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### Résumé de l'article

Cet article examine le contexte anthropologique de l'étude de Rudolf Virchow concernant deux familles inuit du Labrador présentées durant l'exposition ethnographique (*Völkerschau*) de Berlin en 1880 et la façon dont celle-ci reflétait le discours de l'époque sur les Inuit en tant que «race». On y discute aussi de la façon dont la méthodologie anthropométrique de Virchow et ses découvertes concernant les deux familles font le lien avec le travail sur le terrain de Franz Boas en Arctique ainsi que ses futures recherches anthropologiques. Virchow, un des créateurs de l'ethnologie et de l'anthropologie allemandes, avait contribué à un discours «scientifique» plutôt limité au sujet des «Esquimaux», grâce à plusieurs études sur les peuples de l'Arctique, avant de rencontrer le jeune Boas. En particulier, le *Völkerschau* lui a offert sa première opportunité d'étudier les Inuit du Labrador directement. Une analyse de cette étude et d'autres travaux de Virchow apportent un éclairage différent sur les problèmes contemporains de l'interprétation anthropologique auxquels il a dû faire face. Elle montre aussi comment son approche a conduit au choix de la Terre de Baffin par Boas comme zone de recherche sur le terrain et aussi, au changement vers le relativisme culturel.

# Early anthropological discourse on the Inuit and the influence of Virchow on Boas

Rainer Baehre\*

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Cet article examine le contexte anthropologique de l'étude de Rudolf Virchow concernant deux familles inuit du Labrador présentées durant l'exposition ethnographique (*Völkerschau*) de Berlin en 1880 et la façon dont celle-ci reflétait le discours de l'époque sur les Inuit en tant que «race». On y discute aussi de la façon dont la méthodologie anthropométrique de Virchow et ses découvertes concernant les deux familles font le lien avec le travail sur le terrain de Franz Boas en Arctique ainsi que ses futures recherches anthropologiques. Virchow, un des créateurs de l'ethnologie et de l'anthropologie allemandes, avait contribué à un discours «scientifique» plutôt limité au sujet des «Esquimaux», grâce à plusieurs études sur les peuples de l'Arctique, avant de rencontrer le jeune Boas. En particulier, le *Völkerschau* lui a offert sa première opportunité d'étudier les Inuit du Labrador directement. Une analyse de cette étude et d'autres travaux de Virchow apportent un éclairage différent sur les problèmes contemporains de l'interprétation anthropologique auxquels il a dû faire face. Elle montre aussi comment son approche a conduit au choix de la Terre de Baffin par Boas comme zone de recherche sur le terrain et aussi, au changement vers le relativisme culturel.

**Abstract:** Early anthropological discourse on the Inuit and the influence of Virchow on Boas

This article examines the anthropological context of Rudolf Virchow's study of two Labrador Inuit families displayed at an 1880 *Völkerschau* ('ethnographic exhibit') in Berlin, and how the latter reflected the ongoing discourse of the Inuit as a "race." It also discusses how Virchow's anthropometrical methodology and findings regarding the two families are linked to Franz Boas' Arctic fieldwork and subsequent anthropological research. Virchow, one of the founders of German ethnology and anthropology, had contributed to a sparse "scientific" discourse surrounding the "Esquimaux" with several studies on Arctic peoples, before meeting the young Boas. In particular, this *Völkerschau* provided him with the unprecedented opportunity of studying the Labrador Inuit directly. An analysis of his study, and other work by Virchow, sheds light on the contemporary issues of anthropological interpretation, which he faced, and how his approach lent itself to the choice of Baffin Island by Boas as a site of fieldwork, as well as the shift towards cultural relativism.

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## Introduction

Rudolf Virchow, an internationally renowned cell pathologist, co-founder of the German Anthropological Society, and the society's dominant figure before 1900 (Massin 1996), engaged in a wide range of scholarly pursuits that encompassed medicine, biology, archaeology, ethnology and anthropology. One of his specific interests was Arctic peoples, about whom he wrote, including one article following the arrival in 1880 in Berlin of eight Labrador Inuit for a *Völkerschau*, a show of "exotic peoples" and an event which has received considerable attention (e.g., Lutz 2005a, 2005b; Penney 2008; Rothfels 2002: 81-96; Taylor 1981). This *Völkerschau*, one of numerous others featuring peoples from around the world, was sponsored by the Hamburg zoo entrepreneur Carl Hagenbeck during the 1870s, together with an 1878 Greenland Inuit show. It provided Virchow with the unprecedented opportunity of carrying out a direct anthropometric examination and, as the following essay will show, reflects the prevailing anthropological discourse concerning the Inuit.

