Discussion

Race and language in the Darwinian tradition (and what Darwin’s language–species parallels have to do with it)

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Abstract

What should human languages be like if humans are the products of Darwinian evolution? Between Darwin’s day and our own, expectations about evolution’s imprint on language have changed dramatically. It is now a commonplace that, for good Darwinian reasons, no language is more highly evolved than any other. But Darwin, in The descent of man, defended the opposite view: different languages, like the peoples speaking them, are higher or lower in an evolutionarily generated scale. This paper charts some of the changes in the Darwinian tradition that transformed the notion of human linguistic equality from creationist heresy to evolutionist orthodoxy. Darwin’s position in particular is considered in detail, for there is disagreement about what it was, and about the bearing of a famous paragraph in The descent comparing languages and species.

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1. Language–species parallels and their polemics

In 1999, the philosopher Robert Pennock published Tower of Babel: The evidence against the new creationism. As its title hinted, the book included an assault on what Pennock called ‘creationist linguistics’. The idea that extant languages were specially created at Babel by God was a real enough part of the new-creationist package. Pennock cited a number of surfacings, including an exhibit on Babel at the Museum of Creation and Earth History outside San Diego. Taking the battle to the enemy, he proceeded to illustrate the reality of evolving languages with a look at how English versions of the Lord’s Prayer had undergone modification in descent from Anglo-Saxon times to the present. But his main aim in examining language, he explained, was to show that anyone who accepts the comparatively uncontroversial thesis of linguistic evolution should also accept biological evolution, since the two processes are so similar and so well supported by the same kinds of evidence.¹

Pennock’s book was testimony, were it needed, to the continuing relevance of a set of language–species comparisons whose early history was Stephen Alter’s subject in Darwinism and the linguistic image: Language, race, and natural theology in the nineteenth century, also published in 1999 (Alter, 1999). Pennock acknowledged his debt to his Victorian predecessors, above all to Charles Darwin, whose most extensive reflections on languages and species occur in a famous paragraph in The descent of man (1871). As what follows will dwell at some length on Darwin’s paragraph and what Alter has to say about it, it is worth quoting in full:

The formation of different languages and of distinct species, and the proofs that both have been developed through a gradual process, are curiously the same. But we can trace the origin of many words further back than in the case of species, for we can perceive that they have arisen from the imitation of various sounds, as in alliterative poetry. We find in distinct languages striking homologies due to community of descent, and analogies due to a similar process of formation. The manner in which certain letters or sounds change when others change is very like correlated growth. We have in both cases the reduplication of parts, the effects of long-continued use, and so forth. The frequent presence of rudiments, both in languages and in species, is still more remarkable. The letter m in...
the word am, means I; so that in the expression I am, a super- 
fluous and useless rudiment has been retained. In the spelling 
also of words, letters often remain as the rudiments of ancient 
forms of pronunciation. Languages, like organic beings, can be 
classed in groups under groups; and they can be classed either 
naturally according to descent, or artificially by other charac-
ters. Dominant languages and dialects spread widely and lead 
to the gradual extinction of other tongues. A language, like a 
species, when once extinct, never, as Sir C. Lyell remarks, reap-
pears. The same language never has two birth-places. Distinct 
languages may be crossed or blended together. We see 
variability in every tongue, and new words are continually 
cropping up; but as there is a limit to the powers of the mem-
ory, single words, like whole languages, gradually become 
extinct. As Max Müller has well remarked:—‘A struggle for life 
is constantly going on amongst the words and grammatical 
forms in each language. The better, the shorter, the easier 
forms are constantly gaining the upper hand, and they owe 
their success to their own inherent virtue’. To these more 
important causes of the survival of certain words, mere 
novelty may, I think, be added; for there is in the mind of 
man a strong love for slight changes in all things. The survival 
or preservation of certain favoured words in the struggle for 
existence is natural selection.2

Alter’s book is about much more than the above. But he calls 
it the ‘analogic zenith’ (Alter, 1999, p. 99); and his book is orga-
nized accordingly, with the earlier parts in effect surveying the 
debates that made possible Darwin’s paralleling of languages 
and species as he did, and, following analysis of the parallels par-
agraph, a final chapter on the post-paragraph world. To criticize 
Alter’s interpretation of the paragraph is not, then, to criticize 
his book as a whole. But neither is it to pick nits. In ‘‘Curiously 
parallel”: Analogies of language and race in Darwin’s The descent 
of man. A reply to Gregory Radick’, Alter (2008) responds to scept-
tical queries I raised in a review of his book (Radick, 2000a) and, 
in a more focused fashion, in a paper on Darwin on language and 
selection (Radick, 2002). I concluded that paper with some spec-
ulations on how the Darwinian tradition came eventually to con-
tradict Darwin on whether, as Darwin believed and as he thought 
his theory required (or so I suggest), primitive peoples have cor-
respondingly primitive languages. Here I want to develop that 
story of race, language and the Darwinian tradition, from the 
1860s to the 1960s.3 But at the outset there are some complex 
interpretive questions to be faced about Darwin’s parallels 
paragraph.

2 Questions and answers about Darwin, language, species and 
races

In considering the paragraph, Alter and I give different answers 
to the following:

(a) Does the paragraph advance the particular argument of the 
surrounding text in the Descent, on the evolutionary origins 
of language, or is it instead a wide-ranging, score-settling review 
of the most general Darwinian principles?

(b) Granted the polemical nature of the paragraph, is natural 
theology among Darwin’s targets, and if so, what kind of natural 
theology?

(c) Is the upshot of the paragraph a distancing of race from 
language in evolutionary discussion or, on the contrary, a bringing 
together of race and language?

For Alter, (a) involves a choice. Either we understand the paral-
lels paragraph as serving the argument of the particular section of 
the Descent where the paragraph is found—on the human faculty 
of language as having an evolutionary origin—or we understand the 
paragraph as a summary (à la Pennock) of Darwin’s biggest ideas 
about evolution, here cast in linguistic form to aid acceptance of 
their biological form. Alter aligns himself with the latter, didactic 
option. He declares the paragraph, for all its virtuosity and learn-
ing, ‘really superfluous’ (Alter, 1999, p. 103), since it deals with 
principles ably discussed elsewhere in the Darwinian oeuvre, and 
since, in any case, it is far from obvious how a discussion of paral-
lels between languages and species could buttress an argument for 
the language faculty’s evolutionary origin. Alter gives the impres-
sion that Darwin included the paragraph where he did because it 
had to go somewhere, and the section on the evolutionary origins 
of language at least offered the chance for a link of the digressive, 
‘and-another-thing-about’ X kind. I don’t think that’s right, nor do I 
think that I have to choose between options that Alter treats as 
mutually exclusive. Obviously Darwin’s parallels paragraph sum-
marizes a lot of what Darwin thought about species change and 
how to account for it. Below I will suggest that it is precisely as 
an overview of this kind, enlisting so many principles familiar from 
philosophical natural history, that the paragraph renders service to 
Darwin’s case for an evolutionary origin for language. I’ll also sug-
gest that Alter’s difficulty in seeing this—his sense that the parallels 
are argumentatively redundant, and so ‘anomalous’ and ‘irrelevant’ 
(ibid., 1999, pp. 96–97)—arises from a failure to take seriously Dar-
win’s own, deeply held ideal concerning the proper form of a scien-
tific argument.

