

# George Combe's law of hereditary descent

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In this paper I would like to make two main points. The first is historical and the second theoretical or methodological. The historical point is that the phrenologist and philosopher George Combe played a disproportionately major role in popularizing some forms of heredity and proto-eugenic concerns in the mid-nineteenth century. The second or methodological point I would like to make is that the heredity of the ideas of inheritance themselves is as important as their context in determining their specific characteristics.

George Combe was a young Edinburgh lawyer when the German phrenologist Dr Johann Gaspar Spurzheim came to Edinburgh to face down an acrimonious critic in 1816. Through skilful dissections and naturalistic rhetoric Spurzheim was widely seen to have defeated his opponent and Spurzheim's reputation, for some, quickly swung from that of an outrageous foreign quack to a serious man of science to be respected. Combe was among those Spurzheim converted to the new science of phrenology during a seven month stay in Edinburgh.

Spurzheim was at that time the only advocate in Britain of the system founded by Dr Franz Joseph Gall formerly of Vienna and later residing in Paris. Gall called his system *Die Schädellehre* and later in Britain it was named phrenology. Gall recognized that the brain was the organ of mind and furthermore he argued that the mind must be composed of multiple distinct innate faculties. Therefore, each faculty must have a distinct seat or 'organ' in the brain. The size of an organ, other things being equal, must be a measure of its power. Hence, as the skull follows the shape of the underlying brain, the exterior of the head serves as an indicator of the shape of the brain underneath and reveals an accurate index of psychological aptitudes and tendencies.<sup>1</sup>

George Combe began by purchasing some plaster busts to study the science and these soon attracted friends and visitors who looked to Combe to explain the details. This was Combe's first real taste of speaking authoritatively on a scientific subject and he was soon addicted. Over the next few years Combe and his fellow Spurzheim acolytes created the British hybrid doctrine we now recognize as phrenology with its white plaster busts with black markings and the lists of 35 or so renamed cerebral organs with their corresponding mental faculties arranged into orders and genera. Combined with these was a version of the traditional doctrine of the four humours or temperaments – as the phrenologists termed them the lymphatic, bilious, sanguine and the nervous temperament. Combing estimations of temperament and the shape of the skull, phrenologists diagnosed character, aptitudes and mental powers and inclinations. The authority to classify and define the powers and abilities of all humans was a uniquely authoritative role for a phrenologist and it does not seem coincidental that all of the major phrenologists were ambitious, egotistical and often quite arrogant men.

George Combe was perhaps the most ambitious of them all. He first set his sights on becoming a man of science. This he to some measure achieved by co-founding the Phrenological Society in 1820, by writing scientific publications on the subject – his first publications – and by giving public

<sup>1</sup> van Wyhe (2002).



lectures. For Combe the direction in which phrenology was to be taken next was to continue to emphasise and develop the already marked naturalistic themes, which had become part of phrenology.

For example, phrenologists used an appeal to Nature (usually with a capital N) to defend themselves from all matter of criticism of their science. Phrenology must be true, phrenologists argued, because Nature showed it to be true. This sort of tactic, reiterated and relied on throughout the 1820s as it was, became a constant accompaniment and eventually a typical aspect of phrenology. In the face of critics who quipped: "Fool and Phrenologist are terms nearly synonymous," phrenologists replied that: "phrenological [...] is another word for natural," or "whatever is natural is just to the same extent and in the same degree phrenological."<sup>2</sup>

Combe was deeply impressed by the natural philosophical and phrenological works of his mentor, including Spurzheim's *A view of the philosophical principles of phrenology* (1825) and his *Philosophical catechism of the natural laws of man* (c1824). Combe wrote to Spurzheim: "[Your book the *Philosophical principles of phrenology*] has afforded me more delight than I ever received from any book on any subject whatever."<sup>3</sup> Spurzheim, then living in Paris, was deeply influenced by Enlightenment writers like Baron d'Holbach, Constantin François de Volney and Pierre-Jean-Georges Cabanis. Spurzheim reiterated many of their Enlightenment themes such as the progress of knowledge through naturalism, the supreme reign of natural laws, anti-clericalism and also a better morality – which for Spurzheim was not incompatible with Christianity. Spurzheim also wrote about the inheritance of healthy or sickly constitutions and mental characteristics. Perhaps the details of Spurzheim's hereditarian comments owe as much to earlier writers as do his phrenological and philosophical ideas. It is difficult to trace Spurzheim's sources with no papers and few letters known.