It is well known that Virchow influenced Franz Boas by the latter's own admission; he thought highly of Virchow's contributions to anthropology, and also described him as one of the "great leaders" of science, a "great" citizen of Germany, and one of the world's "great men" (Boas 1902 in Stocking 1974). Early on in his career, he also benefited from his introduction and subsequent contact with Virchow and his noted colleague Adolf Bastian, the two "guiding lights" of German anthropology (Bunzl and Penny 2003: 7), less than two years after the Labrador Inuit *Völkerschau* (Liss 1996: 175; Stocking 1974: 22). Yet nothing has been written about the possible discursive connection between Virchow's Inuit research and Boas' anthropological thinking. This remains a relevant line of inquiry since Boas' reasons to go to Baffin Island are important to the historiography of anthropology (Stocking 1965: 53), yet not fully understood. In this article, I will therefore review the anthropological construction of the Inuit to which Virchow and Boas responded. I will then discuss how Virchow's study of the Labrador Inuit represented a reaction to several existing anthropological views about the Inuit, and how his thinking based on the *Völkerschau* related study was not only part of this continuum but also subsequently became a catalyst in Boas' Arctic studies.

## Early anthropological classifications of the Inuit

In order to better understand Virchow's and the young Boas' intellectual and methodological inheritance, to which they responded, the following section briefly examines the different ways in which the "Eskimo" were classified and interpreted during what Boas termed modern anthropology's first and second stages. The first one consisted of the historical, the classificatory, and the geographical approach based on speculative anthropology and deductive thinking. The second one was marked by evolutionary theory. Though flawed, both phases were influential in later physical and cultural anthropology (Boas 1904 in Stocking 1974; Harris 2001: 262-263).

### *First phase: historical, classificatory, and geographical*

How the “Eskimo” was constructed belongs within an historical continuum, about which little has been directly written (Hughes 1968: 18-29), that grew out of a debate over the origins of humanity and its migrations (Hodgen 1964: 272-276). Before the 18th century, the view was widely held that all humanity had descended from Adam and Eve, including “the savage.” Natural philosophy eroded this theological perspective during the Enlightenment, as the “nature” of race and civilisation began to be studied by philosophers, zoologists, anatomists, and physicians. Reflecting Enlightenment progressivism, they ranked living things from the basest to the highest and most perfect forms in the Great Chain of Being and raised the possibility of multiple creations. While the majority position of monogenesis prevailed into the 19th century, it was increasingly challenged by polygenesis, whose advocates included Voltaire, Montesquieu, and Hume. Polygenesis was sometimes used to justify slavery, anti-Semitism, and European domination of indigenous peoples. In contrast, German anthropology before the 1890s, spearheaded by Virchow, supported monogenesis, and distanced itself from racist, imperialist, and colonialist agendas (Bunzl and Penny 2003: 9).

Early anthropologists had often mused about “the Eskimo question,” their origins and whether they should be classed along with other Native Americans. For example, the Swedish physician, botanist, and polygenesist Carolus Linnaeus (1707-1778) suggested seven races of human beings. In the natural hierarchy of living organisms which he organised by genus and species, the Inuit belonged to *Americanus Rubescens*, based on his idea of “the inheritance of acquired characteristics” (Smedley 1993). The French naturalist Georges de Buffon (1707-1788) contended that the “Esquimaux” were more specifically tied to “the Danish, Swedish, and Muscovite Laplanders, the inhabitants of Nova-Zembla, the Borandians, the Samoiedes, the Ostiacks of the old continent, [and] the Greenlanders” (Buffon 1807, 4: 191), and went beyond geographical origin to encompass their inheritance of physical, social and cultural character (*ibid.*:191-193).

Such philosophical speculations inevitably raised questions about causation: what made peoples like the Inuit different? As Stocking (1965) noted, Kant (2000[1777]: 15), whose writings generally influenced Boas during his student days and initial fieldwork, wrote that “the interpretive activity of the human mind had a great deal to do with the character of the objects observed in the ‘external’ world.” Kant (2006[1798]) also discountenanced in his *Anthropologie* the common claim that race was fixed by nature, and argued that the Inuit were a geographical product, though not in a deterministic sense; their physical appearance was primarily shaped though not entirely determined by climate and natural environment, especially the cold and snow. In contrast, Hegel (2000 [1830]: 42) agreed that geography played a role but emphasised their “nature-governed minds.” Hence, he wrote that the “Caucasian mind” was progressing towards “*self-determination*” and “*self-development*,” while the Inuit were incapable of progressing, for they were “the dullest savages” and “a vanishing, feeble race” (*ibid.*: 43).

The role of culture, as a causative factor, came more into play in the work of Johann Gottfried Herder (1744-1803) who became critical of the idea of human homogeneity and the common road to human progress (Bunzl and Penny 2003: 11). Herder, who also influenced Boas, argued that in a pluralistic world, culture and history were more important than the natural environment in shaping peoples (*Völker*) and that there existed an organic relationship between a people's culture, or more to the point, a people's mind (*Volksgeist*), and their civilisation, or lack of (Boas 1906 in Stocking 1974: 24). In describing the Inuit's relationship to their environment and how it influenced their collective physiognomy, Herder took their *Volksgeist*, linked their physical and mental traits, and presumed them to be culturally inferior.

### ***Early physical anthropology on the Inuit***

Boas also identified a second stream of early physical anthropology, which sometimes overlapped with the philosophical stream. It consisted primarily of medically trained "zoologists" who studied "the mental life of mankind" and "the anatomical characteristics of the races of man" (Boas 1902 in Stocking 1974: 37). This group included the Dutch physician, naturalist, and physiognomist Pieter Camper (1722-1789) and the German anatomist Johann Blumenbach (1752-1840) (*ibid.*). Camper's physiognomic contributions were mentioned in many anthropological studies throughout the 19th century, especially his scientific "physiognomy" which applied geometrical angles of the nose and face to classify humanity (Anonymous 1868). His indices of "civilisation," influenced not only Buffon and Herder, but generations who "gazed" upon faces and their imagined racial characteristics.