Turning now to (b): although Darwin at the analogic zenith 
makes no explicit mention of natural theology, Alter reads between 
the lines and discerns a double repudiation of it. Between the lines 
about homology, analogy and rudiments, he reads a repudiation of 
the transcendental anatomy of Darwin’s foe Richard Owen, who had 
made those terms parts of his inquiry into the archetypal plans 
existing in the Divine Mind. Between the lines about variation, 
Alter reads a repudiation of the evolutionist theism of Darwin’s 
friend Asa Gray, who had suggested that God might well design 
the variations that selection preserves and accumulates into ever 
more and ever better adapted species. Here all one can say, it 
seems to me, is: maybe. Maybe Darwin had the likes of Owen 
and Gray in mind when he wrote about homology, analogy, rud-
miments and variations in languages. And maybe some Victorian 
readers understood those lines as tacitly triumphalist over the 
forms of natural theology Alter identifies. I have no idea. I confess 
that I find it strange that Darwin should have expressed himself so 
very obliquely about these matters when he had previously been 
so forthright.4 For his part, Alter gives us very little by way of evi-
dence in favour of his interpretation—certainly nothing as direct 
as, say, a letter from Darwin to friends gloating about how, with 
these language–species parallels, he could really let Owen and Gray

2 Darwin (1981 [1871]), Vol. 1, pp. 59–60. I have not included footnotes referencing works by Lyell, Müller and F. W. Farrar. For Pennock’s discussion of his nineteenth-century 
forerunners, Darwin included, see Pennock (1999), pp. 125 ff.

3 My treatment of post-Darwinian developments elaborates and, I hope, refines the discussion in Radick (2007). There the storyline is broken up across several chapters. The 
more concentrated form presented here may be helpful for those more concerned with human than with animal language (the main subject of the book).

4 In the Origin of species, Darwin (2000 [1859]), p. 435, explicitly contrasted the explanatory prowess of his account of homology with the limpness of creationist morphology’s 
account (‘on which we ‘can only say that so it is’—that it has so pleased the Creator to construct each animal and plant’). In The variation of animals and plants under domesticatation, 
Darwin’s closing words were dedicated to explaining why, ‘However much we may wish it, we can hardly follow Professor Asa Gray in his belief ‘that variation has been led along 
certain beneficial lines’, like a stream ‘along definite and useful lines of irrigation’ (Darwin (1875 [1868]), Vol. 2, p. 428).
have it. As will be seen in more detail below, I think that natural theology was indeed a target, even the target, at which Darwin aimed the parallels paragraph. But it was not an evolutionist natural theology like Gray’s, nor a quasi-evolutionist one like Owen’s. It was an old-fashioned creationist one, tied to concerns about race and language.

That leads to the third question, (c), on race. Darwin does not mention race in the parallels paragraph. But in that silence Alter detects a lesson: that there was, in Darwin’s view, no evolutionarily significant mapping of languages onto human races. In *Darwinism and the linguistic image*, Alter made a great deal of the remoteness, as he saw it, of Darwin’s language–species comparisons from his discussions of language and race in the *Descent*. Surveying the changes in the 1860s that had led a number of people to abandon the idea that one could reconstruct the family tree of human races by reconstructing the family tree of human languages, Alter wrote: ‘Because language and racial biology were now uncoupled in fact, they tended to be so figuratively as well. . . . By the very placement of its discussions of language and race, Darwin’s *The descent of man* would reflect both the real and the analogic uncoupling’ (ibid., pp. 70–71; see also pp. 104–105). But, as I pointed out in my review, race in fact appears in the very next paragraph. Here is that post-parallels paragraph, and the summarizing sentence that follows it, introducing the final paragraph of the origin-of-language section as a whole:

The perfectly regular and wonderfully complex construction of the languages of many barbarous nations has often been advanced as a proof, either of the divine origin of these languages, or of the high art and former civilisation of their founders. Thus F. von Schlegel writes: ‘In those languages which appear to be at the lowest grade of intellectual culture, we frequently observe a very high and elaborate degree of art in their grammatical structure. This is especially the case with the Basque and the Lapponian, and many of the American languages. But it is assuredly an error to speak of any language as an art in the sense of its having been elaborately and methodically formed. Philologists now admit that conjugations, declensions, &c., originally existed as distinct words, since joined together; and as such words express the most obvious relations between objects and persons, it is not surprising that they should have been used by the men of most races during the earliest ages. With respect to perfection, the following illustration will best shew how easily we may err: a Crinoid sometimes consists of no less than 150,000 pieces of shell, all arranged with perfect symmetry in radiating lines; but a naturalist does not consider an animal of this kind as more perfect than a bilateral one with comparatively few parts, and with none of these alike, excepting on the opposite sides of the body. He justly considers the differentiation and specialisation of organs as the test of perfection. So with languages, the most symmetrical and complex ought not to be ranked above irregular, abbreviated, and bastardised languages, which have borrowed expressive words and useful forms of construction from various conquering, or conquered, or immigrant races.

From these few and imperfect remarks I conclude that the extremely complex and regular construction of many barbarous languages, is no proof that they owe their origin to a special act of creation.6

Alter (2008) acknowledges this textual conjunction, but still finds in favour of his earlier view that with the parallels paragraph Darwin intended to drive a wedge between thinking about language and thinking about race. I’ll examine Alter’s case for his interpretation in due course. For now it’s enough to note that, even by Alter’s rather weird idea that textual distance corresponds to conceptual distance, Darwin’s discussing languages and species only to pick up with languages and races suggests a connection worth asking about.

Here, I submit, is how to gloss the connection. The point of Darwin’s drawing out so many parallels between languages and species was to reinforce the argument on language and race that followed, the better to reinforce the major claim of this section of the *Descent*: that human language has a natural, gradual, prehuman origin. When Darwin composed the *Descent*, the view that races and languages were independent of each other, in the sense that otherwise lowly races could be found speaking languages of the highest character, was a creationist position. Understanding Darwin as out to undermine that position is the key to understanding why he subscribed to a vision of race–language hierarchy that is, by modern lights, not just false, but repugnantly false.

3. Wake’s denial of the race–language scale (1860s)

A sketch of race and language in the Darwinian tradition rightly begins not with Darwin, but with the man who in the 1860s provoked Darwin to such intricate argumentation on behalf of a racial and linguistic scale: Charles Staniland Wake. When his 1868 book *Chapters on Man. With the outlines of a science of comparative psychology* came to Darwin’s attention (Wake, 1868), Wake, a London-based solicitor in his early thirties, was at the start of what would be a long and productive association with anthropology. He had joined James Hunt’s Anthropological Society of London in 1863, contributing a paper that year on ‘The relation of Man to the inferior forms of life’, published in its *Anthropological Review*.7 *Chapters on Man* was a much expanded version of the paper, and the first of a number of books that Wake published on topics including serpent worship, the emergence of morality and marriage, and the anthropology of Yorkshire. Alongside his intellectual labours Wake held various offices in a number of anthropological societies in Britain and, after emigrating in the late 1880s, America.8

*Chapters on Man* dealt at length with human and animal psychology, the unity of the human species, the emergence of civilization, and the antiquity of man, saving to the final chapter an explicit critique of ‘the doctrine of material development’. According to Wake, that doctrine’s advocates, Darwin included, ‘ultimately reduce all things to an eternally existing and infinitely extended matter’.9 Against these materialist evolutionists, Wake insisted that with humans a new, spiritual principle was at work in the evolutionary process, and that, as documented earlier in the book, it was owing to this principle that humans alone have the power to form general ideas, as manifest in all human languages, no matter how barbarous a race. Here, from the chapter on ‘Man—species or varieties’, is the passage from which Darwin would quote in the *Descent*:

Another, and more striking, proof of the existence of a mental activity, which is inconsistent with an absence of general ideas

