

Phonology in Antebellum America (1817-1850)

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0. Background -- America in 1840, what would a linguist be interested in?

American Indian languages

German and other immigrant languages in America

creole languages

the nature of slave speech in the plantation south

American vs. British English (formation of new words and new usages of old words; prescriptive pressures toward a standard American language)

Laura Bridgman (the first deaf-blind child to be successfully taught language, tactile finger spelling at the Perkins Institute for the Blind in Boston)

1. During this period Linguistics was referred to as "General Philology" or philology in a general sense or just Philology. *Encyclopedia Americana* v. 10 p. 81-82 1836 printing of 1<sup>st</sup> edition (1828-1832, 13 volumes) Under Philology "But of late, the word *philology* has received a more definite and more appropriate meaning; and it seems now, by a tacit, but almost universal consent, to be chiefly, if not exclusively, appropriated to that science which embraces human language in its widest extent, analyzes and compares its component parts and its various structures in thousands of idioms and dialects, that are and have been spoken on the face of the habitable globe...A science like this, so wide in its extent and yet so homogenous in all its parts, requires an appropriate name, a name familiar to men of science, and such as the learned world will easily be led to adopt...The Germans ... have called it, and still call it *linguistik*; but no other European nation that we know of has followed their example while the name *philology* for some years past, appears to have been generally adopted, even in Germany. It is believed that it was first used in this sense in the United States."

2. Number of real linguists in the United States in 1840 = 4 (all employed in other professions): John Pickering, Peter Duponceau, Albert Gallatin, and Francis Lieber [ see Andresen 1990, *Linguistics in America 1769-1926: A Critical History*]

Pickering is known for his work on Americanisms and his work on American Indian languages. Duponceau's article on "Philology" (in the general sense) in the same Encyclopedia is a state of the art article on linguistics. Duponceau is best known as the originator of the term "polysynthesis" to describe the nature of the American Indian languages, and as the author of what must be the first article with the title "English Phonology" (1818, Transactions of the American Philosophical Society). Gallatin is known for his work on the classification of American Indian languages. Lieber's work is more eclectic and largely unpublished. These 4 men were highly educated, well-traveled internationally, and familiar with the development of linguistics as a field in Germany. They corresponded with each other while Pickering and Lieber corresponded with Wilhelm von Humboldt receiving his latest works. (See Müller-Vollmer 1998.) What is striking about this group of four (Pickering, Duponceau, Gallatin, and Lieber) is that they left virtually no legacy on the subsequent development of linguistics as an academic discipline in America. Their works were all but forgotten by 1860.

### 3. American Indian Languages – the terminology debate (Campbell 1997, Davis 2003)

The "terminology debate" on how to describe the polysynthetic, incorporating nature of Native American languages

- a. Agglutinative -- used by Wilhelm von Humboldt
- b. polysynthetic -- first applied to the Native American languages by Duponceau in 1819 and used by Pickering (1831) in his 'Indian Languages of America'
- c. holophrastic -- coined by Lieber 1837, used in the mid-to-late 19<sup>th</sup> century
- d. incorporation -- this term was used by Wilhelm von Humboldt (*Einverleibung*), but was not considered a special language type. See discussion in Campbell 1997: 383)

4. Pickering's criticized von Humboldt's use of "agglutinative" because of a sense of inferiority that von Humboldt gave to this term. "Thus a learned member of the Berlin academy of sciences -- baron William von Humboldt -- in an ingenious and profound Dissertation on the Forms of Languages, while he admits that those of the American Indians are rich, methodical and artificial in their structure, yet would not allow them to possess what he there calls genuine grammatical forms (*ächte formen*), because, says he, their words are not inflected, like those of the Greek, Latin and Sanscrit, but are formed by a different process which he calls *agglutination*; and, on that supposition, he assigned to them an inferior rank in the scale of languages, considered in the point of view of their capacity to aid the development of ideas" Pickering 1831:582). Pickering goes on to argue at length against this view of the inferiority of American Indian languages and adopts Duponceau's term "*polysynthetic*, from the numerous combinations of ideas which it presents in the form of words." (p. 581)

5. Lieber's specific criticism of the term *agglutination* as applied to American Indian Languages can be found in Lieber (1837/1881:516-517), "This way of expressing whole phenomena or entire relations of a very modified kind, by one word, has been called *agglutination*. This is not a happy word—be it said with sincere reverence for that truly great philologist [Wilhelm von Humboldt], equally distinguished for acute penetration and lofty, comprehensive views—if applied to these forms, for glueing together means fastening by glue things which were separated before. This, however, is taking a partial view of the matter; those words appear to us glued together, because our language designates the ideas contained in their words separately; but they do not appear so to Indians. It is but *one* idea which they express. *We* are the analyzers, not they the joiners; they would have the same right to call our process of expressing one idea. *e.g., giving something to eat*, by four different words, *laceration*."

