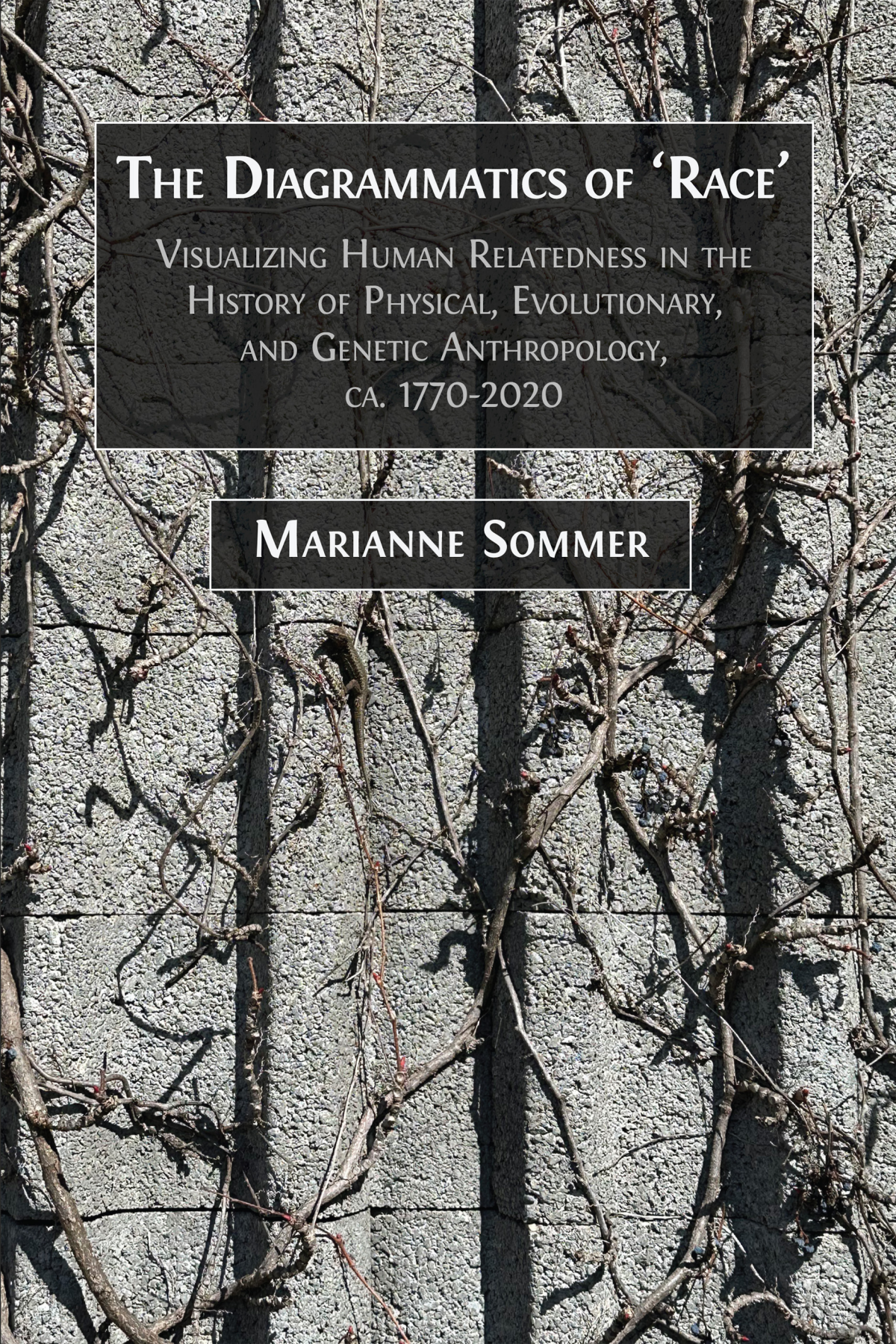

The Diagrammatics of 'Race'

Visualizing Human Relatedness in the History of Physical, Evolutionary, and Genetic Anthropology, ca. 1770-2020

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3. Kinship Denied and Acknowledged

Into this fray entered Morton's second paper skull atlas, *Crania aegyptiaca* of 1844, which was possible due to the plundering of Egyptian sepulchral grottoes, catacombs, and pyramids largely organized by Gliddon, to whom Morton dedicated the volume. The oldest remains were estimated to be at least 2,500 years old, a timeframe that fell within the date range traditionally attributed to the deluge at 3,154 BC. On this basis, Morton approached the controversial questions of whether the ancient Egyptians were Jews, Arabs, Hindus, Nubians, or Black Africans, and whether civilization had started in Egypt or rather in Ethiopia. To ascertain the position of the ancient Egyptians in the 'hierarchy of races', Morton compared the mummies with the monuments, namely the images and statues of the people, and with the skulls in his collection (1844, 1–3).