While the study of facial structure remained somewhat important, the skull became the chief anthropological locus for determining individual and racial traits. In this sense, Blumenbach (1775) led the way. He coined the term "Caucasian" while developing his racial typology based on a comparison of skulls and compiled a world famous skull collection, which included four "Esquimaux" skulls from Nain, Labrador, donated to him by Moravians (Keith 1940: 82-85). The physician Benjamin Smith Barton (1766-1815) was the first to bring Blumenbach's taxonomy of skulls to the United States. He used environmentalism to explain the Inuit and their skulls (Spencer 1977: 571). More consequential, Samuel Morton (1799-1851), the dominant figure in American physical anthropology from the 1820s to the 1850s, used the same material to downplay environmental influences and instead promote racial determinism. Morton (1839) classified races on the basis of cranial capacity, structural features, and phrenological features, and established that all Native Americans, except "the Eskimaux," were related, but both races were "barbarous" (Meigs 1856: 14).

In explaining why some peoples became civilised and others not, the early anthropologists resorted to developmental models which include the idea of degeneration. Both Blumenbach and Buffon had separately pursued this idea that some "races" did not fully develop, even reverting to an earlier form. This concept of degeneracy was later used by phrenologists who influenced some anthropologists to

explain the “progress” of European civilisations versus others. In the late-19th century, social Darwinists also applied degeneration doctrine together with Haeckel’s recapitulation theory (Stocking 1987: 228-229) that individual development reflected ancestral evolution, or “ontogeny recapitulates phylogeny” (Massin 1996: 132-133) which supported their case for the “survival of the fittest.”

Not everyone was convinced by the “science” of the zoologists and anthropologists, however, particularly British ethnologists around the mid-19th century who defended the idea of human unity and criticised racial stereotyping. Members of the London Ethnological Society, many of whom were Quakers and abolitionists, repudiated much of this thinking and dismissed craniological and phrenological evidence. Instead they emphasised environmental, cultural and historical explanations. This group included the English Arctic explorer, geographer, and ethnologist Richard King who took strong issue with the existing philosophical and anthropological arguments. He sharply contradicted the conclusions that the Inuit “physical” and “intellectual” nature, or “industrial arts” were biologically inferior (King 1848: 127), and even raised quite opposite possibilities.

### *Second phase: evolutionary*

During the 1850s and 1860s, the ideological divide between ethnology (the “historical” school) which emphasised cultural and environmental factors, and anthropology (the “scientific” school) which looked to theory and physical anthropology, heightened in Britain, France and North America. Beliefs in racial fixity and hierarchy gained new adherents with growing acceptance of evolutionary theories, and the rise of political and cultural nationalism. The discursive shift towards developmental and evolutionary theory is evident in the following beliefs against which Virchow later argued. For example, in 1851, the English anthropologist and archaeologist Pitt Rivers, developed a model of the different stages of mankind going from infancy and childhood to adulthood; he claimed that “savage races” were humanity in infancy (Bowden 1991). He also suggested that the “primitive” Irish and the Inuit might be a single “primeval race” of Europeans and ancestors of “modern” man (Mosely 1851: 180, cited in Bowden 1991).

Anthropology was gradually revolutionised when it began to move away from the first stage, with its primary emphasis on physical structure and “moral” theories, into the second stage dominated by evolutionary thinking. For example, Charles Darwin (1874: 361) wrote that “the Esquimaux” was “like other arctic animals,” meaning that all human beings, as members of the animal kingdom, were subject to natural selection. Yet others were quick to apply his theory of evolution to race, about which he remained reticent.

In contrast, Darwinist Thomas Huxley, a monogenesist, argued that human “stock” had evolved into different “stocks.” To illustrate his point, he suggested that based on their skull, “the Esquimaux [...] certainly present us with a new stock,” though similar

to those on the Asian side of the Bering Sea, even possibly Japan (Huxley 1865: 227). From this evolutionary perspective, hereditary differences were the product of their adaptation to the natural environment over long periods and led to separate peoples.

In the 1860s and 1870s, there was also a renewed attention upon improving technical instruments with which to measure the human skull and collecting more of them. In this pursuit of “the science of races,” Paul Broca, the founder of French anthropology, developed a craniometer to make more exact measurements (Baker 1998: 172-189). In his studies, Broca viewed the Esquimaux as a race apart, and different from the Laplanders, due to their natural environment, though he was not an evolutionist (*ibid.*). Yet in 1876, France’s eminent anthropologist Paul Topinard used the “Esquimaux” as an example of the most homogeneous of races, yet each individual differed from one another, and none corresponded completely to the racial typology which defined them (Stocking 1982[1968]: 58).