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5 It is interesting to note that Pennock, in offering an updated version of Darwin’s argument, is very positive indeed about recent efforts to coordinate linguistic and genetic data in reconstructing the emergence of distinctive human groups. See Pennock (1999), pp. 142–144.
7 Wake (1863).
8 On Wake’s life and work, see Tort (1996) and Needham (1975). On the 1863 paper as ancestral to the 1868 book, see Wake (1868), p. iii.
[among humans], is found in the artificial and complex character of the grammatical structure of the languages of many barbarous races. On this subject Frederick von Schlegel writes, 'In those languages which appear to be at the lowest grade of intellectual culture, we frequently observe on a closer acquaintance-ship a very high and elaborate degree of art in their grammatical structure. This is especially the case with the Basque and the Lapponian, and many of the American languages'. Alexander von Humboldt says of the American races that they are 'singularly remarkable for the degradation to which their mental faculties have fallen below the original standard', while the American dialects resemble 'the relics of some great ruin or mighty devastation'. After an exhaustive investigation of the American languages, including those spoken throughout the whole length of the continent from Greenland to Cape Horn, DuPonceau asserts that they are in general ‘rich in words and in grammatical forms, and that in their complicated structure, the greatest order, method, and regularity prevail.’ The same may be said of the African dialects, and even of the language of the Australian aborigines, who, although in physical structure further removed from the ape than the negro, are much less advanced in civilization than the latter.10

The challenge to Darwin is plain. As Wake saw it, a continuous evolutionary process of the sort envisaged by Darwin should, over time, have produced human races further and further removed from their nonhuman ancestors. On such an evolutionary scheme, the power to form general ideas would have emerged at a point in between the apish, savage beginning and the fully civilized end. Races formed in that intermediate period would be expected to be distinctively human in some ways but not in others—having, say, distinctively human anatomies, but lacking the generalizing mental power. But in fact no human race, however lowly, lacks this power. Around the world, otherwise primitive peoples can be found with strikingly complex and structurally beautiful languages—evidence, in Wake's view, of mental potentialities present in the minds of progenitors but since lost due to unpropitious circumstances too prolonged. Thus did a religiously minded, anti-Darwinian creationist link the problem of high languages among low peoples with the problem of supplying human language with any explicit intention to change the language, yet cumulatively doing just that—with no limit to the complexity that can be acquired thereby.

4. Darwin's defence of the race-language scale (1870s)

Wedgwood's recommendation was in spirit very Darwinian, and Darwin took it up in the Descent. But he also added an argument very much his own: that, in any case, the languages singled out by Wake as so problematic—high languages among low people—are really low after all, as the evolutionist would expect. Let us look again at the post-parallels paragraph and summarizing sentence, but now with these two arguments—respectively, the 'no art' argument and the 'no anomaly' argument—flagged:

The perfectly regular and wonderfully complex construction of the languages of many barbarous nations has often been advanced as a proof, either of the divine origin of these languages, or of the high art and former civilisation of their founders. Thus F. von Schlegel writes: 'In those languages which appear to be at the lowest grade of intellectual culture, we frequently observe a very high and elaborate degree of art in their grammatical structure. This is especially the case with the Basque and the Lapponian, and many of the American languages.' (The 'no art' argument.) But it is assuredly an error to speak of any language as an art in the sense of its having been elaborately and methodically formed. Philologists now admit that conjugations, declensions, &c., originally existed as distinct words, since joined together; and as such words express the most obvious relations between objects and persons, it is not surprising that they should have been used by the men of most races during the earliest ages. (The 'no anomaly' argument.) With respect to perfection, the following illustration will best shew how easily we may err: a Crinoid sometimes consists of no less than 150,000 pieces of shell, all arranged with perfect symmetry in radiating lines; but a naturalist does not consider an animal of this kind as more perfect than a bilateral one with comparatively few parts, and with none of these alike, excepting on the opposite sides of the body. He justly considers the differentiation and specialisation of organs as the test of perfection. So with languages, the most symmetrical and complex ought not to be ranked above irregular, abbreviated, and bastardised languages, which have borrowed expressive words and useful forms of construction from various conquering, or conquered, or immigrant races. From these few and imperfect remarks I conclude that the extremely complex and regular construction of many barbarous languages, is no proof that they owe their origin to a special act of creation.

Again, the 'no art' argument is the one from Wedgwood. It says that since, in general, languages acquire complexity without the supervision of artfully designing intelligence, we are mistaken if we infer high intelligence among the ancestors of otherwise primitive peoples simply because those peoples speak complex-looking languages. Darwin's argument, the 'no anomaly' argument, is more fundamental, in that it seeks to undermine the idea that the languages in question really are more complex, whatever we think

10 Ibid., pp. 101–102. I have not included footnotes referencing works by J. C. Prichard, Bohn's Philosophy of life and a couple of encyclopaedia articles.

11 Neither Wake's creationism nor the religious stance allied to it was straightforward. What he opposed in opposing Darwinian evolution was the view that the human species had arisen by nothing but descent with modification from an ancestral, nonhuman species. For Wake, a new, 'spiritual' principle entered into play with the emergence of humans.

12 For Darwin's marginalia on his copy of Wake's book, see Di Gregorio (1990), p. 832.

about how complexity arises. The crux of the argument is that the philologists who reckoned they had found high languages among low peoples had, by naturalists’ lights, applied mixed up criteria for perfection and imperfection. More precisely, where philologists placed orderly regularity at the top of their perfection scale, naturalists put it at the bottom. For the naturalists, it was irregular differentiation that topped the scale. And when the naturalists’ scale was applied to language, the barbarous languages in question came out at the bottom, as lowly as the rest of the races’ achievements. There is thus anomaly resolution two times over: there are no anomalously high languages among otherwise lowly people; and there are no anomalous data—observations contrary to theory—for the evolutionary theory of human origins to founder upon.

I mentioned earlier that sensitivity to Darwin’s notion of good practice in structuring scientific arguments would help us in interpreting his parallels paragraph. With the post-parallels paragraph now analysed, I can explain. For Darwin, raised up scientifically on the works of John Herschel and Charles Lyell, the best arguments were those that appealed to causes whose existence had been established on grounds independent of one’s explanatory ambitions. This notion of verae causae, or ‘true causes’, translated in Darwin’s case into a consistently followed expository strategy, of introducing whatever cause or principle will be needed for explanatory-expository purposes later without reference to those purposes. Consider the Origin of species, where Darwin devoted the early chapters to persuading the reader that hereditary variations occasionally occur and that there is a fierce struggle for existence in nature, before going on to show how these together account for what really interests him, the origin of new species from existing ones. Or consider the Expression of the emotions in man and animals, where the three principles that, in various combinations, turn out in later chapters to explain why we cry when sad, smile when happy and so on, are first of all discussed as general physiological principles, to be believed as real on evidence having nothing to do with expression. Although the Descent of man is at first glance quite different in its structure, the same strategy shows up here as well. In the chapter on how man developed out of a lower form, for instance, Darwin first of all surveyed the evidence for man as an animal exhibiting hereditary variation of the same kind as other animals, and subject to checks on population growth comparable to those that affect other animals, before proceeding to explain how humans, by these causes, emerged from a prehuman ancestor. The whole of the second part of the book can be read as a comprehensive attempt, over many chapters, to establish the existence of sexual selection in nature before harnessing it to explain the puzzle that Darwin left hanging at the end of the first part of the book, of why the different human races came to differ physically as they do. Returning now to the post-parallels paragraph, we should expect to find, on these general vera causa precedents, that the ‘no art’ and ‘no anomaly’ arguments have each been prepared earlier in the text, by way of discussions of the key principles in their own rights, as if—as Alter recalls my saying—apropos of nothing. And that is exactly what we find. For the ‘no art’ argument, there is, six pages earlier, the following passage, located after some reflections on whether language is an art, an instinct, or something in between: ‘no philologist now supposes that any language has been deliberately invented; each has been slowly and unconsciously developed by many steps’. Alter notices the sentence but misses the significance. Here Darwin established, to his own satisfaction at least, the principle that he would call upon to undermine a creationist contention about lowly languages with high features thanks to linguistically artful ancestors. And for the ‘no anomaly’ argument, we have the parallels paragraph. What Darwin aimed to do in this paragraph was to show, comparative point by comparative point, how general was the principle that concepts useful in understanding species as historical entities were useful for understanding languages as historical entities. Having thus given this principle a life of its own by such a long list of comparisons, none having anything to do with the origin of language, Darwin went straightaway to exploit the principle for purposes of explaining the origin of language. He dissolved the appearance of anomaly by urging the switch from the philologist’s reckoning of perfection to the naturalist’s reckoning—a switch that seemed reasonable only thanks to the work of the parallels paragraph.

