

**Georgian laterals**

Georgian is a South Caucasian language spoken in the Republic of Georgia. Georgian has two laterals that can appear in various environments: a light/clear (plain) [l] and a dark (velarized) [ɫ]. Are light and dark laterals in Georgian two separate phonemes or allophones of one phoneme?

ɫamazad 'prettily'	kbiɫs 'tooth'	vxlɛtʃ <sup>h</sup> 'I split'	xeli 'hand'
saxɫʃi 'at home'	ɫxena 'joy'	tʃɛtʃxli 'fire'	kleba 'reduce'
kaɫa 'tin'	ɛrt <sup>h</sup> xɛɫ 'once'	zarali 'loss'	leɫo 'goal'
pepeɫa 'butterfly'	xoɫo 'however'	tʃoli 'wife'	

(Kenstowicz and Kisseberth 1979)

**Hindi murmured stops**

Hindi is an Indo-Iranian language of the Indo-European family spoken in India. Hindi has two voiced bilabial stops that can appear at the beginning of words: plain [b] and murmured [b<sup>h</sup>] (a.k.a. breathy voiced, also symbolized as [b̤]). Are plain and murmured bilabial stops in Hindi two separate phonemes or allophones of one phoneme?

bara 'large'	b <sup>h</sup> ɛd 'disagreement'
bais 'twenty-two'	b <sup>h</sup> ari 'heavy'
bina 'without'	b <sup>h</sup> ɔs 'buffalo'
bap 'father'	b <sup>h</sup> ir 'crowd'
bori 'sackcloth'	b <sup>h</sup> ag 'part'

(O'Grady et al. 2001)

**Sierra Popolucan aspiration**

Sierra Popoluca is a Zoque language of the Mixe-Zoque family spoken in Mexico. Sierra Popoluca has plain [p t tʃ k] and aspirated voiceless stops [p<sup>h</sup> t<sup>h</sup> tʃ<sup>h</sup> k<sup>h</sup>], where [tʃ] represents an alveolo-palatal stop. Note also that Sierra Popoluca has geminate stops. Are plain and aspirated voiceless stops in Sierra Popolucan eight separate phonemes or allophones of four phonemes?

pet <sup>h</sup> kuj 'broom'	petta:p <sup>h</sup> 'it is being swept'
kek <sup>h</sup> pa? 'it flies'	nik <sup>h</sup> pa? 'he goes'
tʃu:ki? 'turtle'	kuj 'wood'
mok <sup>h</sup> 'corn'	hu:t <sup>h</sup> 'where'
ikapun 'his barrow'	ti:ttit <sup>h</sup> 'mestizo'
nip <sup>h</sup> 'mouth'	ikka? 'he killed it'
mak <sup>h</sup> ti? 'ghost'	ho:ppa? 'it rolls'
tots 'tongue'	wit <sup>h</sup> pa? 'he walks'
pet <sup>h</sup> pa? 'he sweeps'	pik <sup>h</sup> ʃi? 'bow'

(Kenstowicz and Kisseberth 1979)

**Russian palatalization**

Russian is an East Slavic language of the Indo-European family, spoken in Russia. Russian contrasts palatalized with plain consonants, except before [i] and [i̯].

vʲitʲ 'to twist'	vitʲ 'to howl'
sʲito 'sieve'	sito 'sated (NEUT)'
kʲirʲe 'Kira (DAT SG)'	k irʲe 'to Ira'

(Padgett 2001)