6. Lieber considered *polysynthetic* to be a better term than *agglutination* in describing the American Indian languages, but he didn't see it as going far enough. Lieber (1837/1881:517-518) says the following: "Mr Duponceau, the venerable, learned, and successful philologist at Philadelphia, has named those peculiar words by which is expressed, what appears to us a complexity of ideas, by a far more significant term. He calls them polysynthetic words, and languages in which they appear frequently or for which they form the main body of words *polysynthetic languages*....In as far as the term first introduced by Mr. Duponceau applies to expressions—be they grammatical forms or not—which consist of several elements previously separated, it is not only correct but fully adequate to the object. It matters not whether these elements are ever used as having an independent meaning on their own..." "Still the term polysynthesis expresses a composition of previously separate parts, and we cannot designate it by these words which express that which to others, accustomed to analytic languages, appears as a complex of ideas, that is to say, which formed itself originally in the human mind by the composition of several ideas. Words, then, which express a complex of ideas we will call holophrastic words — words which express the whole thing or idea, undivided, unanalyzed. I know well that all holophrastic words are, if compared to still more comprehensive terms, analytic in their

character, but in all cases of a similar kind we must content ourselves with terms of comparative meaning. If we have seen that the Mohegans have a word for *giving something to eat*, I would call it a holophrastic word, though it has an analytical character, if we consider that it only expresses *to give something to eat*, and not *who* gives to *whom*, on *what conditions*"

7. Phonology in this period -- only Peter Duponceau wrote about it, in the entry on Philology in the *Encyclopedia Americana* and in his *English Phonology* of 1817 [published in 1818].

8. *Encyclopedia Americana* v. 10 p. 84 (1836 printing) "We do not find that any attempt has been made in Europe to give to philology a definite form, by delineating its constituent members. We are, therefore, obliged to adopt, as the only one that we are acquainted with, the division with Mr. Duponceau has made of it, into three parts, which he calls *phonology*, *etymology*, and *ideology*, and which he defines as follows:

"*Phonology* is the knowledge of sounds produced by the human voice. It teaches us to distinguish those sounds, with their various tones, accents and inflections; to analyze, class and compare them with each other, and represent them as much as possible with visible signs. *Etymology* is the knowledge of those constituent parts of speech that we call *words*. By means of it we are enabled to trace the affinities of the different idioms of the earth, and the filiation of the numerous races and families of men who inhabit it; and, lastly, *ideology* is the comparative study of the grammatical forms and idiomatic structures of languages, by which we are taught to distinguish the different shapes in which ideas combine themselves, in order to fix perceptions in our minds and transmit them to those of others."

9. Duponceau, Peter (1818) "English Phonology; or, An Essay towards an Analysis and Description of the component sounds of the English Language". *Transactions of the American Philosophical Society* (new series) 1:228-264. Read before the American Philosophical Society May 24<sup>th</sup> 1817)

10. Duponceau's paper is fascinating in that it is almost certainly the earliest work that defines the nature of phonology and gives direction for what phonologists are to do. It predates Saussure by almost 100 years (See Anderson 1985 who does not mention Duponceau's work.) Further, Duponceau describes English sounds in a way that provides a specific phonological view on matters that are of controversy in contemporary English phonology. As far as I am aware, Duponceau's essay on English phonology is not connected to other work in "Philology" at that time and there was no subsequent follow up work on the topic. The following remark is from the *Encyclopedia Americana* (1<sup>st</sup> edition) entry under Consonants "The various interesting relations of consonants to vowels...have not yet received any satisfactory investigation, which is so much more desirable, as general philology has attracted, in this age, the attention of several distinguished literati, both in Europe and this hemisphere. Mr. P. Duponceau has led the way, in these investigations, by his English Phonology... We have no doubt that the more the science of languages is developed, the more obvious will be the necessity of the study of phonology..."