With Darwin’s vera causa standard in view, we at once bring the parallels paragraph into line with Darwin’s writing strategies generally and illuminate its particular function. The paragraph was not a digression, related only loosely to its textual context. It was deliberately made to look that way, the better to render it fit for argumentative use. And that use was to repudiate the creationist charge of high languages among lowly races. Darwin argued to the contrary that lowly races speak lowly languages, just as his theory predicted.

5. Alter’s reply revisited

There is more to say about Alter’s interpretation of the Descent’s language–species parallels and his response to my earlier queries. Readers who prefer skipping ahead to see how the post-Darwinian story pans out should feel free to do so. But for anyone still curious

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14 The classic work on the vera causa tradition, including Darwin’s relation to it, is Kavalski (1974)—a Ph.D. dissertation that is not easy to get hold of, alas. For a much briefer but more widely available treatment, see Radick (2003), p. 148; also pp. 158–159.
15 Hodge (1977) remains the most penetrative analysis of the vera causa ideal as the key to understanding the Origin’s organization.
16 Darwin (1998 [1872]); (1981 [1871]), Vol. 1, Ch. 4. So far as I know, the conformity of the Descent to the vera causa ideal has not been commented upon before.
17 Here I part company with James Moore and Adrian Desmond. They judge that ‘Selection in Relation to Sex, far from being an addendum, was the Descent of Man’s raison d’être: it was Darwin’s prize contribution to the Victorian debate on the origin of the races’ (Moore & Desmond, 2004, p. xvi). No one reading that will be prepared for the very detailed discussions in the first part of the Descent aiming to show that humankind emerged gradually from an apelike ancestor by descent with modification, to suggest the causes that drove that process, and to supply a genealogy stretching back, down the tree of life, to an ascidian-like ancestor. It would be true to Darwin’s text, I think, to make the more modest claim that Darwin’s account of the origin of the races was Selection in relation to sex’s raison d’être.
19 Alter says merely that the sentence ‘pertained to the origin of language’. As noted, it in fact pertains to something much more focused, the artfulness versus instinctiveness of language. It is important for my own interpretation of (in Jonathan Hodge’s phrase) the structure and strategy of Darwin’s argument on language that such a distinction be observed.
20 This racial progressionism about languages extended, for Darwin, to expressive repertoires as such. In the Expression, he wrote that it was no ‘anomalous fact’ that, in common with chimpanzees and orangutans, ‘the children of savages should exhibit a stronger tendency to protrude their lips, when sulky, than the children of civilized Europeans; for the essence of savagery seems to consist in the retention of a primordial condition, and this occasionally holds good even with bodily peculiarities’ (Darwin, 1998 [1872], p. 230). No less than the contrasting of his arguments to the vera causa standard, the progressionism here was of a piece with Darwin’s biological theorizing from earliest days, including his theorizing about natural selection. On Darwin and progress, see Radick (2000b) and, for authoritative treatment of the notebook period, Hodge (2003), especially pp. 47–49 and 53–55.
about the parallels, it will help to consider each section of Alter (2008) in turn, under his section titles:

5.1. Rehashing old business

Here Alter presents a four-fold retrenchment of his earlier argument that Darwin, in crafting his language–species parallels, aimed above all to review and consolidate understanding of his general big ideas, taking swipes at illustrious opponents along the way. The phrase ‘rehashing old business’ is thus, for Alter, as much descriptive of his own agenda as it is of Darwin’s.

Alter notes, first of all, that Darwin argued throughout the Descent of man for the whole of his general theory, including the morphological elements that were to replace Owenite concepts. That is true enough—see my remarks in the previous section about the book’s ‘manner of development’ chapter—but it is also irrelevant, since the matter at issue, again, is not whether Darwin’s language–species parallels can be read as taking swipes at Owen et al. (they can), but whether they ought to be read that way. If there is positive evidence for reading in what Darwin writes about homology and analogy in languages a riposte against newly resurgent gentile transcendentialist morphology, Alter does not cite it.

His second retrenching claim is that two items in Darwin’s list of ten language–species parallels repeat linguistic analogies made in the Origin, one to do with genealogical classification and the other with vestigial organs, with both analogies serving to aid understanding of the biological ideas. Furthermore, the genealogical analogy appears again later in the Descent and to similar, understanding-enhancing effect—this is Alter’s third retrenching claim. Again, all of this is true but irrelevant; for while there is no denying the effectiveness of the parallels paragraph as a concise, imaginative, even helpful restatement of Darwin’s big ideas, the question is whether Darwin, in putting together a whole paragraph’s worth of such analogies and dropping them into a discussion ostensibly concerned with the origin of language, was after review-for-reviewed’s sake only, or whether something more argumentatively focused was also in view. My point above about lack of positive evidence for accepting Alter’s interpretation applies here with equal force.

His fourth retrenching claim is that the other authors referred to in the parallels paragraph used linguistic analogies to support or dissent from Darwin’s species theory: so it makes sense to see Darwin continuing an indirect debate in which selective, polemical appropriation of language–species analogies is the name of the game. Yet again, I find, I want to agree with Alter without, however, agreeing that he has thereby shown that selective, polemical appropriation was the aim of the exercise for Darwin. To mark the difference between these two possibilities is not, contra Alter, to ‘dismiss the linguistic analogy-making practised by many of the leading figures in the post-Darwinian debates of the 1860s’. It is simply to note that Darwin’s linguistic analogy-making in the Descent may have been a polemically barbed end in itself, or it may have been a means to a polemically barbed end, or it may have been both end and means at the same time. Alter favours only the first possibility, but his retrenching claims are consistent with all three.

5.2. Progress of language/scale of mind

Here Alter casts doubt on the view that what I have here called the ‘no anomaly’ argument amounts to the application of a principle established in the previous, parallels paragraph. I have argued, again, that the point of the parallels for Darwin is revealed only in the paragraph that follows them, since they motivate the switch urged in that subsequent paragraph from the measure of perfection current among the writers Wake cited (according to whom some otherwise lowly peoples speak anomalously high languages) to the measure preferred by naturalists such as Darwin (according to whom those languages turn out to be lowly after all, just as the theory of evolution predicts). Now, as we have seen, Darwin’s putting his argument together in this way—of independently evidencing the existence of a cause or principle before strapping it into the argument he wanted to make—was absolutely standard for him, and reflected deeply held intellectual allegiances. In challenging my reading, Alter produces no evidence against it, nor does he relate his discussion to the question of how in general Darwin structured his texts. Instead Alter suggests that, since what I have called the ‘no art’ argument came before the ‘no anomaly’ argument in the post-parallels paragraph, the ‘no anomaly’ argument should be seen as a kind of superfluous add-on. He describes the ‘no art’ argument as ‘more pertinent’, but he does not say why it is more pertinent. To my mind it seems less pertinent, since, even if it is accepted that languages complexify without art, the evolutionist is still left with the problem of explaining how otherwise lowly people came to have high languages. Darwin seems to have understood this limitation of the ‘no art’ argument; hence his further, ‘no anomaly’ argument—and the parallels paragraph that set it up.

