Phonemes in American English are surprisingly like the
nations of the earth: some are militaristic, some are
peaceful; some have satisfied what they have, some insist on
having more; some have invaded other phonemic
territories, the occupants of which either fight back,
or flee into the territory of still other phonemes, where they
then become invaders; some, usually separated from neighbors,
if not by mountains or oceans, at least by considerable phonemic
space, remain quietly at home— the Switzers and the
Scandinavian countries of the phonemic family of nations.

Now this analogical way of regarding the migration of pho-

nemes and the escaping of sounds from one phoneme to another
is admittedly fanciful, even though convenient. One of its
drawbacks is the difficulty of saying, when, for instance, ten
becomes pronounced tin, whether i has invaded e or whether e
has invaded i. Probably any decision is arbitrary. For this
discussion it will be considered that e has invaded i, on the
ground that, whereas ten retains a spelling usually associated
with e, it has appropriated a pronunciation from the i phoneme,
and has thus encroached on i territory. This way of looking at
the matter has the further advantage of agreeing with the usual
formula of sound change, e.g., $e > i$.

Considered thus arbitrarily, e may be thought of as a very
aggressive phoneme, its characteristic spellings having attacked
its neighbors on every side, and appropriated pronunciations
from i, æ, and e (which in accented syllables in American
English is almost invariably diphthongized to ei).

$e > i$

In sub-standard southern American English, the tendency
of e-spellings to appropriate the i pronunciation is stronger than
even in Anglo-Irish. Any a-sound before m, n or ã is with great
frequency pronounced i. Thus men > min, sent or cent
or scent sent > sent, many men > many min, any ent > any
engine endan > indan, bend bend > bind, contain contain
contain, Jenks dzenks > dzenks, and so on through a very
long list. Get get > grit also; but since it does not contain a

$e > æ$

If e-spellings are belligerent, attacking neighboring phonemes
on all sides, there is no lack of counter attack upon e itself;
every one of the tendencies previously recorded here seems to
be accompanied by a compensatory reverse tendency. Over
against the last one discussed, $e > æ$, there is $æ > e$. This shift
shows in sub-standard pronunciations of various forms of to have
in all the American English dialects. Thus, have hev > hev,
has bez > bez, had hed > hes. There is also catch Kate > kat.
The shift in these words is probably of the same origin as that

$æ > e$
by which $\varepsilon > i$ in $hen$ $h\bar{e}n > h\bar{m}$. For in $hen > h\bar{m}$, the vowel is doubtless raised because the tongue anticipates the necessity of rising to the $n$-position and moves too soon, while $\varepsilon$ is still in the process of being pronounced. In $haed > h\bar{a}d$, on the other hand, while there is the possibility that $d$ may induce an anticipatory rise of the tongue, the change is probably complicated by, if not entirely caused by, conditions of unstressing and restressing, since the forms of to have are incessantly used as auxiliary verbs and are hence with great frequency placed in unstressed positions.

The single word marshmallow $ma(r)m\bar{a}l > ma(r)m\bar{a}l$ in casual, informal speech in most parts of America, but this change is likely one of analogy, arising in the resemblance of $mallow$ to $mellow$.

The change from $a$ to $\varepsilon$ shows also in most of the standard forms of standard English, particularly that branch of the general American called Western Reserve speech (Ohio, Indiana, Michigan), in words where the vowel is followed by $r$: thus, $fair$ $f\bar{a}r > f\bar{e}r$, core $k\bar{a}r > k\bar{e}r$, air $\bar{a}r > \bar{e}r$, etc. If we may assume that the $r$ has something to do with the shift, producing an anticipatory rise of the tongue so early in the word as to affect the vowel, we must believe that the southern British vowel in this class of words must have been raised before the post-vocalic $r$ was lost in southern British, since we find there $fare$ $f\bar{e}r$, air $\bar{e}r$, etc.

