The English fricative voicing rule: an outline history.

Old English: automatic voicing of anterior fricatives in fully voiced environments if the last preceding syllable nucleus was stressed; [v ð z] were always allophones of /f θ s/. The alternation survived unchanged in early Middle English. There are hundreds of examples; typical are the following (given in Middle English form):

- *wulf*, *wulfes* [wʊlf, wʊlvəs] ‘wolf, wolves’
- *pæþ*, *paþes* [paθ, paðəs] ‘path, paths’
- *hūs*, *hūses* [hu:s, hu:zəs] ‘house, houses’
- *half*, *halfe* [hɑlf, halvə] ‘half’ (adj.)
- *wrāþ*, *wrāþe* [wraːθ, wraːðə] ‘angry’
- *wīs*, *wīse* [wi:s, wiːzə] ‘wise’
- *drīfen*, *drāf* [driːn, draːf] ‘to drive, ((s)he) drove’
- *queþen*, *quaþ* [kweðən, kwaθ] ‘to say, ((s)he) said’
- *chēþen*, *chēþs* [ĉeːzən, ĉeːs] ‘to choose, ((s)he) chose’
- *lēf*, *lēven* [leːf, leːvən] ‘permission, to permit’
- *bæþ*, *bæþe* [baθ, baðən] ‘bath, to bathe’
- *hūs*, *hūsen* [huːs, huːzən] ‘house, to house’

The voiceless–voiced alternation in derivation (as in the last three examples above) was reinforced by borrowings from Old French, which had the same alternation in, e.g. *us* ‘use’ : *user* ‘to use’; *sauf* ‘safe’ : *sauver* ‘to save’. Some such pairs were borrowed in the 13th c., or even earlier. For instance, *grief* : *grieve* and *strife* : *strive* appear in the *Ancrene Riwle*, written around 1200, and *advice* : *advise* in Robert of Gloucester’s chronicle of 1297; other 13th-century pairs include *safe* : *save, use* : (to) *use*, and *device* : *devise; relief* : *relieve* follows in the 14th century.

The first disruption of this *pattern* was the borrowing of French words like *grace* [grɑsə] and *pece* [peːsə] ‘piece’ in the second half of the 12th century; these were marked as lexical exceptions to the voicing rule. The *rule* was not disrupted, however; it

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1 For /θ s/ this rule arose by a single corresponding sound change, but for /f/ there was a “conspiracy” of sound changes: voicing of inherited *f* in the same environments and devoicing of inherited *ƀ* in complementary environments, followed by merger of bilabial and labiodental fricatives. See Campbell 1962:179-80.
continued to apply in derived environments.

The second disruption of the pattern was the borrowing of French words with initial \-v- in the 13th century. The result was a new underlying /v/ which contrasted with /f/ in all adult grammars (in the relevant dialects); but the rule still was not affected. In fact, nouns ending in -f borrowed from Old French before about 1350 were subject to the voicing rule: \textit{beef}, which first appears in English around 1290, still has a plural \textit{beees}; the first attestation of \textit{chief} is apparently \textit{on the chive} ‘on the head’, ca. 1330; and though the plural of \textit{coif}, whose singular first appears in 1325, is not attested until the end of the 14th century (see below), we find \textit{quaives} and \textit{coives} in the 17th and 18th centuries (see the \textit{OED s.vv.}).

In the middle of the 14th century word-final -\-əә began to be lost, at first variably. When the process of loss was complete, within a generation or so after 1400, the voicing rule became significantly opaque, since the word-final alternation [-f] \~ [-v-əә] (for instance) was now replaced by [-f] \~ [-v]. It appears that such alternations as [half] \~ [halv] ‘half’ in adjectives did not survive long.

The voicing rule became opaque in all positions because of three sound changes that occurred in the 15th century, the first already underway in 1400:

1) geminate fricatives, which had always been voiceless, were simplified (Jespersen 1909:146);

2) fricatives were voiced when preceded by a fully unstressed syllable (ibid. pp. 199-206);

3) the vowel of the default plural ending (which was now [-az] by change (2)) was lost except when a sibilant preceded immediately (ibid. pp. 188-9), and the ending [-z] was assimilated in voicing to a preceding consonant.

By (1) such plurals as \textit{cuffes}, \textit{mothes}, \textit{masses} [k\texttt{uf}əәs, m\texttt{əθəә}s, mass\texttt{əә}s] became [k\texttt{uf}əәs, m\texttt{əθəә}s, mass\texttt{əә}s], with voiceless fricatives between vowels; these were few, and must at first have been marked as exceptions to the voicing rule.

But (2) and (3) created the fully opaque situation that still persists (to some extent) in modern English, with /wulf/ and /pa\theta/ subject to the voicing rule in the plural ([w\texttt{əθəә}vz, pa\texttt{θəә}z]) but /kuf/ and /mo\theta/ exempt ([k\texttt{uf}əәs, m\texttt{əθəә}s]).

\textcolor{red}{At that point the fricative voicing rule became vulnerable to being lost, since it had no phonological trigger and multiple morphological triggers.}
But the rule was not lost quickly, and in most dialects of English is still has not been lost completely.

Fricative voicing still applies to plurals of following nouns in my standard English:

- in /-s/: *house*;
- in /-θ/: *bath, path, mouth, sheath, and wreath*, probably variably;
- in /-f/: *half, calf, hoof, roof, thief, sheaf, leaf, knife, life, wife, loaf, wharf, turf, elf, self, wolf*;
  13th-c. French loan: *beef*;
  late 14th-c. Low German loan: *shelf* (*pl. shelfes* and *shelves* in different manuscripts of Chaucer);
  16th c.: *scarf* (*pl. scarfs* at first; also *scarves* from mid-18th c.).

In the derivation of verbs the rule no longer applies automatically (one *reefs* sails, trees *leaf* out, etc.), but many old (and a few newer) examples survive.

There is at least one backformed noun: *belief*, backformed to *believe* in the 16th c. (the noun was originally also *believe* (!)).

In strong verb inflection the alternation has been lost.