5.3. A denser analogy

Alter here raises two objections. The first is that the connection I posit between the parallels paragraph and the ‘no anomaly’ argument in the succeeding paragraph is too abstract for Darwin’s readers to have grasped. While that may be true of readers now, and even true of many readers in Darwin’s day, we need to ask what Darwin thought he was doing, and the related question of whom he thought he was writing for. Here I have suggested that he formed his argument structure to his usual vera causa ideal, and that he wrote in the first instance for Lyell and other peers of that scientific calibre—readers who would have had no trouble following a vera causa argument when they saw one. Alter’s second objection is that ‘Radick’s single-dimension interpretation does not take into account the ambiguity of [the] parallelisms, the way each side reflected on the other in a perpetual dialectic’. I think this boils down to the complaint that my reading is reductive whereas Alter’s is not. But reductionism in these matters is in the eye of the beholder. I find it far more obviously single-dimensional to insist that the parallels paragraph served only to review Darwin’s general ideas creatively than to allow, as I do, that the paragraph also played a role in the specific argument of its section of the Descent.

5.4. Mapping language onto race

In his book, Alter argued that by the time that Darwin wrote the Descent, he had changed his mind about the close link between races and languages posited in the Origin, where he had suggested that the family tree of races would supply the best classificatory system for languages. The evidence for this change of mind was, for Alter, the great textual distance between Darwin’s discussion of race in the Descent and his discussion there of language. In my review of the book I made two observations to the contrary.

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21 On Darwin’s ‘aristocratic’ unconcern with the judgements of all but the scientific readers he held in highest esteem, see Gould (2002), p. 1, who credited the point to Michael Glazelin.

One was that in fact race and language nestle close together in the Descent—a point explored here at some length now. The other was that the race-language mapping proposed in the Origin carried on intact into the final, sixth edition of 1872. On this point about textual inertia, Alter replies that the proposal's preservation does not count against his argument because the proposal was always hypothetical. According to Alter (2008), what Darwin changed his mind about was not whether the pedigree of languages would turn out to map onto the pedigree of races in principle, but whether sufficient evidence could be gathered to assemble the pedigrees in practice—a change that Alter (2008) attributes to 'the revised human time chronology [that] had rendered that quest hopeless' in the 1860s, when human antiquity suddenly became vastly extended. In his book, however, Alter had argued that, already in the late 1850s, when Darwin wrote the Origin, he had no confidence that the pedigree of races could be assembled (1999, p. 33). One is left struggling to find any evidence at all for a change of mind about race and language.

6. Hale's denial of the race-language scale (1880s)

There is an understandable desire to suppose that Darwin, so invested nowadays with cultural authority, believed what we believe about a consistently and comprehensively ordered race-language scale: namely, that there is no such thing, and that this absence is entirely in keeping with a Darwinian theory of human origins. If we give in to that desire and, following Alter, make Darwin an honorary member of the present consensus on race and language, then there is no long-run story to be recovered, in the sense that there is nothing especially interesting about race and language in the Darwinian tradition. Darwin, on this view, got it right, and that rightness carried forward, at least among enlightened opinion. But, as we have seen, the relevant texts suggest that Darwin was not 'one of us' on race and language. He believed that there was a race-language scale and that his theory of human origins made sense of it. Historians thus have some explaining to do, about why Darwin thought as he did (a question to which I will return in conclusion), but also how the Darwinian tradition—understood here as that unbroken chain of thinkers on language who, from Darwin's day to ours, have invoked his name and ideas—came to embrace beliefs very much the opposite.

We have so far considered Wake's denial of the race-language scale in the 1860s and Darwin's defence of the scale against Wake in the 1870s. This section and the next two will continue this story of successive response. In the course of it we will see how, rather remarkably, what had been creationist heresy for Darwin was converted into Darwinian orthodoxy. We shift our attention now from Britain to North America, and three illustrious representatives of American anthropology. The first is Horatio Hale. In the 1880s Hale issued an influential denial of the race-language scale, but in rather a different scientific idiom from that of Wake and of Darwin. The second is Hale's admirer and quasi-apprentice Franz Boas. In the decades around 1900, Boas established professional, politically progressive anthropology in the US with denial of the race-language scale at the core. The third is Charles Hockett, a Boasian anthropological linguist. In the 1950s Hockett set out to bring Darwinism back into the anthropological picture, but now as underwriting his discipline's foundational faith in the absence of a race-language scale.

First, to Hale. Like Wake, Hale came of age as a scientific student of humankind in the decades before Darwin's origin, when no figure exercised greater influence in that domain than J. C. Prichard, founder of Britain's Ethnological Society. It was a basic teaching of Prichard's that, underneath all their surface diversity, brought about over thousands of years of change in environments sometimes advantageous to human mental, moral and physical development and sometimes not, the human races were kin, descended from a single stock.24 It is not hard to detect this Prichardian conviction animating within Wake's 1860s denial of the race-language scale.25 Nor is it hard to detect it within Hale's denial in the 1880s. By that time, Hale, like Wake, had kept up a decades-long engagement with inquiry into human languages and customs. Hale's interest in aboriginal peoples dated from his spell as an undergraduate in the late 1830s at Harvard, where some work he did on the Algonquin vocabulary led to an invitation to join the four-year Wilkes Exploring Expedition to the South Pacific as ethnologist and philologist. When published in 1846, his contribution to the expedition-summarizing volumes was widely admired for its superb treatment of American and Polynesian languages. At this point, however, the business of earning a living—in Hale's case, as in Wake's, as a lawyer—took over, and Hale, by then living in Ontario, went into intellectual hibernation for the next quarter-century. He emerged again around 1870 by way of some fieldwork among the Iroquois. With the publication of the results of the new work in the early 1880s, he re-entered the public sphere of anthropology (as the science was increasingly known), now in the role of grand old man.25

In an invaluable study of Hale from forty years ago, Jacob Gruber stressed how firmly rooted was Hale's post-1880 work in the ethnological perspective current in the 1840s. 'Upon his return to anthropology', wrote Gruber, 'Hale brought back a fragment of the past'. The isolation of this anthropological Rip Van Winkle from current trends was nowhere more conspicuous, Gruber went on, than in Hale's dissent from the hierarchical ordering of human races, so ubiquitous among the new evolutionist anthropologists. Their urge to understand up-from-the-ape natural progress did not mesh at all with Hale's deep sense of, in Gruber's nice phrase, 'an essential human condition, which lay imbedded within the constantly differentiating ways of man's behavior'—and which prompted Hale, on more than one occasion, to cast doubt on the ranking of some races and languages as lower than others. Yet it isn't quite true that, to quote again from Gruber on Hale, 'although his papers bear the dates of the 1880s, they could have been written just as surely and with the same meaning and utility during the 1840s'.26 Yes, Hale's general attitude to humankind and its study was old-fashioned. But for all his unreconstructed ethnologism, Hale in the 1880s was an evolutionist, and of a distictively modern kind. Indeed, his evolutionism formed a major part of his case against a race-language scale.