Morton concluded that the ancient Egyptians were 'Caucasian'. Most importantly for his overarching argument, he 'showed' that in ancient Egypt the main existing 'races' of his day had already been present, and even exhibited similar relations, including Black Africans as slaves and serfs and some 'Caucasians' as human gods. And with civilizations as old as in Egypt and in the Americas, humankind and the human varieties would have to be referred even further back in time (1844, 65–67). Morton's conclusions from the two skull atlases could therefore be read as arguments in favor of polygenism. However, it seems that it was only in the third edition of his catalogue of 1849 that Morton openly stated the view that the 'main races' were rather groups themselves containing 'races', all of which had originated independently and in the geographical region in which they now lived, and to which they were adapted. In the catalogue, he also gave measures of facial angles and

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cranial capacities to definitively fix the 'hierarchy of races'. Even then, such clear statements were hidden in footnotes (1849a, ix footnote; see also Morton 1849b, 223 footnote).

This seems to fit the observation of Paul Wolff Mitchell and John S. Michael that Morton never took clear sides in the slavery debate, whether in public or in private, and that he had friends and colleagues in both parties, including vocal proslavery race supremacists as well as abolitionists. Even the man who funded the lithographs for *Crania americana* and the lithographer Collins were antislavery activists. Furthermore, while studying in Edinburgh, Morton became friends with the physician Thomas Hodgkin who spoke out for the Native American peoples. At the same time, Morton's close association with polygenist slaveholders and their use of his work for their cause seem to speak for themselves (Mitchell and Michael 2019, 86–87; Sommer 2023a, 21).

Morton drew especially on French polygenist writers in *Crania americana*. One inspiration Morton explicitly mentioned in his preface (1839, iv) was the politically progressive military physician Julien Joseph Virey, who divided the genus *Homo* into two species on the basis of the facial angle (1824, 438). Virey's writing also once again illustrates that the emphasis on the head as the most important source of information was present not only in phrenology, but also in the older approach of physiognomy. Morton cited Virey's *L'Art de perfectionner l'homme* (1808), which concerns the interdependence of environment and the 'soul', morals, 'temperament', and way of life, as well as the physiognomy of peoples. While this environmental approach clearly diverged from Morton's views, the notion that the human body exhibits particular and meaningful proportions and symmetries align with his understanding. Virey claimed that the 'straighter' ("droite") the face, the higher the intellect and civilization, while what he described as the extended "museau" [muzzle] in Black Africans (143) was seen as a decline towards the apes. Playing with the correlation of parts in Cuverian fashion, the elongation of the lower part of the face was said to have the effect of the proportional retreat of the brain, so that while the senses were increased, intelligence decreased (139–59).[1]

1 Indeed, Michael (2021a) has shown that Virey actually manipulated some of Blumenbach's skull illustrations in this way to increase the facial angle of 'the Caucasian' and to decrease that of 'the Ethiopian'.

Another French polygenist was Antoine Desmoulins, who, in his *Histoire naturelle des races humaines* (1826), gave descriptions of head types; although he did not take measurements, he did discuss measurements such as diameters in his work. Desmoulins divided humankind into different *espèces* [species], their '*races*', and their *souches* [families], with references to Camper and Blumenbach among others, and he claimed that each animal and human species was created at a specific place, although this place (the environment) had nothing to do with its form (335). In his treatise, we already encounter the claim that the study of the ancient texts shows that the same human species lived and were recognized at that remote time, and that the parts in which they were then found were where they originated (336; altered human populations, he suggested, were the result of mixtures). Like Morton, Desmoulins held that philology proved nothing when physical characters contradicted it; the affiliation of languages hinted only at political not genealogical affiliation.