However, it is interesting to note that in southern British the $\varepsilon$-phoneme lies much higher than in American English, and hence much closer to $\varepsilon$. Consequently the $\varepsilon > i$ shift is much more common in southern England, and affects many words in which the vowel has never been followed by $r$. Thus, $man$ $m\bar{a}n > m\bar{e}n$, $thank$ $\bar{e}nk > \bar{e}nk$, $majesty$ $m\bar{e}d\bar{j}e\bar{s}t > m\bar{e}d\bar{j}e\bar{s}t$, etc.

$1 > \varepsilon$

In sub-standard American English, particularly southern, the shift of $fen$ $f\bar{e}n > f\bar{m}$ recorded $ante$ has a vigorous compensatory accompaniment in the form of an opposite movement. The context is $1 +$ nasal. Thus, since $s\bar{m}ts > s\bar{m}ts$, $\bar{t}erest$ $\bar{t}erest$, $principal$ $p\bar{n}\bar{a}m\bar{p}\bar{e}l > p\bar{n}\bar{a}m\bar{p}\bar{e}l$, been $b\bar{m} > b\bar{m}$, and the Louisiana town of $M\bar{i}nd\bar{e}n$ $m\bar{i}nd\bar{e}n > m\bar{i}nd\bar{e}n$. In this case there is a strong possibility that many individuals use a sound approximately midway between $1$ and $\varepsilon$ for both vowels, and that when it is used for $\varepsilon$ as in $Ben$ $b\bar{e}n$, it is so much too high that the word is heard as $b\bar{m}$, whereas when it is used for $1$ in $bin$ $b\bar{m}$, it is so much too low that the word is heard as $b\bar{m}$.

The $e$-phoneme makes a compensatory foray on the $e$-territory, as if to retaliate for the $leg$ $l\bar{e}g > l\bar{e}g$ shift. Thus, $make$ $m\bar{e}k$, $take$ $t\bar{e}k > t\bar{e}k$, $n\bar{e}ked$ $n\bar{e}ked > n\bar{e}ked$ in sub-standard southern speech, and $afraid$ $af\bar{r}ed > af\bar{r}ed$ in all of the regional speech forms in America.

$i > 1$

American English is generally lax, as compared with the more crisp British English. Probably modern British English is more lax than earlier English. In both American and British, but particularly in American, standard or sub-standard, the tense $i >$ the lax $i$ in context $i + r$. Thus beer, which, judging by various evidence such as the cognate German $B\bar{e}r$ $b\bar{i}r$, must have once been $b\bar{i}r$, is now $b\bar{a}r$. Likewise, we now have here or hear $h\bar{e}r-b\bar{e}r$, appear $p\bar{e}r-b\bar{e}r$, hear $h\bar{a}-b\bar{a}r$, etc. In sub-standard American dialects, the principal vowel of here and of perhaps a few other words has undertaken a second marauding expedition after invading $i$ and has descended into the territory of the next lax vowel, $e$; thus, here $h\bar{e}r-b\bar{e}r > h\bar{e}r-b\bar{e}r > h\bar{e}-h\bar{e}r$ — really, $\bar{e}r-\bar{e}r$. It is noteworthy that the American words keep the accent on the first element of the diphthong-like combination $e\bar{e}$, whereas in southern British the accent has shifted instead to the second diphthongal element, producing hear $h\bar{a}r$, years $j\bar{e}z\bar{e}$, etc.

$1 > \varepsilon$, $\varepsilon > i$, $\varepsilon > eir$

Occasionally a shift is accomplished by an unaccountably long leap. The Appalachian and Ozark Mountain dialects, for example, furnish a limited number of examples of $1 +$ nasal going $\bar{a}r$ as far as $\varepsilon$. Thus, thing $t\bar{h}i-n > t\bar{h}e-n$; conversely, $\varepsilon$ leaps over the long distance to $i$ in the single word can $k\bar{e}n$, which becomes $k\bar{m}$ in all sub-standard American speech. This again is probably largely an unstressing-restressing phenomenon. In sub-standard southern American, the single word can't $k\bar{e}nt > k\bar{m}$.