Rudolf Virchow inherited this discourse and its methods. Yet he was also a leading representative of the liberal school of German physical anthropology; believed in the unity of humankind, or monogenesis; questioned the role of biological evolution though not the natural environment in creating races; refuted anthropological conclusions based on any unsubstantiated theory; and, in the Humboldtian tradition, rejected “the depressing assumption of superior and inferior races of men” (Popkin 1978: 231). A positivist anti-Darwinist, and a devotee of scientific method and objectivity, Virchow sought to learn more about the Inuit during the 1870s and 1880s than theory provided. There were as yet no satisfactory “scientific” answers on their origins, their links to other races, whether they were atavistic, the uniqueness of their society and culture, the extent of their intellectual capacities, or, whether they could be fully civilised.

### **The question of extinction**

In studying the Inuit, there was also the related question of whether they would continue to exist, certainly in their “pure” state, which both Virchow and Boas took into consideration. In 1865, partly out of growing concerns about extinction and a recognised need that more scientific knowledge about the Inuit and other Arctic peoples was necessary, the Royal Geographical Society of Britain and the newly founded Anthropological Institute began to lobby government to support Arctic exploring expeditions, especially one of “the unknown North Polar Region.” The society also wanted more anthropological studies completed, as long as “the traces of wanderers or sojourners of a bygone age” existed (Markham et al. 1873: 295). Such research, they proposed, could perhaps be done through direct contact with the local descendants in Greenland, Labrador, Boothia, and Siberia, in an effort to discover prehistoric migration patterns, and to answer other questions. These geographers and anthropologists also wanted future Arctic researchers to make careful notes “on the skulls, the features, the stature, the dimensions of limbs, the intellectual and moral state of individuals belonging to a hitherto isolated and unknown tribe, their religious ideas,

their superstitions, laws, language, songs, and traditions, their weapons and methods of hunting, and their skill in delineating the topography of the region within the range of their wanderings" (*ibid.*).

In his 1880 study, Virchow noted that only a few Inuit families survived in the remote Nachvak area and only 3,000 in Labrador, overall, of which roughly two-thirds had converted to Christianity, mostly in the Moravian settlements. While he did not state it too explicitly, the implication was obvious: there were increasingly fewer Inuit left in their "natural state." Indeed, his more pessimistic colleague Bastian believed that "natural peoples," like the Inuit, subjected to external change, would succumb to physical decline and die out (Zimmerman 1999: 161).

What became an international anthropological quest in the 1870s, to learn more directly about Arctic peoples, also coincided with the polar fever of state nationalism which gripped several countries, including Germany, setting the stage for both Virchow's and then Boas' research. From the anthropological perspective, the primary purpose of Arctic studies was however rooted, not in national or military objectives but in Humboldt's cosmography that called for "the study of the world and its development" (Boas 1885: 78). It was urgent, Boas wrote, that international scientific research in the Arctic continue, despite at best mixed results, before "the rapid diminution of those peoples and the influence of European civilisation will deprive the ethnographer of anything to study but their moldering remains" (*ibid.*: 81).

### **Virchow's study of the Labrador Inuit**

Virchow, who mentored Boas before the latter's departure for the Arctic, reflected the first anthropological school of physical anthropology, though he also "advanced the whole field of anthropology" in opposing deterministic models of human evolution (Boas 1902 in Stocking 1974: 37). Having worked closely with Germany's leading ethnologist and Darwinian critic Adolf Bastian, as a scientist and public figure, Virchow was however also loyal to liberalism, cosmopolitanism and humanism, part of his self-critical and rounded *Bildung* ('education') which defined both his research and his politics, and was admired by Boas.

True to his Humboldtian roots, Virchow preferred to rely upon empirical evidence rather than theory to guide his work, and thus depended heavily on craniometry and anthropometry. Initially convinced that physical evidence, particularly skulls, would eventually determine similarities, differences, lineages and migrations of the Inuit, Virchow consulted with like-minded international scholars, including John Barnard Davis, Emil Bessels and others. Yet his intellectual reliance on skulls appears to have begun following his examination of the Labrador Inuit during their *Völkerschau* of 1880 in Berlin, sponsored and organised by Hagenbeck the successful entrepreneur, promoter of "exotic" animal exhibits, founder of the Hamburg zoo, a founding contributor to the Hamburg Ethnographic Museum, and member of the Berlin Anthropological Society since 1878.



In 1877-1878 when Hagenbeck contracted Johann Adrian Jacobsen, a former Norwegian fishing captain, to bring Arctic peoples to Germany for the first time for such an event, the “Eskimo” captivated the imagination of audiences, as representatives of the “noble savage” (Murphy 2002). It was also during the Greenland “Eskimo show” of that year that Virchow and Bastian made their first contact with Hagenbeck’s principal agent, Jacobsen, subsequently “an official collector for the Berlin Anthropological Society” (Rothfels 2002: 106-107), whose artifacts Boas and others later studied.