Morton also referred to Jean-Baptiste Bory de Saint-Vincent as an important input in the preface of *Crania americana* (1839, iv) and cited him frequently in his treatment of the varieties of the human species. In *L'Homme* (*Homo*) (Bory 1827), the French naturalist, military man, and politician denied that 'the Red and Black races' were consanguineous with 'the White'. Bory claimed that his voyages had given him proof of eleven species and later of fifteen. Of Bory's many human species, "*Homo Japeticus*" (after Japheth) was the most beautiful in proportions, presented the largest facial angle, an oval face, and contained the greatest number of geniuses (Vol. I, 102–162). "*Homo Aethiopicus*", too, was given a close description regarding the form of the skull, its volume (smaller than that of "*Homo Japeticus*", Vol. II, 29–30), the protruding face, etc. (Vol. II, 29–86). It was once again the Khoekhoe or Khoisan, Bory's species number fifteen, who were presented as bridging the gap to the apes (Vol. II, 113–34). In one breath, however, Bory condemned the cruelty inflicted by White people upon Black Africans, including in the context of the slave trade and slavery, while (condescendingly) observing that Haiti's Black population had taken revenge and proven that they could have ideas of freedom. Bory's blatant scientific racism thus exemplifies the complexity of the connections between science and

politics, as he strongly opposed slavery and was an antimonarchist, liberal thinker who believed in equality before the law.

In the preface of *Crania americana* (1839, iv), mention was also made of Morton's friend, American race supremacist Charles Caldwell, who might have been the first to explicitly promote polygenism in the English language and who took on Prichard in his *Thoughts on the Original Unity of the Human Race* (1830). Morton (1839, 88) cited Caldwell in support of the old age of both 'the White and Black races' – an age that, according to biblical chronology, did not leave enough time to render the previous transformation of one into the other a possibility.[2] Nonetheless, there were also the voices of monogenists in *Crania americana*, beyond those of Camper and Blumenbach. One of them was the British physician William Lawrence, whose influential *Lectures on Physiology, Zoology, and the Natural History of Man* Morton cited. The lectures had been held by Lawrence as Professor of Anatomy and Surgery at the Royal College of Surgeons and published in 1819, but Lawrence was withheld copyright due to a verdict stating that the book was in parts against the Scripture, and there were accusations of materialism. In spite of this, several editions appeared, and, in 1822, Lawrence was made a member of the American Philosophical Society in Philadelphia (Mudford 1968). Lawrence was clearly a follower of Blumenbach, to whom the book was dedicated and whose ideas structured Lawrence's treatment of

2 Concerning further American sources, Morton for example also highlighted the importance of the monogenists John Collins Warren (e.g., 1822) and Benjamin Hornor Coates (e.g., 1834). Finally, Morton's book was more than a mere comparative anatomy of skulls. To link it to the literature on the distribution, history, language, affiliations, general appearance, customs, religion, commerce, politics, temperament, etc. of diverse peoples, he drew on travelogues and historical and ethnographical studies (beyond Prichard). *Crania americana* was dedicated to Morton's Philadelphia colleague and surgeon of the US Navy, W. S. W. Ruschenberger, who wrote about his voyage around the world and provided Morton with important information especially with respect to Peru (Ruschenberger 1838 – dedicated to Morton in turn). Ruschenberger was among those explicitly listed in the preface of *Crania americana* (Morton 1839, iv). Morton also relied on Ruschenberger's *A Voyage Around the World* (1838) for physical descriptions of peoples, and he referred to the latter's table of "four purely Siamese heads" (Ruschenberger 1838, 299) and their measurements including the facial angle (ibid., 300) (see Morton 1839, 49, also footnote). The same was true for Alexander von Humboldt's (1814) description of the retreating and small forehead of Indigenous peoples of the Americas (Morton 1939, 66) or of features, stature, hair, etc. more generally (ibid., e.g., 69, 71, 143).

the human varieties. The 1822 reprint of *Lectures* also included some of Blumenbach's skull drawings. However, like Prichard before him, Lawrence denied that the climate was the cause of the imperceptible gradations in variation throughout the human species, which must rather spontaneously appear in generation as was the case in domestic animals. At the same time, Lawrence deviated widely from Prichard as well as Blumenbach in his description of Black Africans, inverting the argument against slavery, from the stance that Black Africans were not generally inferior to the stance that their inferiority was a reason against enslavement (1822, 330–36).

