Attention limited primarily to developments in the US, since it’s the history of the LSA we’re discussing. Also, although phonological notions are applicable to signed languages as well, I leave those out of account for reasons of time.
Some Terminology

**Phonetics:** The study of the range of properties of utterances that distinguish one possible human utterance from another, independent of any particular language. Phonetics is thus concerned with the range of human articulatory capabilities, the acoustic consequences of articulatory gestures, and the way acoustic events affect the auditory system.

**Phonology:** The study of the ways in which sounds are organized and related internal to individual languages, as an aspect of their grammar.

Begin by delimiting the subject matter of phonology within the broader study of sound in natural language:

- phonetics, on the one hand, I take to be the study of articulatory, acoustic and auditory phenomena that play a role in natural language but from a point of view that is independent of the properties of any particular language.
- phonology, on the other hand, is the study of the way sound properties and distinctions function within the systems of individual languages: the study of their sound patterns.
Some Terminology

+ Saussure: “phonologie” = (modern) phonetics; “phonétique” = study of the historical evolution and change of sounds

+ Jespersen: “It would, perhaps, be advisable to restrict the word ‘phonetics’ to universal or general phonetics and to use the word phonology of the phenomena peculiar to a particular language (e.g. ‘English Phonology’). (Philosophy of Grammar, 1924; p. 35)

The word “phonology” itself shows up in literature well before what we think of as the period of modern linguistics: the first citation in the OED is from 1798. In general, though, it doesn’t have a precise meaning beyond something to do with the study of sound in language. Saussure uses the word, but confusingly not in the modern sense: he uses “phonologie” as essentially what we call “phonetics,” and “phonétique” for the historical study of sounds, but he had no term for the systematic study of language-particular synchronic sound systems. Conveniently, it is in 1924 that we find a clear delineation of the sort we assume today proposed, in Jespersen’s “Philosophy of Grammar”
So what did we know about phonology in 1924? What was the state of the art?

- There was quite a lot of interesting work in the European tradition beginning with Baudouin de Courtenay, whose distinction of anthropophonics -- essentially physical phonetics -- and psychophonetics comes quite close to our contemporary understanding. But this tradition was little known and quite without influence in American linguistics at the beginning of the 20th century.
- Saussure is generally thought of as more central to the development of the field, but he too was not at all well known in America in 1924, and in any event his ideas of phonological structure are somewhat harder to discern than is sometimes supposed.
- Boas represents a major strand in distinctively American thought about language in these early years, but as far as sound was concerned, he was mostly concerned with accurate phonetic transcription, rather than with things like sound patterns.
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### The State of the Art in Phonology in 1924

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The state of the art in Phonology in 2014

On the face of it, quite a lot more. Pretty much all there was in 1924–5 was Sapir’s paper, but nowadays we have vast amounts of literature dealing with theories of sound structure, techniques of phonological description, the specific sound patterns of a great many languages, and much more. Phonological has definitely been a growth industry over the past 90 years.
How did we get here?

Some History

Tracing a path from Sapir’s ideas to today takes us through a number of superficially very distinct periods in terms of theorizing about sound structure.

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What happened to the Phoneme in 1959-1965?

**Halle (1957, 1959): asymmetries in Russian obstruent voicing**

- Structuralist phonemic level makes it impossible to state voicing assimilation in a unitary way

**But examples of the same form had been discussed before (Bloomfield, Bloch, Hamp...)**

**The force of Halle’s argument ultimately rests on its assertion that an adequate description has to get not only the representations of forms correctly, but also the rules.**

Probably the most fundamental re-orientation of phonological thinking was that associated with the replacement of structuralist phonemics by generative phonology and its descendants. What provoked that?

- The usual picture is that in the late 1950s, Morris Halle discussed some interesting facts about voicing in Russian obstruents. In this language, voicing is distinctive for some obstruents but not for others,
- but voicing assimilation is quite general across all obstruents in clusters. Halle argued that a description interposing a phonemic representation between a morphophonemic one and the surface phonetic form necessarily lost the unitary nature of the generalization about voicing assimilation. From that evidence, the story goes, the field rapidly converged on the view that structuralist phonemic representations were a bad idea, and replaced them with the more abstract representations we have since come to know and (mostly) love.
- This story leaves out some important history, though: in fact examples just like Halle’s had been discussed before, and taken to lead to very different conclusions. Bloch, for example, discussed essentially similar facts in the distribution of vowel length in some dialects of American English, and instead of concluding that phonemic representations were a bad idea, used the facts to argue that the rigor of phonemic theory could save the linguist from being misled by a seductive apparent regularity.
- The force of Halle’s argument, then, lies not in the nature of the facts, but in the use Halle made of them: essentially, to argue that a description of a language’s phonology had to get not only the forms right, but also had to capture the regularities that govern the distribution of those forms: the rules as well as the representations.
What happened to the Phoneme in 1959-1965?

+ The rules only matter, though, if we assume we are describing not (just) the external manifestations of language but the knowledge speakers have of their language.

+ This is fundamentally a ‘Mentalist’ or cognitive conception of language: I-language vs. E-language.

+ The actual history is messier (cf. Anderson 2000), but the transition from Phonemics to Generative Phonology was greatly aided by the renewed respectability of talk about minds.

Of course, this line of reasoning only makes sense if we assume that the rules are really part of the language, and that in turn only makes sense if we assume that our description has to encompass the knowledge speakers have.

- And that, of course, is just what phonemic theory was opposed to, based as it was on essentially behaviorist notions according to which only external observables, and not ineffable notions like “the mind” were the province of genuine science.

