans and Native Americans with real and imagined pre-human populations. He based these assertions on cranial features, initiating the subsequently common association of the Neanderthal fossil skull fragments to the skulls of Australian Aborigines. Additionally, the evolutionist, pro-Darwinian paleo-anthropologist directly linked skull shape to intellectual capacity, emphasising ape intelligence while denying ancient humans and Australian Aborigines the potential for higher levels of intelligence and thus civilisation. In his latently polygenist scheme of human evolution, Schaaffhausen also invoked the contemporaneous discourse on the extinction of uncivilised races, claiming that Australia's original inhabitants were to vanish in a natural cycle of racial emergence and extermination as a consequence of their lands' colonisation by a higher race.

I have further argued, by the examples of Alexander Ecker, Gustav Lucae and Rudolf Virchow, that the notion of an inferior Australian Aboriginal race penetrated the earliest investigations of Australian Aboriginal skeletal remains of the nineteenth century. All three of them were committed to empirical-inductive methodology in opposition to Darwinist hypothesising. They also, in varying degrees, used their physical anthropological and (comparative) anatomical work to debunk Darwinian claims of human animal descent. Ecker, however, appears to have accepted the modes of Darwinian evolutionary processes (in particular in relation to the "struggle for existence" of nations and races), whereas Lucae and Virchow remained a very outspoken anti-Darwinists throughout their lives. As regards their utilisation of Australian Aboriginal skeletal remains, all of these prominent first generation physical anthropologists compared them with the skeletal remains of Africans and Germans, finding that all of these specimens combined "higher" with "lower" measurements and features. While they largely refrained from interpreting their findings, seemingly true to their generation's aspiration to state the facts rather than embark on grander theorising. Notwithstanding, their investi-

gations elucidate the omnipresent framework of racial hierarchisation that underpinned contemporaneous enquires into the diversity of humanity. Despite their findings of highly variable human characteristics, Ecker, Lucae and Virchow remained within the paradigm of assigning Australia's indigenous people a low stage within the commonly assumed hierarchy of human races.

Finally, I have shown, by the example of the outspoken second-generation Darwinist Hermann Klaatsch, how the persistent stereotypical and racialising evaluation of Australian Aborigines informed both his investigations of their skeletal remains and his attitude and conduct towards them during his travel in Australia. Based on his Darwinist convictions and his examinations of hominid fossil and predominantly Australian Aboriginal skeletal remains, he devised a program of New Anthropology, emphasising the significance of complexes of race traits rather than single characteristics. He underlined this agenda by utilising the high variability of physical and anatomical features which he found in the *Australier* and by arguing for an Australoid root of the human species. According to Klaatsch, his physical anthropological research of the dead and the living proved that Australian Aborigines had remained the closest to a common mammal ancestor, retaining numerous of its primitive complexes of pre-human traits.

In summary, I have shown, that the interpretation of Australian Aborigines as a "low", if not "the lowest", human race by German physical anthropologists was established long before they turned their area of investigation into a natural scientific discipline. They formed their views of the *Neuholländer*, *Australier* or *Australneger* by replicating already existing bodies of assumed knowledge that were circulated in the British colonial as well as in the German-language spheres. This bias was extraordinarily powerful, overriding the empirical evidence that challenged these pre-conceived ideas. The profoundly variable nature of humanity demonstrates the underlying fundamental problem; namely, the intrinsic fragility of classifying, typifying and ordering human diversity on the basis of one or another concept of race.

In the broader historiographical context, my research underlines Andrew Zimmerman's argumentation about German *Anthropologie*'s "antihumanism". During roughly the first half of the nineteenth century, German "practitioners of physical anthropology" aspired to investigate the human with an emphasis on the *Naturvölker*. Presenting their work at the German Naturalists Association's meetings, they increasingly distanced themselves from the philosophical and psychological approaches to the study of

human nature. This sentiment or need to differentiate their area of investigation from the humanities, was a driving force for the establishment of *Anthropologie* as an objective, natural scientific discipline. It is reflected in Karl von Baer's and Rudolph Wagner's exclusive invitation to the Göttingen Meeting as much as in the physical anthropological investigations of Australian Aboriginal remains by Ecker, Lucae and Virchow.

Thus, whereas the latter did refrain from drawing far reaching conclusions about Australian Aborigines or the origin of the human species and the processes of racial diversification (except for rejecting Darwinian theory), they undertook their investigations within the existent hierarchical and ideological framework of racialising humanity. The argument for early German physical anthropologists' non- or anti-racist approach to humanity can therefore not be substantiated. With respect to the construction of racial hierarchies, they differed little from their Darwinist counterparts, such as Hermann Klaatsch or Hermann Schaaffhausen– in particular with a view to their interpretation, or rather non-interpretation, of the ape-like features they thought to have determined in the "lower races". While non-Darwinists based their ranking on the statement of Australian Aborigines'' alleged "approximation" to apishness and their cultural stage, Darwinists interpreted these traits as proof of the direct or indirect genetic link between some "lower races", the apes and pre-human ancestors.

Returning to the issue of the repatriation of Australian Aboriginal ancestral remains, I have through my research collated potentially useful information about the modes of the appropriation, the possible German locations and, in some rare cases, the provenance of these Australian Aboriginal skeletal remains. Although I have provided glimpses of these aspects in my case studies (by naming the appropriators and receivers, the circumstances of their acquisition and the apparent names of the individuals whose remains were rendered into scientific specimens), a comprehensive analysis has remained beyond the scope of this thesis. Nonetheless, the present study and the knowledge garnered so far provides an historical foundation for further research on this multi-faceted issue. This thesis also remains within the bounds of German language publications. One area that requires further investigation is the comparison of the German ways of utilising and interpreting Australian Aboriginal skeletal remains with the British, Australian, French and northern as well as southern American approaches. It would also be important to extend the scope of research beyond the investigation of

Australian Aboriginal remains, for example in a comparative study of physical anthropological investigations of other "lower races".

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