Reading Spurzheim along with Combe, however, there can be no doubt about the formers' influence on the latter. Combe borrowed a radically naturalistic, progressive and normative philosophy full of scientific elements such as hierarchical classifications, nested realms of natural laws and the unanswerable force of causal necessity. From these materials Combe eventually formulated what he called, after Spurzheim, the 'doctrine of the natural laws'. This doctrine was expressed in many of Combe's works but its primary showplace was Combe's masterpiece *The constitution of man* (1828). This book went on to become one of the most widely read books of the nineteenth century. It sold more than 350,000 copies by the end of the century and was continuously in print from 1828 until 1899 with more than one hundred publishers in half a dozen languages.

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<sup>2</sup> See "Anti-Phrenologia" in *Blackwoods Edinburgh Magazine* 13 (1823), pp. 100-8, 199-206, p. 100; *The Phrenological Journal*, 1, 1823/4, pp. xxi, 94.

<sup>3</sup> Combe to Spurzheim, 18 February 1826.



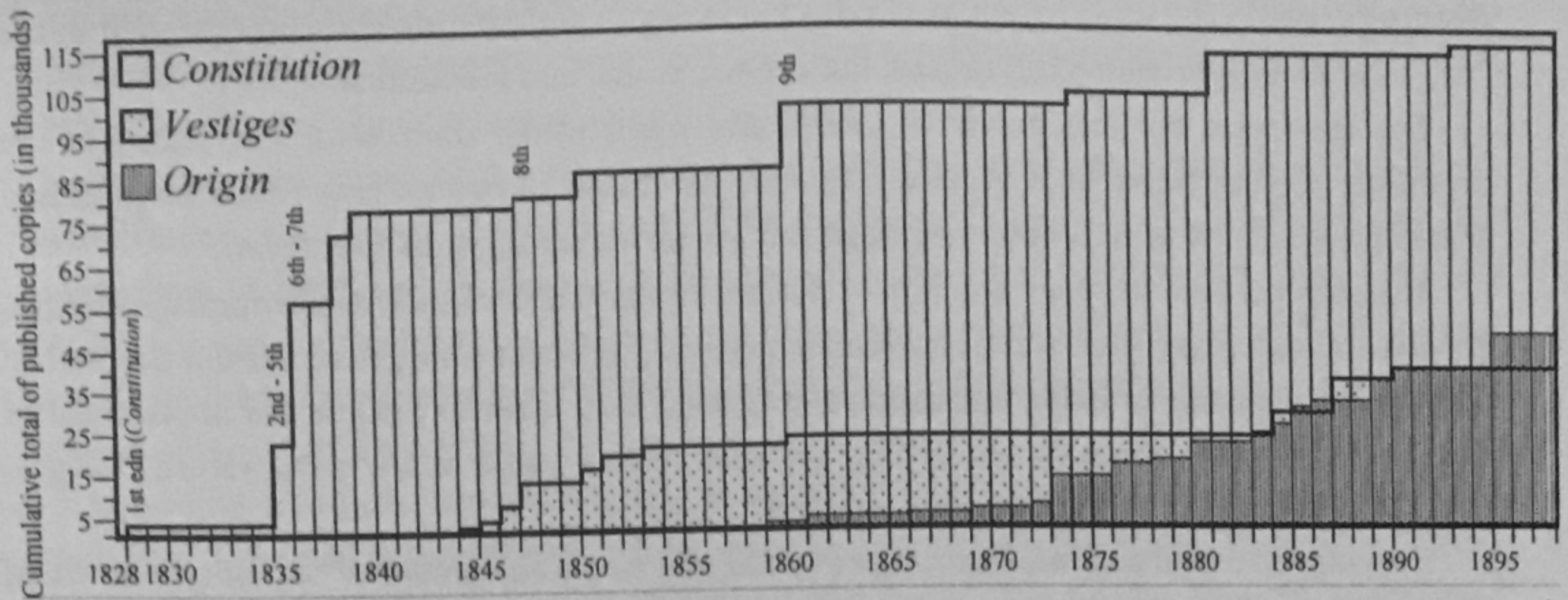


Fig. 1: Sales of George Combe, *The Constitution of Man*, Robert Chalmers, *Vestiges of the natural history of creation*, and Charles Darwin, *The origin of species*.

If we compare the English-language sales of *Constitution* with those of the better-remembered *Vestiges of the natural history of creation* (1844) or *The origin of species* (1859), we get a sense of how much more common *The constitution of man* was in the nineteenth century than its reputation today would lead us to believe (see fig. 1). As I have argued elsewhere *Constitution* did not just sell more copies but probably created more controversy and inspired more subsequent writers to imitate it than *Vestiges* and the *Origin* combined during the nineteenth century.<sup>4</sup>

### *The doctrine of the natural laws*

So what was Combe's doctrine of the natural laws? The doctrine was a systematic, though somewhat vague and amateurish, bid to provide an alternative for traditional Christian systems as guides to conduct and especially as an alternative to beliefs of the fallen state of Nature and Man, the sufficiency and necessity of the Bible as a guide to daily living and as a moral, philosophical, and epistemological authority. Briefly stated, the doctrine went thus: if Man were to devote himself to understanding and following the natural laws, all would live in a happier, healthier world and experience the greatest possible joys and satisfactions as civilization, and individuals, progressed ever farther towards perfection. All the evils in the world