11. Background on Duponceau, 1760-1844 (Edgerton 1942, Andresen 1990, Swiggers 1998): Born in France in 1760, came to the U.S. in 1777, became a citizen of Pennsylvania in 1781, admitted as an attorney in Philadelphia in 1785 and "[b]ecause of his acquaintance with the civil and continental law of Europe and with foreign languages, he was in demand for matters involving international law and practice." [Andresen 1990:97]. Earlier writings were on legal matters. His success as a lawyer allowed him to devote his leisure time to the study of languages with a particular interest on American Indian languages and language structure in general ([Swiggers 1991: 28]. Duponceau was elected to

the American Philosophical Society in 1790 and served as its president from 1827-1844. Probably most known for his writings, both published and unpublished on American Indian languages, which included his *Mémoire* on the grammatical systems of some North American Indian languages which was the winning essay for the competition of the 1834 Volney Prize and his coining of the term “polysynthetic” to describe the morphological character of many of the American Indian languages (first used by Duponceau in an 1819 publication; see Edgerton 1942:29). Duponceau was also known for translations of various early grammars on American Indian languages, such as his translations into English of works on the Delaware language by Zeisberger (in 1830, *American Philosophical Society, Transactions*) and Heckewelder (in 1834, *American Philosophical Society, Transactions*). In 1838 Duponceau published a monograph ‘Dissertation on the Nature and Character of the Chinese System of Writing’ (Volume 2 of *Transactions of the Historical and Literary Committee of the American Philosophical Society*) which Edgerton (1942) considers to be Duponceau’s most brilliant linguistic work. In it, Duponceau argues for the syllabic nature of the Chinese character system.

Duponceau’s essay on English phonology --

12. Duponceau’s conception of phonology -- involves abstract analysis of sounds within a language (such as English) and a consideration of the same or similar sounds across different languages. In defining what his essay is about, Duponceau writes (p. 239), “The component sounds of the English oral language, considered in the abstract, and independent of the signs which are used to represent them, are the subject of this Essay. I have attempted to subject them to the process of a severe analysis, taking the ear alone for my guide”. The practical aim of the article seems to be to offer names for the particular (abstract) oral sounds that occur in (American) English and to discuss some matters of analysis. Earlier in the article he puts forward a notion of a science of phonology (p. 230-231) when he mentions “the great difficulty, if not impossibility, of representing in an universal alphabet, all the sounds and shades of sounds actually existing in human language...To acquire even an imperfect knowledge of so many different sounds, to analyse and compare them with each other, class them according to their respective analogies, and graduate them by an accurate scale, and after all to communicate in an intelligible manner through the eye, the result of all these studies requires almost an Herculean labour, from which, perhaps, might result a curious and interesting science, which, until a better name can be devised, I would denominate the *Phonology of Language*.”

“I do not possess the requisite talents to venture upon so vast an undertaking. I leave it to those who are not aware of its difficulties, or who feel conscious of sufficient powers to overcome them. I will, however, make an attempt to apply my principles to the English language, although I am far from considering this an easy task.”

13. Duponceau’s phonological classification of (American) English sounds p. 249-263 that I have placed in the form of a chart but based on his description and example words. (I will not discuss the names he assigns to the particular sounds nor the written symbols he uses to represent them, other than to note that most of the consonant sounds correspond to typical English orthography. I give the classification in chart form using contemporary transcription symbols.)

Labials	Labio-dentals	Gutturals	Linguals	Linguo-palatals	Linguo-dentals	Vocals	Aspirations
b	v	g	ʒ	l	d	y	h
p	f	k	ʃ	r	t	w	
m			z	n	ð		
			s		θ		

14. The chart in (13) represents Duponceau's terminology reflecting the exact order of his presentation. He does not describe how these sounds are articulated, though he provides example words in English orthography illustrating each of the sounds above. For example, the words he uses to indicate the 'p' sound include 'pain', 'mope' and 'happen' giving a variety of different contexts. The terms in the chart are his terms. Duponceau does not overtly distinguish manner of articulation from place of articulation. While some of his groupings in (14) reflect place of articulation (labials, labio-dentals, gutturals, and linguo-dentals), others seem to combine place and manner. For example, linguals = coronal fricatives and linguo-palatals = coronal sonorants. While these can be considered natural groupings in English phonology, he does not discuss why. He also does not discuss voicing, but it is clear from the order of his presentation he is aware of it. This is because for each pair of sounds that contrast only in voicing, he always presents the voiced one before the voiceless one. What's missing?

