DOUBLE AND SECONDARY ARTICULATION

It is possible for some sounds to have a double stricture, i.e. with a narrowing or obstruction of the airflow in two places within the vocal tract. One example of such a double articulation is the English sound /w/, in which the lips articulate with each other, while the back of the tongue is raised simultaneously towards the velum. As a result, the sound is said to be labial-velar. A similar phenomenon can be observed in the case of the French sound [ɥ] in fruit ([fʁɥi]), but this time it is the front of the tongue that moves towards the palate, thus giving rise to a labial-palatal place of articulation.

A distinction is also made based on whether the second stricture is of the same order as the first; if it is not – i.e. the narrowing of the airstream is less great – then we use the term secondary articulation. An example of this is palatalization, which is a prominent feature in Slavic languages like Russian; it involves the addition of a [j] to another sound by raising the front of the tongue towards the palate (which explains the use of a small raised 'i' to represent this phenomenon): e.g. [tʰj] (as in [martjina], ‘Martina’), [pʰj] (as in [pʰotr], ‘Peter’).

Labialization involves the addition of lip rounding to the production of a sound, and is represented in the IPA by means of a raised w (w). This phenomenon is found in a number of languages in Africa (e.g. Amharic in Ethiopia), Australia and the Caucasus. In Arabic, labialization is a common feature in many consonants in the Moroccan dialect (particularly in Marrakeshi): e.g. [gʷal't], ‘I said’.

Labialization is often accompanied by velarization, i.e. the raising of the back of the tongue towards the velum. In this respect, one may point to the fact that most back vowels (e.g. /u/), in which the velum plays the determining role, are also characterized by lip-rounding.
Velarization occurs, for instance, in Russian, and in the RP English /l/ that you hear in pill ([p]), a sound which will be discussed in greater detail later on. The IPA diacritic for velarization is a tilde through the symbol in question.

Finally, pharyngealization denotes the addition of a constriction in the pharynx during the production of a given sound. As velarization often goes hand in hand with pharyngealization, or no distinction is made between them by native speakers of the language in which it occurs, the IPA diacritic is the same for both. When a clear difference should be made, the IPA uses a raised ˘ for pharyngealization (e.g. [s˘]), and a superscript ˘ (e.g. [n˘]) for velarized sounds. Pharyngealization is usually associated with certain Arabic phonemes known as emphatics: e.g. [safar] (‘journey’) / [s˘afar] (name of the second month in the Muslim calendar); [t˘in] (‘figs’) / [t˘˘in] (‘clay’); [darb] (‘alley’) / [d˘˘arb] (‘attack’); [iz˘haːr] (‘prosperity’) / [iz˘˘haːr] (‘display’).

Practice:

1. You can test this for yourself by looking in a mirror and pronouncing the words bee (/bi:/) and boo (/buː:/); you will notice that in bee the lips are completely spread, whereas for boo they are quite rounded. At the same time, you should feel a difference in tongue position between the two words: in bee, you can clearly feel the front of your tongue moving upwards, whereas in boo it is the back.

2. You can also observe the process of labialization in English in sounds preceding labial sounds (especially /w/). When you pronounce the words kite (/kaɪt/) and quite (/kwai̯t/), you will see (and feel) that in the latter the /k/ is already rounded in anticipation of the following /w/. What would the narrow transcription of quite be?