

Phonological Change Problem

(Be careful if you print this out! Answer is given below after a space.)

Describe the changes in the phonological system produced by each of the following phonetic changes, first in structuralist, then in generative terms.

Proto-Italic had a set of voiceless unaspirated stops /p/, /t/, /k/; voiced stops /b/, /d/, /g/; and voiceless aspirated stops /p^h/, /t^h/, /k^h/. It also had a fricative /s/. It had no other stops or fricatives.

1. Voiceless aspirated stops became voiceless fricatives (e.g. *p^herō > ferō 'I carry', *rut^hro- > ruθro- 'red', *t^hēkī > *θēkī 'I put, made')
2. In Latin θ > f next to u (e.g. *ruθro- > *rufro- 'red')
3. In Latin all voiceless fricatives became voiced stops between voiced sounds (e.g. *rufro- > ruber 'red', *kon-θō > condō 'I put together')
4. In Latin θ > f (e.g. *θēkī > fēcī 'I made')

Solution:

Structuralist:

1. Non-phonemic (new phonetic realization)
2. Partial merger (/f/ already existed by the preceding change)
3. Partial merger
4. Complete merger

Generative:

1. Restructuring
2. Restructuring or rule addition (I gave you no synchronic allomorphic alternations)
3. Rule addition (it seems likely that the simple & compound forms of 'put', e.g., would be enough to give speakers a basis for a synchronic rule). Note that if you added a rule in step 2, it could still exist. You would simply have to order the two rules.
4. Restructuring (of morphemes with /θ/ either to /f/ or to /d/). Loss of the rule added in step 3. I admit that if you make the rule in 3 apply to all voiceless fricatives, then the change in step 4 gets very complicated, since it's not immediately clear what happens to the rule for the fricatives other than /θ/. If you added a rule in step 2, it surely has been lost in step 4.