follow from disobedience to the natural laws and all pleasure and progress follows from knowledge of and obedience to them. As 'the true science of mind', phrenology could be the key to unlocking this doctrine, but Combe was explicit in referring to phrenology and the doctrine of natural laws as distinct enterprises. Little in Combe's account was very new but he did arrange his pieces into a convincing and provocative order which countless thousands of nineteenth century readers found profoundly moving.

According to Combe, Nature was designed benevolently by a deistic creator according to a progressionist principle. It was not ruled by divine intervention but by a complex set of natural laws. The main categories of natural laws were physical, organic and intellectual or moral (the

<sup>4</sup> van Wyhe (forthcoming 2003).



wording varied). The three realms were reflected in Man's constitution and corresponded to the "three classes of [phrenological] organs, the animal, moral, and intellectual."<sup>5</sup>

The laws were the regularities of matter and mind which the creator had willed at the beginning. Combe never tired of reiterating that the realms of natural laws which he preached acted independently of each other; although this too he borrowed from Spurzheim.<sup>6</sup>

The physical laws included traditional notions of natural laws such as chemical properties, gravity, and other consistencies of Newtonian physics. The organic laws were a realm devoted to the unique properties of living organisms and Combe used them to espouse the importance of cleanliness, hygiene, adequate ventilation, guarding against rapid bodily temperature changes, bodily exercise, moderation in exertion, and sufficient rest.

Obedying the moral and intellectual laws would lead to the enjoyment of "a fountain of *moral and intellectual happiness*".<sup>7</sup> New and higher pleasures awaited those who could bring their faculties into harmony with Nature. Therefore, apart from promoting good health, Combe valued intellectual more than physical pursuits. Modes of behaviour proscribed by the moral and intellectual laws included greed and corruption, employing people to do things for which they were not naturally suited, and capital punishment (then a common sight in Edinburgh).<sup>8</sup> Most of all respect for Combe's style of secular natural philosophy was enjoined as progressive and just.

### *The law of hereditary descent*

One law within the realm of the Organic laws was what Combe called the 'law of hereditary descent', referring to the fact that offspring acquire characteristics from their parents – both of what would today be called heritable traits and Lamarckian inheritance.