15. Discussion of affricates (though this term is not used by Duponceau), p. 247

"There are other organic sounds [consonants] which combine so easily with each other, that when placed in a certain juxta-position, and pronounced rapidly together, they are so blended that they appear as forming but one sound. Such are the sounds of *t* and *d*, with *sh* and *zh*, as in *charm*, *joke*, etc. These blended sounds might well be represented as single letters in a phonological alphabet of the English language..." [Note: these are not included in the chart in (13)] "There is not so much necessity for single characters to designate the various combinations of S and Z, with other consonants preceding them, such as *ks*, *gz*, *ps*, *ts*..."

16. Vowel Inventory (my transcription based on his example words in the order he presents)

ɔ, ɑ, ε, e, i, o, u [Note: 1<sup>st</sup> 3 vowels = open-o, back-a, and epsilon]

- a. Each vowel has a long and short form. These would be indicated by diacritics
- b. Almost all examples of ε occur before 'r' (hair, pear, care, very, merry). Note that the vowel sound in the word *bet* would be transcribed as short-e.
- c. The vowels ɔ, ɑ, i, o have a nasalized form. The other vowels do not.

Issues of Analysis (either overtly discussed and/or implicit in his presentation)

17. Quantity vs. quality in the analysis of the English tense vs. lax distinction in English vowels. This is a long-standing problem in English phonology. For example, Chomsky and Halle (1968) use quality [± tense] to distinguish *i*/*I*, *u*/*U*, etc. Others consider the length contrast as being basic (e.g. [i] is underlyingly two moras or two X-slots while /i/ is underlyingly one mora or one X-slot with the quality difference being secondary; see Giegerich 1992 for discussion). Duponceau is clear that the difference between such pairs (*i*/*I*, *u*/*U*, but also *o*/*Λ*) is basically one of quantity, not quality. "Quantity is so little attended to in the English language, that a foreigner judging from our grammars and pronunciation dictionaries, would be led to believe that there is no such thing in it. Mr. Walker, in the Treatise on Pronunciation prefixed to his Dictionary, hardly deigns to bestow a few lines on this subject 'because,' says he, 'vowels long and short are always sufficiently distinguishable.' ... the truth is that quantity has been too much neglected by grammarians, who have exclusively bestowed all their attention on accent and emphasis, without regard to duration of sound. It is not possible to ascertain with due precision the pronunciation of a language, when so material of an ingredient is left out of view." [p. 239-240]

18. The nature of stressless vowels (note: the quantity issue in (17) references stress vowels only) p. 241-242 "...and those unaccented [vowels] are passed over with so much quickness, that the vocal organ does not dwell upon them long enough to enable a common ear to catch their precise sound, and it perceives only an indistinct vibration, a small vacant space, as it were, between the consonants, like the *Sheva* of the Hebrews, and the French *e* feminine. The vacant space, this *Sheva*, the English phonologists (if I may be allowed to use the name) have almost uniformly represented by *u* short, for some predilection for this character, for which I cannot, nor do I think it necessary to account. Thus *altar*, *cancer*, *honor*, *martyr*, when their pronunciation is to be explained, will be spelled for demonstration's sake, *altur*, *cansur*, *honur*, *martur*, as if the vowel sound of the last syllable in all of them were the same. But this similarity is nothing in my opinion, but a deception produced on the ear by the rapidity of the voice passing over the unaccented vowel. If the powers of the auditory sense could be increased by some acoustic instrument, as those of the organs of vision by the microscope, I have no doubt that the sounds of the vowels thus obscurely but correctly pronounced, would be distinctly heard; but they escape our ear as minute objects do our eyes as the sight glances over them with rapidity."

19. Glides as positional variants of corresponding vocals

p. 247 "...there are vocal sounds which by a particular position become organic [consonants]. Such as those which in our language are represented by the letters *y* and *w*. When placed immediately before other vocals, and even before their own duplicates, their pronunciation requires a certain motion of lip or tongue, as in *ya*, *ye*, *yi*, *yo*, *yu*, *wa*, *we*, *wi*, *wo*, *wu*. Hence they are entitled to rank both among vocal and organic [consonant] sounds, and in a complete alphabet, should have particular signs to represent them in each different capacity."