The *Völkerschauen* constituted commercialised ethnological and anthropological theatre reflective of “middle-class science” (Bruckner 2003: 154; Thode-Aurora 1989), and welcomed in many parts of parochial Germany, “not simply for the titillating experience of observing exotic others, but as part of a genuine craving for a knowledge of, and experience with, the larger world” (Bunzl and Penny 2003: 16). Throughout the western world, they were also used to promote stronger national identities, cultural pride, and racial superiority (Feest 2002; Idiens 1999[1987]: 166-169; Rydell 1987; Vaughan 2006; Wright 1999[1987]: 215-234; Zwick 2006: 25-82). Virchow, their leading advocate, Bastian, and the Berlin Anthropological Society gave them “their broad scientific authority” (Rothfels 2002: 93), because, like the museum, they served as tools to educate the public, though Virchow later doubted their value as “an ethnographic laboratory” (Bruckner 2003: 137-143).

The scientific role of the Labrador Inuit *Völkerschau* is suggested in whom Jacobsen contracted, namely two family groups, quite different from one another in terms of both geographical origin and how “civilisation” had influenced them. One consisted of Christianised Inuit from the Moravian settlement of Hebron, a 35 year old Inuk Abraham Paulus, his 24 year old wife Ulrike, their daughters Sara, four years old, and Maria, one and a half years old, and an unrelated 20 year old man, Tobias. The other was the Tirianniakat family, “heathens” who came from around a remote northern Hudson’s Bay company post, Nachvak, at which they traded. The husband was a reputed shaman (*angakkuq*) named Tiggianiak, accompanied by his wife Paingo, and their daughter Noggasak (Lutz 2005a). This *Völkerschau* gave Virchow the rare opportunity, as an anthropologist, to study “the Eskimo” in person and possibly to provide insight into the still unresolved nature and cause of human diversity, “the most important and magnificent questions that mankind can ask” (Lutz 2005a: 61).

His specific objective was to add to the existing scientific knowledge of “Eskimos” from Greenland to Siberia, demonstrate that they had a common geographical origin, examine their racial characteristics, and establish whether they were a race distinct from other North American native peoples. For this purpose, he conducted a detailed physical and cranial examination, asked questions about their foodways, their ability to count, and their colour perception in what constituted part of an anthropological deconstruction of their bodies, and compared their tools, clothes and tattoos. His findings, while compartmentalised into anthropology and ethnology, were far-ranging and extended beyond interpreting their skulls (Virchow 1880). In establishing their origins, he noted that the Inuit language had similarities with the “Tschuktschen

(Chukchee), Kamtschadalen (Kamchadal), Utari (Ainu)," and Greenland "Eskimo," lending weight to previous contentions that all Arctic peoples had a common origin. He also observed that both families shared a common physiognomy with Mongolians when it came to their eyes and eyelids, suggesting a distant but common Asian origin, though their muscular jaw structure was different.

After interviewing the heathen family, representing the Inuit in a "pure" (*Natur*) state of existence, Virchow established them as "primitive" peoples because their knowledge of numbers did not extend up to 10, and on the basis of their skin colour. However, he recognised in the Christianised Abraham, that the Inuit could be highly intelligent, musically talented, and quite literate. This confirmed that the Inuit, as a people, were not fixed by race. He also determined that members of both families had a strong and discerning sense of colour, as revealed in their vocabulary, especially the Inuit women who evinced a high sensory development (Rivers 1901; Virchow 1880). This finding was likewise important, because anthropologists agreed that variegated colour sense indicated a high degree of evolution, while colour-blindness suggested atavism. These findings about their differing abilities contradicted anthropological claims of innate Inuit racial inferiority and raised questions about the overriding role of geography in determining their characteristics.

Virchow (1880) also observed how the long-term effects of Labrador's natural environment with its absence of vegetables and little fruit had shaped their physical structure. This environment forced the Inuit to rely heavily on raw flesh and fat, and they consequently developed large jaw muscles for chewing. If, as Virchow deduced, Inuit jaw muscles were the product of environmental, not hereditary factors, this physical feature then was also reversible. If so, their entire individual development was likewise malleable. What most distinguished them from the rest of humanity was their elongated skull structure, which Virchow and others believed had evolved differently from other peoples due to geographical isolation, but again the product of relative environmental not hereditary factors.

In sum, Virchow's findings countered views like those held by Robert Knox, the mid-19th century proponent of "moral anatomy," and others with similar ideas, namely, that different savage races, such as the "Eskimaux," the Australian Aborigines, and "the Negro," shared unbending racial "markings," and the prospect of educating them into "white men" was "an entire delusion" (Farrar 1867; Knox 1863: 268). In contrast, like other missionary agencies, the Moravians believed in the moral and spiritual redemption of the Inuit, with their very survival dependent on the degree to which they assimilated their religious beliefs, education, trades, and work ethic, but such adaptation also meant the disappearance of their primitive society and its culture. Virchow concluded that both the *Völkerschau* families represented "primitive" peoples in a developmental sense, and a product of their geography, history, and natural environment, but this did not fix them as a race—a shift in his own previous thinking. They were capable of becoming educated and civilised, as the highly intelligent and multi-talented Abraham overwhelmingly demonstrated. However, the "primitive" shaman Tiggianiak and his daughter Noggasak had manifested inexplicable behaviour

(e.g., Virchow 1880: 257) which called for more study. In also recognising that both Inuit families had been influenced by European contact, which also compromised the ultimate objectives of his study, Virchow indirectly raised the need to find Esquimaux as close to their “natural” state as possible before such inevitable assimilation, or even extinction, happened.