He put old and new together in 1888 at a lecture before the Canadian Institute in Toronto:

The doctrine of evolution, whose importance I would in no way depreciate, has, in reference to the intellectual powers of the human race, been strangely misapplied, to such an extent as to lead to serious errors. The misapplication, it must be said, began with Darwin himself; but he, with that noble candor which distinguished him, admitted and corrected the mistake, in which some of his followers still persist. We know how frankly and fully, near the close of his life, he withdrew, on better information, the opinion which he had originally expressed of the low intellectual and moral character of the Fuegians. By

25 On Hale's life and work, see Gruber (1967); also Brinton (1897).
26 Gruber (1967), quotations on pp. 12, 18.
just implication, this reversal of his opinion will apply to all savages—for the Fuegians have always been ranked among the lowest of the low. On further consideration, it becomes apparent that this final judgment of the great investigator of nature was in strict accordance with the law of evolution. It is certain that there has been, from one geological age to another, a steady though somewhat irregular increase in the size and complexity of the brains of vertebrate animals. But this increase appears to occur in the transition from one species to another. When a species is once established, there is no evidence (as I am assured by high zoological authority) to show that any material change in the quantity or quality of its brain occurs from first to last. When ‘speaking man’ appeared as a new species on the world’s stage, the size and power of his brain was fixed, once for all. There are variations in different races, as there are differences in this respect among children of the same parents; but the variations do not pass certain defined limits, and are constantly tending, as Mr. Galton has shown of the human stature, towards the general average.27

It is striking how Hale, with his remarks on Darwin’s late change of mind, assumed the Darwinian mantle even in endorsing one of the era’s most profoundly anti-Darwinian theories of evolution. Hale here introduced his audience to Francis Galton as one of several experts who were offering a vision of species changing not by stately progress, as Darwin had thought, but by leaps and bounds after periods of stasis—saltationist evolution, as it came to be known. Applied by Hale to humans and language, this saltationist alternative licensed a vision of the first humans coming into the world with high intelligence, including all the linguistic capacity that their descendants would ever have. As Hale made plain elsewhere, there was thus no need to regard apparently high languages among otherwise lowly peoples as something to be explained away. The highness of these languages was no trick of the philologist’s light, nor was it a problem for the evolutionary theorist. It was a legacy of the considerable brainpower that came into being with humankind and has remained fixedly a part of the human endowment. For all that unfortunate circumstances had held back certain branches of the human family from making the most of it, intelligence was a human birthright, with language an especially robust outward sign of intelligence, even when it failed otherwise to manifest itself.28

Recall that Wake, in the 1860s, had felt that he had to reject materialist evolutionism as inconsistent with what he took to be the reality of high languages among otherwise lowly peoples. In the 1880s, Hale—so similar to Wake in basic outlook on race, language and evolution—had more options. Thanks to Galton’s success in promoting saltationism as a respectable alternative to Darwinism, Hale was able to conceive and present his antipathy to race-language ranking as evolutionarily sound, indeed as bang otherwise to manifest itself.28

That process continued with the work of our fourth character, Winian tradition from belief in a hierarchy of human languages and-language ranking as evolutionarily sound, indeed as bang otherwise to manifest itself.28

7. Boas’s disciplining away of the race-language scale (1880s–1930s)

Wake and Hale are remembered only by specialists. Boas is famous still as the begetter of professional anthropology in the United States. For purposes of understanding his role in reversing what Darwinians understood Darwinism to mean for race and language, it will suffice here to stress a couple of points by way of biographical introduction.29 First, as mentioned, Boas in the 1880s and early 1890s was quasi-apprenticed to Hale, who was more than forty years older than Boas. This arrangement came about thanks to the British Association for the Advancement of Science, which employed Boas to do fieldwork in the Pacific Northwest on condition that Hale act at a distance as supervisor. In that capacity Hale corresponded with Boas a great deal, during Hale’s period of greatest activity in publicly rethinking race, language and evolution. And, as Gruber documented long ago, Boas came later to be identified with views on those topics that bore a remarkable similarity to his former supervisor’s. In particular, both men opposed the race-and-language rankers, insisting that it was history, not biology, that accounted for the greater strides that some races had taken towards civilization, and that claims about primitive languages were invariably bogus, founded on sloppy listening and thinking. Had Hale’s sympathetic remarks on Galton come to Gruber’s attention, he might have gone even further in drawing out the comparison; for Boas too was, later on, full of admiration for Galton’s achievements in biology, his saltationism very possibly included.30

The second point to emphasize is that where Hale can be seen, like Wake, to have denied the existence of a race-language scale, Boas can most perspicuously be characterized as having disciplined that scale away. The word ‘discipline’ of course conjures notions both of inquiry constrained by high intellectual standards and an institutionally embedded form of inquiry. Both senses are operative in the Boasian case. Boas set the model for critical scrutiny of the arguments of the race-and-language rankers in his epoch-making book of 1911, The mind of primitive man. It was there, as part of a wider anti-hierarchical critique, that he showed how racial prejudice (his term) underpinned the selective descriptions whereby the languages of technologically primitive peoples had come to be counted as primitive. Was it truly the case, he asked, that, as gradualist-evolutionists had alleged, the languages of races outside the civilized world tended to be less precise in expression, using a single, modified word to express many things where their civilized counterparts used many independent words? Not at all. All languages were more refined in connection with certain topics and less so in connection with others, depending on cultural interest. ‘It seems fairly evident’, he wrote, ‘that the selection [of terms] … must to a certain extent depend upon the chief interests of a people; and where it is necessary to distinguish a certain phenomenon in many aspects, which in the life of the people play each an entirely independent rôle, many independent words may develop, while in other cases modifications of a single term may suffice’. As an example of a people who used several different words where English speakers use one, he cited the Eskimo on snow, with their different words for ‘snow on the ground’, ‘falling

28 Hale (1891), especially pp. 103–108. Hale was particularly warm (pp. 106–107) in endorsing one of Wake’s sources on the highness of many American languages, Du Ponceau.
29 For further discussion of Hale’s saltationist vision of the origin of the human faculty for language, see Radick (2007), pp. 115–116, 176–181, 369–371. In allowing for a single large leap out of prehuman animality, saltationism did away with the notion of animalish intermediates, in language as in everything else. Thus—to put on the isms—could saltationism underwrite egalitarianism without mysticism.
30 Consistent with this fame, Boas’s life and work can be read up in the Dictionary of scientific biography.
31 On a recently discovered Science article by Boas promoting Hale’s 1888 address on the origin of language, see Radick (2007), p. 428 n. 120. Gruber overstated, however, in crediting the convergence of views to Hale’s influence on Boas (Gruber, 1967, pp. 18–34, especially 19, 31–34), for Boas was already more or less fully formed intellectually when he arrived in the States from Germany, where the battle of sceptical rigour against the evolutionist race-rankers had already been joined. It would be more accurate to see in Hale’s congruent attitudes—so unusual in the American context—an encouragement to the newly arrived Boas. For further discussion of Boas’s German intellectual heritage as compliant with much in Hale’s outlook, see Radick (2007), pp. 190–191; on Boas’s saltationism, see pp. 371–372.
snow’, ‘drifting snow’ and so on.\textsuperscript{32} He made a related point regarding the supposed absence of abstract words among Amerindian peoples:

Primitive man, when conversing with his fellow-man, is not in the habit of discussing abstract ideas. His interests center around the occupations of his daily life: and where philosophic problems are touched upon, they appear either in relation to definite individuals or in the more or less anthropomorphic forms for religious beliefs. Discourses on qualities without connection with the object to which the qualities belong, or of activities or states disconnected from the idea of the actor or the subject being in a certain state, will hardly occur in primitive speech. Thus the [American] Indian will not speak of good-naseness as such, although he may very well speak of the goodness of a person. He will not speak of a state of bliss apart from the person who is in such a state. He will not refer to the power of seeing without designating an individual who has such power. Thus it happens that in languages in which the idea of possession is expressed by elements subordinated to nouns, all abstract terms appear always with possessive elements. It is, however, perfectly conceivable that an Indian trained in philosophic thought would proceed to free the underlying nominal forms from the possessive elements, and thus reach abstract forms strictly corresponding to the abstract forms of our modern languages.\textsuperscript{33}