- Actually, the story is rather more complex, and involves the role of graduate students looking for productive thesis topics as well as these idealistic notions, but the importance of the shift lies fundamentally in the resurgence of talk of language as something in the mind, not just out there in the products of speech. And that, in turn, rests on the fact that this change came about at a time when a similar shift in attitudes more generally was taking place.
When we look at the history of the notions in psychology that are relevant to language, we see that 1924 was again an important year:

- it was the date of publication of J. B. Watson’s book “Behaviorism.” This point of view, which we saw already in Weiss’s article in Language, became the dominant paradigm in psychology for quite a number of years, especially as later taken up by B. F. Skinner.
- But then in 1959, Chomsky published a very influential review of Skinner’s book “Verbal Behavior,” pointing out various ways in which the behaviorist perspective was unable to deal with the observed facts of how language is acquired and used. This review had an effect not only on thinking about language, but more broadly, and led to the rapid decline of “behaviorist” psychology more generally and the rise of “cognitivist” views — which we can associate, again, with a rapid increase in the use of the word “cognitive.” Actually, the decline of behaviorism was probably more apparent than real: a remarkable number of psychologists today, even if they reject the label of “behaviorist,” nonetheless see the primary object of inquiry in psychology as an understanding of behavior, something to which talk of “minds” may contribute, but which is primarily about understanding external manifestations. But that’s a subject for a different talk...
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Changing views in Psychology

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A somewhat different issue that I would like to introduce is the question of universals in phonological structure: whether these are real or just epiphenomena resulting from the limited range of languages we have to explore, and if they are real, what their status is.

Actually Boas had a rather strong, if implicit, view of universal constraints determining the content of phonological systems, but that was never really brought out, and at any rate didn’t have any theoretical status in 1924.

Sapir, however, already in his little book Language of 1921, rejected the notion that there are real, substantive universals of language. Sapir draws this in part from the Boas tradition of emphasizing the study of languages on their own terms (while neglecting Boas rather strong views about typological frameworks for linguistic description, which imply a strong set of substantive universals), and in part from the liberal politics of the time, which emphasized ‘nurture’ at the expense of ‘nature’ in accounting for the properties of individuals.

In rejecting language universals and attributing observed cross linguistic regularities to factors of culture and historical transmission, Sapir was more in tune with the way the field would develop, at least until the 1960s, when the re-emergence of nativist views of innate structure resulted in the ascendance of strong theories in this domain. In Generative phonology, we see a resurgence of the idea that there are strong universals governing linguistic structure (and phonology in particular), principles that are grounded in the biological nature of the human language faculty.

More recently, though, we see a return to positions that are more skeptical about the status of apparent universals: Julietter Blevins’ arguments that these are just the consequence and of independent principles of linguistic change, whose outcomes show regularities that are not due to any innate faculty of UG or the like.

Similarly, Jeff Mielke has argued that even the basic descriptive framework of the feature system is not grounded in biologically determined universals, but just follows from the range of classes that arise in phonological regularities as a consequence of change and related factors.
Two Big-Picture Issues (1924-2014)

- Phonology: Patterns in the mind or patterns of sounds? I-language or E-language?
  - Sapir; Chomsky & Halle, Generative Phonology of various sorts (including OT) vs.*
  - (Boas;) Weiss/Bloomfield, American Structuralism; Bybee, Exemplar Theory, (some) Laboratory Phonology

- Phonological Universals: Organizing principles of the language faculty or epiphenomenal consequences of historical transmission and culture?
  - (Boas;) Generative Phonology (including OT) vs.*
  - Sapir; American Structuralism; Evolutionary Phonology

We can identify two “big picture” issues on which positions have shifted over the years.
- one of these is the question of whether phonological structure and regularity resides in the mind or in the external productions of speakers.
- Sapir, and most adherents of generative phonology of all stripes, would maintain that the description of a phonological system is the description of a fundamentally cognitive reality.
- In contrast, following the lines of behaviorists, American structuralists sought such structure in the sounds themselves. And more recent views, becoming more prominent even as we speak, represent in some ways a return to such a concern with the external manifestations of language, and a rejection (or at least considerable weakening) of the view that phonological structure is an aspect of the mind and the biological language faculty.
- A similar polarity characterizes views on universals: do they follow from deeply grounded principles of universal grammar, or are they simply the natural outcome of more external events>?
- The former position may have been Boas’s, but in any event it is certainly the approach associated with virtually all strains of generative phonology, up to and including OT.
- The opposite view characterized Sapir’s stance on this issue, and again, this more skeptical view has seen a recent rebirth in work such as that in “Evolutionary Phonology.”
From 1924 to 2014...

• The technology of phonological description has changed massively (and often!)

• Our knowledge of the substance of the sound systems of the world’s languages is vastly enhanced.

• But basic issues of how sound structure is related to the human language faculty remain largely the same — and unresolved.

So what are we to conclude about the extent to which differences in the state of the art in phonology between 1924 and 2014 represent clear advances in knowledge, solutions to basic questions?
• We have of course seen enormous changes over this period.
• And in many ways, the results represent obvious advances: we know much more about the substance of the sound systems of the languages of the world than we did, and also about the regularities that characterize those systems across languages.
• But with respect to the deep questions of how sound structure is related to our nature as human speakers, there is much less resolution. The basic divisions that have polarized the field since its beginnings are still with us, not essentially resolved -- at least not to anything like general agreement.
Plus ça change...

Thanks for your attention