20. Analysis of "diphthongal sounds" (p. 258-259)

"I call diphthongal sounds, those which are composed of two vocals, rapidly pronounced in succession, so as to form but one syllable. I do not include those in which the first vocal has a consonant or organic character, as *y* and *w*. There are four diphthongal sounds in the English language."

a. The four diphthongs given their current transcription according to Duponceau's description

oi (as in "oil")      ai (as in "mile")

au (as in "foul"; "The people of Connecticut, and of the Eastern States generally, pronounce the third diphthongal sound by [εu] [my transcription], and are remarked for this singularity." p. 258)

iu (as in "pure"; "It is not a clear and distinct succession of fully articulated sounds, as in the pronoun *you*; there is something in it more slurred, more delicate, which brings it nearer to a pure vocal sound." p. 259. See Davis and Hammond 1995)

21. Aspirations (p. 248) "In addition to the proper vocal and organic sounds, the English language has two modifications of sound, which I call aspirations or spirits. The one is soft, and in our common alphabet is represented by the letter *h*. The other is harsh and guttural, and is only found in some Scotch and Irish proper names, such as Lough, and Drogheda, &c. It may be said, perhaps, that this last does not properly belong to the English language, but it is so common in almost every other European idiom (the French and Italian, I believe, are the only exceptions,) that it would be very useful, if added to the auxiliary table of signs which I propose."

22. The lack of velar nasal (see 13) – nasalized vowels as underlying (p. 257)

"The French nasal sounds are more pure than those of the English language, which being invariably followed by one or other of the hard consonants *g* and *k*... Yet these pure nasal sounds are not the less component parts of the English language, and analytically speaking, should be considered apart from

the consonant mixture.” Duponceau then gives a discussion of how various relevant words such as ‘long’ and ‘think’ should be transcribed in “[a] phonological alphabet”. Specifically, given Duponceau’s discussion of such words, ‘long’ would be represented using current transcription symbols as /lɔŋ / while ‘think’ would be transcribed as /θɪk/. This would be a problematic analysis from a contemporary perspective.

23. There are many issues that would be included in a modern phonology of English that Duponceau does not discuss. These include phonological processes, allophonic distribution, stress patterns, description of possible consonant clusters, etc. However, he does comment on the pronunciation of /t/ as [ç] in forms like “nature” and “don’t you”. He is also certainly aware that the pronunciation of a particular sound in his phonological alphabet of English varies by context. This is because when he presents examples of a particular sound, he gives a range of contexts in which it appears. For example, in introducing the labial sound /p/, he gives the examples ‘pain’, ‘mope’, and ‘happen’. Duponceau is certainly aware that the precise pronunciation of /p/ is different in these examples, but in a phonological alphabet for English, they would be represented by the same symbol. Nonetheless, given that Duponceau’s work seems to be the very first attempt at articulating a view of phonology with analysis, his work is insightful and keeps to his goal stated on p. 239: “The component sounds of the English oral language, considered in the abstract, and independent of the signs which are used to represent them, are the subject of this Essay.”

24. What motivated Duponceau to write about English phonology? Duponceau expresses in his article a strong prescriptivist tendency toward a view of correct pronunciation. He spends a fair amount of space in the first part of the article distinguishing sounds from orthography. In doing this, he takes strong position against those who advocate spelling reform so that orthography more closely reflects pronunciation. In arguing against spelling reform, Duponceau mentions the inevitability of language change over time. He further argues that people learn spelled words as whole and not by their individual sounds. He also mentions that deaf people learn to read but they do not seem to have a conception of sound and he also refers to very fast readers who cannot be comprehending words by connecting individual letters with sounds. Despite his view about the inevitability of language change, he is critical of certain pronunciations that lexicographers have deemed to be correct. One example (among others) concerns the pronunciation of stressless vowels (p. 243-244). “It is improperly, therefore, that the modern English lexicographers have substituted almost every where the dull inarticulate *sheva*, or short *u* as it is called, for the proper sounds of unaccented vowels. With equal impropriety have some of them struck out in certain words the vowel altogether, for instance, in *raven*, *maiden*, *heaven*, &c. the pronunciation of which is according to Walker, *ravn*, *maidn*, *heavn*, thus making these words monosyllabic...The standard exists only in the language of solemn recitation, in which every sound is distinctly uttered, and no licenses are permitted. It is by adhering to this standard alone, that the purity of the language can be maintained, and that it can be saved from corruption and barbarism.”

“This is the important object, for which I have ventured upon the Essay. The correct pronunciation of a language cannot be reserved, unless it is precisely fixed and ascertained, and that cannot be done unless all its component sounds are accurately known and clearly distinguished from each other. This has not yet been done with respect to any language that I know of, certainly not as to English. The various powers of the characters of its alphabet have been described, but the sounds themselves have never been analysed, nor can they be, unless they are as much as possible abstracted from the signs which represent them, for the ear alone should be listened to, nor suffer itself to be misled by the delusions of another sense, which was given us for a quite different purpose from that of conveying the ideas of *sound* to the mind.”

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