With regard to the French-speaking community, *Crania americana* refers to the work of the monogenist Pierre Paul Broc. The Professor of Anatomy and Physiology opened his *Essai sur les races humaines* (1837) with a fold-out of skull lithographs and 'racial portraits'. Broc recognized only one species of 'man' containing different 'races' or varieties. The differences between human groups concerned the form of the skull and face, the proportions of their various parts, as well as the color of skin and hair, but these differences were not essential. It was impossible to reconstruct something like an original state of the 'races', because they had mixed and changed over an immense and unknown period of time. In nature, Broc reasoned, there were in fact no races, only individuals, but the human mind liked to categorize and thus sort humans into groups. So, in a certain sense, those scholars who constructed a great number of races (up to sixty) were closer to the truth. Broc juxtaposed the systems of human classification of Cuvier, the physician Pierre Nicolas Gerdy, Linné, Blumenbach, Virey, Bory, and Desmoulins in a table (1837, 7) and went on to synthesize their racial classifications and descriptions, including the comparative-anatomical traits with a range for the facial angle. Broc also reproduced Prosper Garnot's table of comparative measurements of skulls – a table that indicates that an extensive system was in place before Morton's crania atlases (Broc 1837, 29; see my Figure I.12).

The marine surgeon and naturalist Garnot had been part of an expedition 'around the world' in the first half of the 1820s. They 'collected' skulls and, in the atlas of plates accompanying the published research results, there is one showing the lithographed front, base, and profile of a skull from New Guinea (Duperrey 1826, Plate 1). In the first chapter of

the first volume and first part of the research compendium (Lesson and Garnot 1826, 1–116), Garnot carried out a comparison of skulls from Waigeo, New Guinea, New Zealand, Mozambique, and Paris and gave the table reproduced by Broc (Lesson and Garnot 1826, 113–15). In this play of image, measurements, and diagrammatic description of relative proportions and volumes, the impression again emerges that the various human skulls could be arrived at through 'the flattening, squeezing, elongating, etc.' of certain parts, and the correlated changes in others, of the European variety (see also Garnot 1828, in which he mentioned the systems of the scholars treated above; and Garnot 1836, which again contains said table of measurements and a series of plates, with Plate 217 and Plate 221 showing 'portraits of races' and their skulls).

TABLEAU COMPARATIF *des proportions que présentent les diverses parties des crânes de*

	FRANCAIS.	NEGRE MOZAMBIQUE	PAPOU DE WAIGIOU.	ALFOUROUS. NOUVELLE-GUINÉE.	NOUVEAUX ZÉLANDAIS.
	p. l. m.	p. l. m.	p. l. m.	p. l. m.	p. l. m.
Diamètre antéro-postérieur ou occipito frontal.	6 10 0,185	6 4 0,171	6 6 0,176	6 9 0,183	6 8 ,0180
Diamètre transverse ou biparietal.	4 10 0,131	4 7 0,124	5 4 0,144	4 8 0,126	4 10 0,131
Diamètre perpendiculaire ou sphéno-bregmatique.	5 » 0,135	4 6 0,122	5 3 0,142	5 » 0,135	5 3 0,142
Distance de la protubérance occipitale à la symphyse du menton.	6 10 0,185	7 5 0,201	»	8 » 0,217	7 4 0,198
Distance du sommet de la tête à la symphyse.	8 2 0,221	8 2 0,221	»	8 » 0,217	8 3 0,223
Distance d'une arcade zygomatique à celle opposée.	4 10 0,131	4 6 0,122	» 0,135	5 1 0,138	4 11 0,133
Distance d'un angle de la mâchoire à celui du côté opposé.	3 10 0,104	3 4 0,090	»	3 6 0,095	3 8 0,099
Distance de l'angle de la mâchoire à l'apophyse condyloïde.	2 4 0,062	2 3 0,061	»	2 6 0,068	2 5 0,065
Distance d'une apophyse mastoïde à celle du côté opposé.	3 10 0,104	3 8 0,099	3 8 0,099	3 8 0,099	3 11 0,106
Distance de l'angle orbitaire externe à celui du côté opposé.	3 10 0,104	3 8 0,099	4 » 0,108	4 1 0,111	4 1 0,111
Diamètre transverse de l'orbite.	1 5 0,038	1 6 0,041	» 8 0,045	1 10 0,050	1 7 0,043
Diamètre perpendiculaire.	1 4 0,036	1 4 0,036	1 4 0,036	1 6 0,041	1 5 0,038
Largeur des fosses nasales.	1 11 0,025	1 1 0,029	» 11 0,025	» » 0,027	» 11 0,025
Diamètre antéro-postérieur du trou occipital.	1 3 0,034	1 4 0,036	1 4 0,036	1 3 0,034	2 » 0,054
Diamètre d'une tubérosité molaire de l'os maxillaire supérieur à l'autre.	» 8 0,045	1 8 0,045	1 6 0,041	2 » 0,014	»
Angle formé par une ligne partant de la symphyse du menton à la protubérance occipitale, et par une autre ligne partant de la symphyse à la bosse frontale.	70 degrés.	58 degrés.	» (1)	67 degrés.	67 degrés.