Combe's law of hereditary descent was essentially his description of the fact that heredity occurred and that a good or bad constitution was inherited by offspring. According to Combe, the qualities of children were determined jointly by the constitution of the parents (though often to a varying degree) and by the faculties, which predominated in power and activity in the parents at the time of conception. Combe divided heredity into two basic kinds:

1. the inheritance of inborn mental and physical characteristics
2. the transmission of acquired and even momentary mental and bodily qualities and conditions.

Like Darwin's *Variation of Animals and Plants under Domestication* of 1868, Combe provided many cases of heredity of various kinds. For example, Combe wrote that mothers have a strong hereditary impact on offspring, particularly if the mother is marked by strong mental or physical qualities. A mother's state of mind, especially any strong impressions like fear or horror at the sight of a cripple could specifically imprint themselves on the offspring. (Incidentally, for this fact Combe cited the authority of Dr Darwin.) In general both parents contributed characteristics to offspring and it seemed likely to Combe that fathers contributed more to sons and mothers more to daughters. If a clever man married a dull woman then their children, because mixed, would be

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<sup>5</sup> Combe (1828), p. 181.

<sup>6</sup> Spurzheim (1825).

<sup>7</sup> Combe (1828), pp. 19, 37.

<sup>8</sup> Gatrell (1996).



less clever than the father. Close relations should not marry. In addition the too young and too old should not reproduce because their imperfect condition would be passed on to their children. The prime of health and vigour was heritable for Combe.

The same inheritance of mental qualities was attributed to different human races – hence “each Hindoo, Esquimaux, Peruvian, and Carib, obviously inherits from his parents a certain general type of head; and so does each European.” In intermarriage between Europeans and Hindoos or native Americans similar effects would occur as when a clever man and dull woman reproduce – pureness of virtue would be diluted and lost – but the offspring would still be superior to those of pure native ancestry.

According to Combe, mankind was arranged in a hierarchical scale of superiority and inferiority. The scale began with non-European races, especially those with dark skins “whose brains are inferior” at the bottom, and western Europeans, like Combe himself, at the top.<sup>9</sup> European interbreeding in India, for example, would lead to a mixed-race that would eventually rule the native inhabitants. Combe's belief in distinct human ‘races’ and in a scale of their superiority were wholly unoriginal points. Despite the low value attributed to other ‘races’, Combe was vehemently opposed to chattel slavery and was an early critic of colonialism. For Combe non-European races were emphatically human, as phrenology proved, by possessing the same cerebral organs. Nevertheless in all things there were degrees of power or virtue. A phrenological brain organ could be well or poorly developed – but it was still the same organ. In the same sense all humans were ranked according to their natural gifts – some were intelligent, others stupid, some healthy, others sickly. Human races were essentially the same for Combe, though some were *better* than others.

Combe asserted that vital and long-term conclusions were to be drawn from the law of hereditary descent. He thought that heredity alone enabled the progress of Man to occur in the long run, as each individual could increase his or her physical and mental powers through proper use and exercise and as the actual heightened state of physical and mental virtue could be passed on to offspring. Combe theorized that each generation could be given a head start by beginning at the heightened state of perfection reached by its parents. European society could gradually increase its concentration of intelligent and moral beings and lower races could gradually improve their stock and thus climb the scale of civilization.

In order to best progress societies must practice improvement breeding almost like that done for domesticated animals. Only the fittest people in the prime of their lives, who were in perfect health and could afford to support a family should be allowed to breed. In support of the view that careful improvement breeding should be applied to humans Combe cited, among others, Horace, John Gregory<sup>10</sup>, Voltaire<sup>11</sup>, Dr James Gregory,<sup>12</sup> John Mason Good<sup>13</sup>, Albrecht von Haller, and an unnamed medical friend.

Interestingly in the marginalia to the 6th edition of *Constitution* held at the Whipple library in Cambridge an unnamed evangelical reader left traces of his reactions to Combe's work. Among

<sup>9</sup> Ibid., p. 194.

<sup>10</sup> John Gregory (1766).

<sup>11</sup> Voltaire (1766), s.v. “Cato.”

<sup>12</sup> James Gregory [c. 1780].