Virchow’s study of the Labrador Inuit has been interpreted as “a demonstration of scientific racism’s pertinence outside an imperialist and racist socio-political agenda,” and his intellectual and professional role, wrongly, as “part of an anthropological continuum which indirectly lent support to later Nazi ideology” (Lutz 2005a: 77-82). In fact, Virchow, though influenced by racial categories, opposed the ascendant school of socio-biological determinism headed in Germany by Ernst Haeckel (1834-1919), Bastian’s former student, and representative of the ascendant generation of neo-Darwinian and neo-Lamarckians whose influence prepared the groundwork of Nazi ideology (Massin 1996: 79-154). He contended that humanity’s physical and mental traits were relative to the environment, not predetermined by heredity and race, and slowly shaped over many generations. Therefore, “race” was not only variable in nature, but a product of culture, and he doubted whether an “ethnic law of hereditary development” existed (Brinton 1902: 278-279). Instead, differences within each race and between races stemmed from a people’s geographical and historical (read cultural) “environment.”

In the decade following the Labrador Inuit *Völkerschau*, Virchow also expressed other reservations about the value of craniometry and anthropometry, if used in isolation from other evidence (Massin 1996: 106-07). Although he remained one of the world’s foremost skull collectors (*ibid.*: 84)—Boas was trying to sell skulls to him (Cole 1985: 168) as late as 1889 (Virchow 1889)—he became uneasy with the methods of physical anthropology. Virchow’s trepidations surfaced in his 1892 introduction to a new edition of Samuel Morton’s *Crania Americana*, where according to one reviewer, he rejected Morton’s beliefs in race, and doubted “that there is any one characteristic aboriginal American type of skull, or, so far as one can see, that there ever has been one” (Brinton 1892: 278-279). He also argued that Native peoples had immigrated to the Americas as fully developed human beings, and their complete history remained largely unknown. Yet to reconstruct and understand that history, bones were no better guides than linguistic tools; he also noted that the largest cubical brain capacity had come from the skull of a Labrador Eskimo, not from a European.

Zimmerman (1999: 158) states that “treating the human as pure object was a defining theoretical feature of German anthropology, which considered itself a natural scientific discipline, opposed and superior to social and humanistic studies of humankind. Hence, Virchow’s now qualified support of his own methods contributed to a growing “crisis” within physical anthropology in the 1890s (Massin 1996: 106-114), over the links between “savage and primitive races,” evolution, and degeneracy (*ibid.*: 98), and racially defined cultures (Geulen 2000).

## Influences of Virchow and Bastian on Boas

Hagenbeck, after suffering financial losses over the cost of the *Eisbär* expeditions under Jacobsen and the tragic deaths of the Labrador Inuit from smallpox while in Europe, decided to discontinue his *Völkerschauen*, though they were later revived. This coincides with Boas' arrival in Berlin. In 1882, Boas' family and their professional contacts in the city had put him in touch with Bastian, who showed the young scholar around the Ethnological Museum's Eskimo collection, much of it brought from Greenland and Labrador by Jacobsen. Bastian also introduced Boas to Virchow, an old friend and associate of Boas' Uncle Abraham Jacobi, at a meeting of the Berlin Anthropological Society (Herskovits 1953; Liss 1996: 175-177). This timing proved fortuitous in Boas' subsequent career path. After purchasing the *Eisbär*, Bastian contracted Jacobsen to carry out anthropological expeditions for the museum along the Pacific coast of Canada and Alaska (Cole 1985: 58-67), out of which the famous Bella Coola exhibit was drawn. Moreover, Bastian hired Boas as his museum assistant in 1885 after his return from Baffin Island, before following Jacobsen to the Northwest. Boas and Jacobsen's paths would cross yet again intermittently, including at the Columbian International Exposition in Chicago during 1892 (Cole 1985: 131).

Many biographical details about Boas are well known but require further contextualisation. When he met Bastian and Virchow, Boas had only just finished his doctorate in physics with minors in geography and philosophy, and was completing a required year of military service. During these days, he kept his mind occupied with readings about "my Eskimos" and "the dependence of the migration of the present-day Eskimo on the configuration and physical conditions of the land" (Cole and Müller-Wille 1984: 38-39). They had fascinated him since he was a teenager during the First and Second German Northern Polar Expeditions, having first read Charles Hall's Arctic accounts. His interests also suggested the influence of Theobald Fischer, a geographer at Heidelberg University who, as a docent, lectured in Bonn in 1877-1878 on polar geography and exploration, and later in Kiel and Marburg, becoming at Kiel "a mentor" to Boas who started to study the migration of the Inuit in relation to their natural environment, though "chiefly from a methodological standpoint" (Boas 1882 in Stocking 1974: 44; cf. Cole 1999; Cole and Müller-Wille 1984).