Boas went even further, reporting that he had gone ahead and tried it out with a native interlocutor on Vancouver Island, who replied that, indeed, the ideas of ‘love’ and ‘pity’ made sense, over and above the more familiar ideas of some particular person’s love or pity.\textsuperscript{34}

Showing by example what disciplined anthropological thinking about race, language and evolution looked like, Boas was also a builder of anthropology as a university-based discipline, in the classic sense. With Columbia as his headquarters, he started a university degree programme, commanded professional organizations and journals, and generally evangelized for his vision of the science. He and his students were so effective that some of that vision did indeed pass into ‘common knowledge’.\textsuperscript{35} A rather spectacular success story in this respect is the idea that all human peoples have roughly equivalently complex or potentially complex languages. From the 1920s, support for linguistic egalitarianism more or less defined professional students of language in the United States, whether they considered themselves linguists or anthropologists, thanks not least to the advocacy of the Boas-inspired Leonard Bloomfield.\textsuperscript{36} Outside professional circles, meanwhile, linguistic egalitarianism came to be presented as unarguable scientific fact. Consider the following, from books on language for the general reader at different ends of the twentieth century. The lowliest South African Bushman speaks in the forms of a rich symbolic system that is in essence perfectly comparable to the speech of the cultivated Frenchman. Thus former Boas student Edward Sapir, in his textbook Language, published in 1921.\textsuperscript{37} More than sixty years later Sapir’s attack on the reality of primitive languages, including a demonstration that the verb paradigm of one Amerindian language bears comparison with Latin, featured in its own mini-essay in the article on ‘The equality of languages’ in David Crystal’s The Cambridge encyclopedia of language (1987, since updated). ‘The fact of the matter’, wrote Crystal, ‘is that every culture which has been investigated, no matter how “primitive” it may be in cultural terms, turns out to have a fully developed language, with a complexity comparable to those of the so-called “civilized” nations’.\textsuperscript{38} It was this consensus that made a star of the claim—still thriving in our culture—that Eskimos have a lot more words for snow than we do (or even than Boas claimed for them).\textsuperscript{39}

8. Hockett’s Darwinizing away of the race-language scale (1940s–1960s)

In between Sapir’s statement of the equality of human languages in the 1920s and Crystal’s affirmation of it in the 1980s came Charles Hockett’s Darwinian explanation for it in the 1950s. Old man Boas was still attending seminars when Hockett was doing graduate work in American Indian anthropological linguistics at Yale in the 1930s, absorbing the disciplinary values that Boas had done so much to create. A student of Sapir and protégé of Bloomfield, young Hockett made a strong impression right from the start, as a technically brilliant field linguist who also had fire-in-the-belly for theoretical speculation on the elements and nature of language.\textsuperscript{40} After service in World War II, his ambition took public shape in an extraordinary manifesto published in 1948, calling for the social sciences—and linguistics especially—to integrate with modern biology. The call was made in the name of one of the great liberal causes of the day: the unity-of-science movement, which sought to make the special sciences reducible to what could be observed or deduced, with no appeals to suspiciously metaphysical items such as ‘mind’ or ‘vital principles’ or ‘social forces’. Throughout the 1950s Hockett, by now with a post at Cornell, pursued a many-sided unificatory programme that, by late in the decade, had reached biology.\textsuperscript{41} At the end of his very influential 1958 textbook, A course in modern linguistics, in a final chapter on ‘Man’s place in nature’, he announced the results.\textsuperscript{42}

It is worth emphasizing how against the grain it was for someone trained up in American linguistic and cultural anthropology to attempt a rapprochement with biology—and on the territory of language, no less. But the timing was auspicious. For one thing, a new science of animal behaviour had emerged since the 1930s, bringing with it studies of animal communication whose precision

\textsuperscript{32} Boas (1911), pp. 145–147, quotation on p. 146. The book’s first chapter is entitled ‘Racial prejudices’.
\textsuperscript{33} Ibid., pp. 140–150.
\textsuperscript{34} Boas (1911), pp. 145–147, quotation on p. 146. The book’s first chapter is entitled ‘Racial prejudices’.
\textsuperscript{35} On the Boasian academic enterprise and its impact on American anthropology, see Darnell (1998). For the impact on the wider culture, see, for example, Degler (1991), Chs. 3–4; Cravens (1978), Ch. 3.
\textsuperscript{36} On egalitarianism as a hallmark of Boasian–Bloomfeldian linguistics, see Newmeyer (1986), pp. 39–47.
\textsuperscript{37} Sapir (1921), p. 22.
\textsuperscript{38} Crystal (1987), p. 6.
\textsuperscript{39} In Jonathan Safran-Foer’s 2002 novel Everything is illuminated (Safran-Foer, 2002, p. 60), the Jewish hero tells his Russian guide: ‘The Eskimos have four hundred words for snow, and the Jews have four hundred for schmuck’. On the remarkable cultural afterlife of the Eskimo-words-for-snow example, see Pullum (1991). Pullum tracked the example back not to The mind of primitive man but to another, more technically focused book of Boas’s published that same year (pp. 162–163). He thus missed the race-leveling point of the example for Boas. The history of later, inflated claims about Eskimo words for snow, and the linguistic relativism that those claims were taken to support, look less ludicrously arbitrary than Pullum makes out once Boas’s own relativizing, anti-racist intent is restored.
\textsuperscript{40} On Hockett as the ‘Bloomfeldian boy-wonder’, see Harris (1993), p. 43. On the strong influences of Sapir and Bloomfield, see Agard et al. (1983), p. ix. Hockett, who died in 2000 at the age of eighty-four, left reminiscences of his life up to World War II in Hockett (1980).
\textsuperscript{41} Hockett (1948). For discussion of this paper and the programme it inaugurated, see Radick (2007), pp. 288–289. In Radick (Forthcoming), I examine the programme in more detail, including its comprehensive repudiation in Chomskyian linguistics.
\textsuperscript{42} Hockett (1958). The editors of a festschrift for Hockett described his 1958 Course as ‘a book which initiated many of us into the profession’. See Agard et al. (1983), p. x.
allowed for far more fine-grained comparisons and contrasts with human language than possible previously.\textsuperscript{43} At the same time, evolutionary biology had changed, reorganized around population genetics and a revitalized confidence in the adapting power of gradualist natural selection. Although its leaders had not developed this ‘synthetic’ Darwinism in order to free it of Darwinism’s racialist past, the new science proved up to the task when called upon, as it was increasingly in a postwar period eager to renounce the biological racism behind the death camps. At Columbia, Theodosius Dobzhansky collaborated with Boas’s last graduate student, Ashley Montagu, on spelling out the new reasons for thinking that race set no meaningful limits to human potential.\textsuperscript{44} In 1958, the year that Hockett published his textbook, and with the Darwin centennial celebrations now in prospect, Dobzhansky reiterated a major lesson of that earlier work in Science: ‘Natural selection has made all healthy human beings trainable for the performance of diverse duties. This is, then, a biological adaptation which makes people multiform, not uniform as is sometimes supposed. Educability, the ability to be trained, is consistently fostered in man by natural selection’.\textsuperscript{45}