<sup>13</sup> Good (1825), vol. 5.



these are some scribbled responses to Combe's hereditarian pronouncements. The evangelical reader objected to Combe's proposal to improve mankind because of "[the] original depravity Adam fell!" The human species could not be improved because "the germ of all is bad.[...] hence Sin has descended to us all!"<sup>14</sup>

Combe's lengthy focus on heredity, which totalled about 10,000 words in *The Constitution of Man*, more than was devoted to phrenology, brought to a vast reading audience many of the themes for which Darwin is now better known. *Constitution* brought these subjects from specialist contexts into the home as Jim Secord has shown that *Vestiges* brought evolution into the home.<sup>15</sup> Darwin's comment that *Vestiges* helped prepare readers for his *Origin of species* could have included *Constitution* which for thirty years had taught countless thousands of readers to think in terms of selective breeding and the cumulative effects of the early death of the sick or infirm:

When we reflect on the transmission of hereditary qualities to children, we perceive benevolence to the race, in the institution which cuts short the life of an individual in whose person disease of essential organs has exceeded the limits of the remedial process: it prevents the extension of the injurious consequences of his errors over an innumerable posterity [...] the race is guaranteed against the future transmission of his disease by hereditary descent.<sup>16</sup>

However a focus on Combe's great influence should not lead us to think of him as the source of these ideas. Very similar passages can be found in Spurzheim's earlier and less widely-read books. For example, Spurzheim wrote: "Since beggars, and those with hereditary dispositions to diseases, only propagate to the detriment of society and to entail misery on their progeny, were it not better to prevent them from marriage altogether?" The future of society is dependent on only "the stoutest and best made men" propagating and not those with "bodily weakness and disease".<sup>17</sup> In his turn Spurzheim had been influenced to the same extent by Gall and the physician Pierre-Jean-Georges Cabanis as Victor Hilts has shown.<sup>18</sup>

These remarks by Spurzheim and Combe sound remarkably like Darwin's view in *The descent of man* (1871):

Yet [one] might by selection do something not only for the bodily constitution and frame of his offspring, but for their intellectual and moral qualities. Both sexes ought to refrain from marriage if they are in any marked degree inferior in body or mind; but such hopes are Utopian and will never be even partially realised until the laws of inheritance are thoroughly known. [...] all ought to refrain from marriage who cannot avoid abject poverty for their children; for poverty is not only a great evil, but tends to its own increase by leading to recklessness in marriage.<sup>19</sup>

All three of these passages, from Spurzheim, Combe and Darwin are what Francis Galton would later call "eugenics" in his *Inquiries into Human Faculty and Its Development* (1883) as "the study

<sup>14</sup> G. Combe (1836), 6th ed., pp. 109, 123, WSM Store PH-52.

<sup>15</sup> Secord (1989). This point was made earlier by Chadwick ([1975] 1995), p. 165.

<sup>16</sup> G. Combe (1828), pp. 247-8.

<sup>17</sup> Spurzheim (1825), pp. 178, 179.

<sup>18</sup> Hilts (1982), pp. 62-77.

<sup>19</sup> Darwin (1882), pp. 618-9.



of agencies under social control which may improve or impair the racial qualities of future generations either physically or mentally." Victor Hilts observed that, "Spurzheim placed most of his faith upon the regulation of marriage, whereas Combe resurrected Lamarck by teaching that parents could transmit good qualities to their offspring by perfecting those same qualities in their own persons." To my knowledge there is no evidence that Combe borrowed this from Lamarck's writings. Instead Combe seems to have expressed a common-sense impression of heredity.