Besides taking an increasing interest in geography and Arctic studies, Boas' general research approach and methods were also transformed (Stocking 1982[1968]: 137-139). He explained to his uncle that as an undergraduate his interests had drifted away from mathematics, physics, the natural sciences, and their "materialistic *Weltanschauung* ('worldview')," because the latter was "untenable." Likely influenced by F.A. Lange's *The History of Materialism* which seriously challenged many of the existing empiricist assumptions on the natural sciences to which Boas' had adhered (Cole 1999), he now wanted to study "the interaction between the organic and the inorganic, above all between the life of a people and their physical environment" (Stocking 1974: 43-44; draft of a letter to A. Jacobi). Prior to Berlin, he also developed an interest in psychophysics, or what he describes as the relationship between sensation, perception, and geography. He moved more directly into "geography," of

how geographical and environmental factors influenced cognition. This decision to explore the neo-Kantian relationship between geographical surroundings, migration, and “psychological” ideas, or culturally based ideas, became life changing.

In the transitional year between Boas’ doctorate and his decision to leave for the Canadian Arctic, Friedrich Ratzel published *Anthropogeographie* (1882) which called upon scholars to examine common geographical areas, or clusters, inhabited by peoples of similar cultures, in order to better analyse how the natural environment shaped them. This influenced Boas in how to conduct his research as he moved away from detached scientific observation to fieldwork. To better understand the historical and cultural connections related to migration, in which he had been interested, it was “necessary to study on the spot a people living in a wide area of uniform character,” (Boas 1887a in Stocking 1974: 59-60), and he had chosen his favourite people, the Inuit, to do so. He also pursued the idea of “a critical analysis of the characteristics of *each* people,” [my emphasis] rather than studying the Inuit as a whole (Boas 1888: 629; cf. Benedict 1943: 28), before attempting to draw conclusions about “cultures found in wider areas” (*ibid.*); this meant studying individual Inuit groups and moving from universalism to particularism.

Boas seized the propitious opportunity of going to Baffin Island right after the First International Polar Year of 1882-83, with the projected international initiative to carry out meteorological and other scientific studies in all Arctic regions (Barr 1983); it provided him, as a geographer, with an excellent opportunity of testing his new ideas. This international project included establishing 15 weather stations, one of which was to be established at Nain (Labrador) by the German government, with another German-sponsored station at Kingava Fiord in the Cumberland Inlet, where some researchers also collected ethnological data. With Bastian’s help and influence, Boas succeeded in gaining support from the German Polar Commission and in training for his fieldwork, Virchow taught him the art of anthropological and craniometric measurement (Cole 1999: 67; Cole and Müller-Wille 1984).

The choice of Cumberland Sound and Baffin Island was obviously determined by the German expedition, but the choice of Baffin Island must in part have been considered in the context of Virchow’s study of the Labrador Inuit which made it plain that hardly any Greenland or Labrador Inuit remained untouched by “civilisation.” Also the two families, though both Inuit, were remarkably different and had come from separate parts of Labrador; this suggested the need to study them within their individual environments because the *Völkerschau* study had failed to answer why strong cultural differences existed between them. While Boas recognised that much work still remained to be done in Labrador, the Inuit on the shores of Baffin Island, though long visited by whalers and by explorers in search of a North-West passage, remained, in contrast, “still little known” to “any man of science” (Boas 1984[1884]: 255). He decided therefore to focus his work on these “tribes” scarcely observed by any “white men,” and which represented Inuit closer to a state of nature. His mission was to find answers to the longstanding and unresolved anthropological questions about the origins and migrations of this region’s Inuit, including to Labrador. Well versed in

geographical methods and trained as a cartographer, he regarded his fieldwork as key to furthering this research and his academic career. Virchow (1883) also provided him with instruments for craniometrical study and also called upon him to make notes on Inuit menstruation cycles, though apparently Boas did neither, probably due to opposition from local Inuit, who also protested his attempts to remove skeletons and skulls from graves.

Boas regarded directly learning about specific Inuit bands as a way of breaking out of the theoretical and empirical impasse in the anthropology of the day, not surprisingly because, up to 1883, the physical evidence about the Inuit upon which anthropological discourse was largely based consisted of 127 skulls (Kollmann 1883), though a few more were added from Labrador by Curwen in the 1890s (Duckworth 1896), together with a scattering of missionary, travel, explorer, and naval accounts. In short, the study of skulls and artifacts had not provided the answers to the questions which Boas and his predecessors had sought (Bunzl 1996; Smith 1959). Moreover, he must have been fully aware that the direct study of Inuit at a *Völkerschau* was a compromised setting, and not genuinely scientific. When Boas concluded his fieldwork in August 1884, it reconfirmed not only the deficiency of the existing evidence, but other unresolved and complex dimensions of determining these people's origins of "customs, traditions and migration," and the necessity of acquiring "a thorough knowledge of their history" (Boas 1887a in Stocking 1974: 60). The latter, he now contended, was "of greater influence than the surroundings" (*ibid.*).

## Discussion

What distinguished Boas at this point in his career from other contemporary scholars in the field, including Bastian and Virchow, was the way in which he phrased the particular problem of studying cultural variations and the relationship between "the objective world and man's subjective world" (Benedict 1943: 27-28). Until then, "no one had envisaged intensive investigation of the mental life of man as it expressed itself in all aspects of culture" (*ibid.*). In pursuing this route, and reflecting a range of influences including Virchow's, Boas realised that "laws," in the sense of the "pure" sciences, were not possible in the study of culture, at least not without first understanding the historical, environmental, and "psychological" conditions of particular cultures. Only by comparing one culture to others would general answers unfold (*ibid.*: 31; Reichard 1943: 57).