For his part, Hockett had taken the trouble to educate himself in the new biologies of behaviour and population-genetic Darwinism—and his message about language’s evolution was reassuringly humanist.\textsuperscript{46} He showed, first of all, that language could be linked to other animal communication systems without fear that humans would be thereby diminished. The point was made visible in a table, with a checklist of seven ‘key properties’ of language—effectively, the criteria for something’s being a language—going down on the left-hand side, and representative examples of animal communication systems strung across the top: bee dancing, stickleback courtship, herring gull care-of-offspring, gibbon calls and human language. Over the next decade Hockett’s table would grow in size and complexity, as he identified ever more key properties (eventually called ‘design features’) and extended his range of examples of non-linguistic systems. But the upshot was always the same: although all the properties of language were present somewhere among the nonhuman animals, at least in a rudimentary way, only human language had them all in full. On the table’s debut, he noted that the bee dance appeared most language-like, as it exhibited productivity (when totally new yet understandable messages can be generated) and interchangeability (when senders can be receivers and vice versa), as well as some displacement (when there is communication without proximity to what is being communicated about—as when bees at the hive dance out the location of the distant nectar) and specialization (when activities that send messages are not directly, physically involved in the activities that will follow). ‘But there are no proto-bees in Man’s lineage’, Hockett noted, ‘so that the functional parallels are like the fact that some invertebrates, some reptiles, most birds, and two mammals (‘bats and men) have all, quite independently, acquired the power of flight’.\textsuperscript{47}

Concentrating on the human lineage, Hockett next drew on the patterns revealed in his table, together with reflection on language’s key properties, to reconstruct the evolutionary emergence of language. Along the way, he offered a Darwinian explanation for linguistic equality among the world’s peoples. According to Hockett, human language and the power to use it confer such advantage in the Darwinian struggle that any less capable competitors do not long survive, ensuring a world of linguistic equality:

At the time of the earliest foreshadowings of productivity, there may have been striking differences in the genetically determined abilities of various groups of Hominioidea to acquire culturally transmitted communicative habits, and correspondingly striking differences in the ‘languages’ and quasi-languages found among the groups. But the workings of natural selection, on both the genetic and the cultural level, eliminated the inefficient strains and the inefficient culturally transmitted habits in relatively short order, so that what we know now as human language is, and for many millennia has been, about equally efficient for all human communities. If the impact of different present-day languages on the other behavior of their speakers shows any meaningful variation at all, the differences are of the order that can be discerned, as it were, only through a cultural microscope; whatever the differences may be, there is no reason to believe that they are a residue of the presumably vaster differences of the early times of which we are now speaking. . . In the case of the adaptation or adaptations which changed pre-humans into humans—first, and quite early, the genetic changes which were permissive for cultural transmission, and later those which were permissive for language—the differential advantage was enormous, for a wide variety of ecological niches: no half-way genetic adaptation among kindred strains had a chance.\textsuperscript{48}

The reconstructive argument, table and all, crossed over to a wider audience a couple of years later thanks to an article by Hockett on ‘The origin of speech’ in Scientific American, in a human-evolution special issue introduced by the synthesis-friendly physical anthropologist Sherwood Washburn (on tools and human evolution) and concluding with Dobzhansky (on selection as operating now in a man-made environment).\textsuperscript{49} If ever a publication were calculated to suggest that Hockett’s analysis of language belonged within the Darwinian tradition, this was it.\textsuperscript{50} Near the outset of the article, Hockett recalled the hopes of European scholars of the nineteenth century of finding linguistic ‘living fossils’ in the world’s unexplored places, and how those hopes were never borne out. ‘Nowhere in the world’, wrote Hockett, ‘has there been discovered a language that can validly and meaningfully be called “primitive”. To illustrate, he quoted Sapir’s 1921 passage on the linguistic equality of the lowly Bushman and the cultivated Frenchman.\textsuperscript{51}
9. Revising traditions within and about racist Darwinism

My title promised a story about race and language in the Darwinian tradition. Can Hale, Boas and Hockett truly be said to belong to that tradition? None shows up in standard histories of Darwinism, and only Hockett made much use of the theory of natural selection. Those histories also tend to portray the saltationism underpinning Hale's and, it seems likely, Boas's critique of the race–language scale as one of the anti-Darwinian alternatives that ‘eclipsed' natural selection theory in the decades around 1900.52 But an intellectual tradition is larger than the people who pledge themselves to uphold it. Hale and Boas sought publicly to relate their views to Darwin's, indicating where they were building on his achievements and where, thanks to scientific advance, they were going beyond him.53 Hockett's case is more straightforward. He worked to reconcile the race–language egalitarianism forged by Hale and Boas, in defiance of the Darwinism of their day, with the new Darwinism that came to wider scientific attention after World War II. It is as though Hockett decided that the Boasians had to be right about there being no primitive languages, but also that the synthetic Darwinians had to be right about natural selection, understood population-genetically, being a central force in evolution. The challenge was to make these work together. His unifying project thus stands as a reminder, not just of the unity–of-science movement's impact on evolutionary biology, but of the potency, too little explored, of Boas's legacy for American Darwinism. A closer look at that legacy may well reveal saltationism to have helped transform natural selection into the theory we now know, free—as Darwin's version was not—from a prediction of race–and–language hierarchy.54

So there is unfinished business near the beginning of the story. There is also unfinished business near the end of the story. There are always more complete recapturing of why, for someone like Darwin, the race–language scale seemed obviously, vindicatingly true, we cannot take the measure of the changes that separate his world from ours. In Darwin's case, needless to say, the difficulty is compounded by reverence. Even our most distinguished commentators have tended to underplay Darwin's commitment to natural progress and the hierarchies of complexity that, for Darwinians, had to be right about there being no primitive languages, but also that the synthetic Darwinians had to be right about natural selection, understood population-genetically, being a central force in evolution. The challenge was to make these work together. His unifying project thus stands as a reminder, not just of the unity–of-science movement's impact on evolutionary biology, but of the potency, too little explored, of Boas's legacy for American Darwinism. A closer look at that legacy may well reveal saltationism to have helped transform natural selection into the theory we now know, free—as Darwin's version was not—from a prediction of race–and–language hierarchy.54

Yet without a more complete recapturing of why, for someone like Darwin, the race–language scale seemed obviously, vindicatingly true, we cannot take the measure of the changes that separate his world from ours. In Darwin's case, needless to say, the difficulty is compounded by reverence. Even our most distinguished commentators have tended to underplay Darwin's commitment to natural progress and the hierarchies of complexity that, for Darwin, progressive change had left in its wake, among human races and languages as elsewhere. Restoring the language–species parallels that Darwin drew in the Descent of man to their race–progressionist context is a first step toward the more thoroughgoing rethinking that the whole topic of Darwin and race requires. Yes, let us hear, again, of the anti-slavery credentials of Darwin and his family, and of how his friendships with nonwhites impressed upon him the fundamental unity of mankind, and of the way that his sexual–selection account of human racial differences tended to make those differences look unimportant. But let us ask too how these squared with Darwin's attachment to the race–language scale—and be prepared for the exercise to uncover some uncomfortable insights into what Stephen Alter, in the arresting phrase with which he concluded his book (Alter, 1999, p. 148), called 'the scaffolding of plausibility surrounding the house of Darwin'.

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References


52 See, for example, Bowler (1983).
53 Hale’s positioning himself in relation to Darwin’s legacy has been discussed. For a counterpart in Boas’s oeuvre, see his contribution to the 1909 centennial, ‘The relation of Darwin to anthropology’ (unpublished). There he set out what he saw as the contribution of The descent of man, the vindication of some of Darwin's ideas since 1871, and the rejection or revision of other ideas, including the notion that some races were lower anatomically than others. See Franz Boas, ‘The relation of Darwin to anthropology’, 1909, Papers of Franz Boas, collection 5, box 3, American Philosophical Society, Philadelphia. A transcription of the lecture is available electronically as part of the online version of Lewis (2001).
54 See also the remarks in Radick (2007), pp. 373–374.