### *Descendants of Combe's hereditarianism*

I have argued elsewhere<sup>20</sup> for the extraordinary influence of Combe's writings, especially the *Constitution of man*. Combe also promulgated his laws of inheritance in his *Moral Philosophy: or the Duties of Man Considered in His Individual, Social, and Domestic Capacities* (1840). His brother, Andrew Combe, a well-known physiologist and phrenologist also stressed the importance of the transmission of characteristics via heredity.<sup>21</sup> But Combe's hereditarianism was spread *much* more widely as it was picked up by *many* other writers, especially in America by popular authors such as the phrenological Fowlers whose works were often little more than paraphrases of Combe's writings. A number of their works dwelt particularly on the subjects of marriage and heredity including Orson Squire Fowler's *The practical phrenologist* (1869), his *Matrimony: or Phrenology and Physiology Applied to the Selection of Companions for Life* (1842[?]) and especially his *Hereditary Descent: Its Laws and Facts Applied to Human Improvement* (1852). There was also Lorenzo Fowler's popular *Marriage: its history and ceremonies: with a phrenological and physiological exposition of the functions and qualifications for happy marriages* (1847). The Fowler publishing industry also distributed similarly Combean works by the Rev. George S. Weaver such as *Hopes and helps for the young of both sexes. Relating to the formation of character, ... and marriage* (1854).

Furthermore, as Victor Hilts observed, two English writers most associated with hereditarian ideas in the latter nineteenth century, Herbert Spencer and Francis Galton were both influenced by Combean phrenology. The Combean flavour of Spencer's hereditarianism is unmistakable. Galton was less influenced by Combean hereditarianism, but was nevertheless influenced by it.

Therefore from Volney, Gall, Cabanis and others we can trace a direct line of descent for these hereditarian concerns through Spurzheim to Combe and from Combe to the Fowlers, Spencer and Galton and from them to a larger audience than ever before.

### *Methodology and conclusion*

John Waller remarks in his important recent article<sup>22</sup> that in the past we tended to conceive of eugenics popping into existence in late Victorian Britain from a context of "rival economic superpowers and an increasingly volatile metropolitan underclass." Waller is quite right to conclude that this was not the case and that Galton was not a founding father as he has been portrayed. Waller goes on to declare:

<sup>20</sup> van Wyhe (forthcoming 2003).

<sup>21</sup> A. Combe (1834).

<sup>22</sup> Waller (2001), pp. 289-457.



To identify Galton as a primary causal agent in the early history of eugenics is to over-personalise an episode and period in which, as I have sought to show, individuality is insignificant in comparison with context.

[...]

By attaching too much importance to individuals we lose sight of the fact that—in terms of causal agency—the idea of eugenics arose from a *general* fascination for [...] and a particular set of social, institutional and political circumstances of the mid-Victorian period.<sup>23</sup>

I completely agree that Galton should not be identified as an original source, but I think it is unjustified to conclude from this fact that “the idea of eugenics arose from a *general* fascination.”<sup>24</sup> Ideas cannot arise in social contexts themselves – literally speaking ideas arise only in individuals’ heads. Of course all individuals are within a social context and their ideas reflect their context – but to say that the ideas arose from the context is to be ahistorical. It is ahistorical because if ideas are spontaneously generated by contexts then they would have no history, that is they would not contain elements or characteristics of past ideas. We would not see the gradual cultural change, which we observe and the affinities between ideas in different periods. My discussion of the history of Combe’s hereditarian ideas and more so Hilts’ and Waller’s work show that ideas of heredity developed gradually over time from person to person and from decade to decade.

I have suggested that Combe played a disproportionately major role in the propagation of hereditarian ideas in the nineteenth century due to the propitious success of his *Constitution of Man*. More people encountered and were influenced by his versions of heredity than other versions. No one proposes returning to writing only histories of Great Men but we cannot overlook that humans are the agents in history. The hereditarian ideas that were available in the late nineteenth century had the characteristics that they did, including notions of acquired characteristics, purity of blood, responsibility to breed only with healthy mates etc. not just because of the context of the moment, but also because of their history, that is, where they came from, or what they were before, because of the people who had possessed and promulgated them at an earlier time in different contexts. I think Waller is correct that the different context of the latter decades of the century explains why eugenics became the widespread phenomenon familiar to us but I think we must always consider context *as well as* the ancestry or earlier sources or inspirations of the ideas in a context.

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<sup>23</sup> Ibid.

<sup>24</sup> Ibid. Italics mine.



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