(1) Les têtes qui ont été comparées entre elles n'étant pas parfaitement entières, nous avons été forcés de négliger quelques-unes de leurs dimensions.

Fig. I.12 "Tableau comparatif des proportions que présentent des diverses parties des crânes de" [Comparative table of the proportions presented by the diverse parts of the skulls of]. Pierre Paul Broc, *Essai sur les races humaines* [...] (Brussels: Établissement Encyclographique, 1837), p. 29. Public domain.

Overall, there are competing messages in Broc's 1837 treatise. While he repeated the racist descriptions of other naturalists, he recounted with pride how he had opened up a school in Bogotá with children of all 'races', free and enslaved, motivated by the enormous transformative power of education in all 'races of man', which to him proved the unity

of 'mankind'. Broc ended his book with a diagram by a corresponding member of the Royal Academy of Medicine (Antoine Constant Saucerotte) that instantiated a grand synopsis of the then circulating 'knowledge' about the human 'races' and their derivates – their distribution and characteristics (including the range of the facial angle) (Figure I.13).[3]

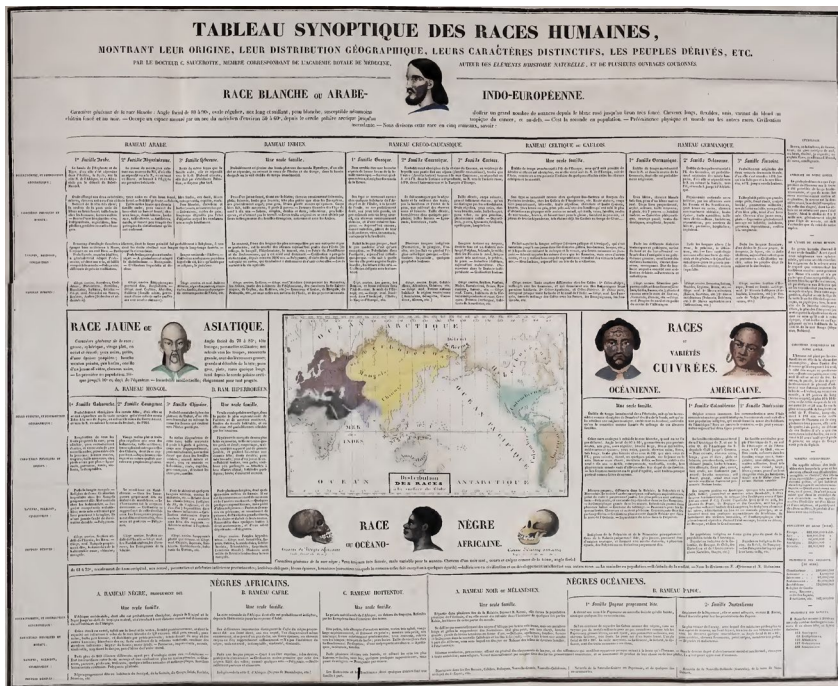

Fig. I.13 "Tableau synoptique des races humaines" [Synoptic table of the human races]. Pierre Paul Broc, *Essai sur les races humaines* [...] (Brussels: Établissement Encyclographique, 1837), appendix. Public domain. A larger version of this image may be viewed at https://hdl.handle.net/20.500.12434/ce1f3d06

All in all, Morton especially relied on French polygenists already in *Crania americana* when establishing a 'racial hierarchy' based on skulls,

3 Saucerotte had published the compendium *Elémens d'histoire naturelle* (1834), which treated botany, zoology, and mineralogy, with each section containing synoptic tables followed by plates. The section on zoology contained a plate with stereotypical drawings of the 'three main human races' (Plate 5) that were described in the synoptic tables under the first order of the "Bimanes" (38), including the facial angle (39, see also 34).

diagrams, and numbers. But he also drew on monogenists, and members of both camps could stand for complex and contradicting politics of knowledge. As we are going to see, it was after Morton's death, and in connection with *Crania aegyptiaca*, that Morton's ethnology was once and for all enlisted for polygenist and racist causes by the Egyptologist Gliddon and the surgeon and Alabama plantation owner Nott.