Despite the practical and ultimate limitations of his research, Boas insisted on applying the same rigorous scientific principles he had practiced in his first discipline, physics, and he transferred "the essence of its [physics] method so far as it was applicable" (Kroeber 1943: 5, 7). In avoiding the inappropriate application of theory, or "laws," and wanting to be guided principally by evidence, Boas reflected Virchow's empirical and detached approach to the study of human origins, human nature, and the relationship of culture to the natural environment. In this sense, he would later write, Virchow was to him the model of the natural scientist, "the ice-cold flame of the

passion for seeking the truth for truth's sake" (Boas 1945: 1; Stocking 1974: 22). Moreover, particular forms of uncompromised evidence could only be gleaned in the natural environment in which the Inuit lived. Boas insisted that each culture needed to be studied first on its own terms and in its own setting (Boas 1907 in Stocking 1974: 276-277).

Boas' direct and continuous encounters with the Inuit transformed how he came to perceive and understand them, as compared to what he had previously read or discerned from "reading" their skulls, what some have attributed to a "conversion experience." He became not only self-critical but began to challenge the existing anthropological presuppositions about the "natural" superiority of Europeans. This prompted him to write, "we have no right to look down on them [...]. We 'highly educated people' are much worse, relatively speaking" (Boas 1883 in Cole 1999: 79). Yet Boas' scholarly shift from the natural sciences to cultural anthropology, and the changing values which accompanied it, also clearly show the influences of Humboldt, Bastian, and Virchow and suggest, as Stocking (1982[1968]) has argued, a discursive continuum.

Various other intellectual influences also coincide with Boas' transformation. In 1887, he concluded, "By regarding a single implement outside of its surroundings, outside of other phenomena affecting that people and its productions, we cannot understand its meaning" (Boas 1887b in Stocking 1974: 62). His willingness to consider cultural relativism and his ideas on the role of *Verstehen* (i.e. establishing meaning in understanding the human condition), sidestepped traditional scientific theory, method, and rationality, or *Erklärung* ('explanation'). In so doing, he openly embraced what belonged to a growing critique of scientific rationality in Berlin by other scholars of his own generation, some of whom he had encountered, including the historian and philosopher Wilhelm Dilthey (Boas 1907 in Stocking 1974: 276-279), the sociologist Georg Simmel, and the ethnologists Moritz Lazarus and Heymann Steinthal (Bunzl 2003; Kalmar 1987; Stocking 1974: 10-11; Yengoyan 1997).

In 1889, Boas' experience and rethinking of the nature of human diversity as culturally relative led him to reconsider further not only the contributions of ethnology, but also its Eurocentric underpinnings. Ethnology had advanced the understanding of human culture by pointing out how the "natural" nature of emotions was relative, and that what one thinks, and how one feels reflected not only ability and knowledge, but was "the result of our upbringing as individuals and our history as a people" (Boas 1889 in Stocking 1974: 71). Boas added: "To draw conclusions about the development of mankind as a whole we must try to divest ourselves of these influences [the correctness of our emotions], and this is only possible by immersing ourselves in the spirit of primitive peoples whose perspectives and development have almost nothing in common with our own" (*ibid.*). In short, Boas now called upon ethnologists and anthropologists to reconsider their pre-existing biases about non-Europeans, to accept them as fellow human beings, and to pursue scientific objectivity; so too had Virchow.

Boas readily acknowledged that Virchow had influenced his thinking about how culture worked, and he drew an analogy between Virchow's research in cell pathology and his own gradual shift within anthropological discourse. In studying "the mutability of cells and groups of cells," Virchow had been convinced that there was no sharp distinction between normal and pathological cells per se (Boas 1902 in Stocking 1974: 38-39). Upon comparing cell reproduction and its origins as a species, he had concluded that it was impossible to determine whether or not a cell's pathology was inherently different or the result of secondary factors. What constituted a particular cell could only be determined through careful direct and exact observation and interpretation, and not through general theory. Also to determine the nature of a cell required knowledge of its form, its relationship to other cells, and its function. Virchow's model determined that the study of a particular cell required one to observe its active and reflexive relationship with other cells. This realisation had early on not only shaped Virchow's approach to anthropology but it had also transformed Boas' thinking about the study of anthropology in its emphasis on direct observation of particular data and their comparative analysis (*ibid.*).

Nevertheless, while by the end of the 1880s, it was obvious that Boas still practiced mainstream anthropology, he had also begun moving slowly and steadily into what he termed the third stage of modern anthropology, of cultural relativism, with its study of specific cultural traits, of behaviours, beliefs, and symbols within a local context, to which he applied his fieldwork and other ethnological and anthropological methods. In helping us to understand how and why Boas got there, Virchow's study of the Labrador Inuit in Berlin is pivotal, a discursive linchpin which changed Virchow's understanding, indirectly affecting both Boas' decision to research the Inuit of Baffin Island, and his conceptual shift away from the older physical anthropology towards cultural anthropology.

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