$a > \bar{a}$, $\bar{a} > a > \varepsilon$

One of the most frequent and striking shifts occurs in the "deep South." Here words and accented syllables containing the spelling $ar$ final or plus a consonant and not preceded by phonetic $w$, develop $\bar{a}$ instead of the normal $a$; thus, car $k\bar{a} > k\bar{r}$; bard $b\bar{a}d > b\bar{d}$, argue $a\bar{g}\bar{j}u > a\bar{g}\bar{j}u$, are $a > \bar{a}$, etc.
through a long list. In New England, the same spelling shifts pronunciation, but instead of invading the phoneme above, it attacks the ones in front, viz., a and oe; thus, tart tart becomes standard eastern tart and sub-standard tæt. Harvard harved > harved—hævæd, park paak > paak—paak, etc.

\( \alpha > \epsilon, \eta > \iota \)

Another deep South sub-standard shift, representing a partial invasion of the \( \iota \)-phoneme by spellings of the \( \alpha \)-phoneme, is the diphonization of \( \iota \) to \( \iota \iota \) in all accented syllables containing the same phonetic vowel as \( \alpha \). The spellings may be ear, er, ir, or, or ur; thus, heard hæd > hæd, fern fern > fern, bird brd > brd, work wark > wark, burn brn > brn. Sub-standard New York City speech (lower east side and Brooklyn) makes the same shift, sometimes increasing the change by using \( \alpha r \) instead of \( \iota r \); thus, bird brd may become brd. New Orleans goes to the same extreme on rare occasions, so that burn brn > brn. Both cities have a bizarre compensatory sub-standard pronunciation affecting words which normally have \( \iota r \); thus, boil boil > bæl, joint jænt > jænt, etc.

The low back-central \( \alpha \)-phoneme is very stable in American English. That is, its spellings remain in \( \alpha \)-territory, with little inclination to wander elsewhere. In this regard, the American \( \alpha \) is quite in contrast to the British \( \alpha \), which is so much lower and farther back that it is easily confused with \( \iota \) — as it is indeed so pronounced by many foreigners who learn English in England or from British teachers. The American \( \alpha \) is only a little lower and farther back than \( \epsilon \), which, except in respect to its greater duration, it resembles considerably. In the limited number of words where \( \alpha \)-spellings wander into other phonemic areas, the American shift is to \( \epsilon \) or \( \iota \). Thus, such satʃ > setʃ—satʃ, just diʒest > diʒest. These are probably the only words representative of this sound change.

There are many more such phonemic encroachments in American English. Some represent confused shutting back and forth between sounds, as in the uncertain words spelled with oo, like hoof, room, coop, where either u or u may prevail for a time, disregarding the probably historical u.

And en passant, consonant shifts abound too; vide the case of American dark l, which, as in the London Cockney change from milk milk to mlok, is confused with o, and produces, e.g., baby-talk potential for potato pototo, even as Latin falcon falcon gave rise to French falcon fokə; or note that t > d; thus, notice nouthe > noudes—ou.

Attention has been called to the difficulty of saying which is the aggressor in the battle of phonemes. Perhaps, after all, there is no aggressor and no battle. Perhaps we have, instead, only fugitives — fugitive spellings like tender and wrench concealing themselves in the company of tiend and winch, or fugitive sounds like o escaping from the customary a-, aw-, and o-spellings and hiding among ar-spellings. Obviously, any such manner of viewing the problem is only a figurative one, but it has appreciable values in vividness and clarity.

8. Prof. Viggo Brøndal (Copenhagen): The variable Nature of Umlaut.

Mr. Chairman, Ladies and Gentlemen,

In view of this Congress I have written some pages on Umlaut-problems considered from the standpoint of phonology. In the short time at my disposal I shall however not be able to insist on more than a few points, and I must renounce on most of the details.

It is a well-known fact that in German the plural of Kuh,",a cow" is Kühle, of Fuss, "a foot", Füsse, and that the comparative and superlative forms of alt, "old" are älter and ältest. Just in the same way the adjective höflich is derived from Hof, the "abstract" substantive Glätte from glatt and the verb kälbern — a dialect-form of kalbern — from Kalb.

This change of the principal or stem-vowel — evidently due to a prepalatal element in the following part of the word — has been called Umlaut by German Grammarians since the days of Kloßstock and Grimm. Analogous phenomena are found