An areal-typological survey of voicing contrasts in Western Asia

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Typological studies of "Western Asia" have led specialists to propose pan-regional features (Haig, 2001; Johanson and Utas, 2000; Janse, 2004; Key, 2012) or to propose certain areas within Western Asia as typological buffer zones (Stilo, 2004) or transition zones (Haig, 2017). The area consists of Anatolia, the Caucasus, Iran and Mesopotamia, and has been the subject of particular interest in areal-typological studies due to the region's dense concentration of languages from multiple families (Stilo, 2004; Haig, 2017; Donabedian and Sitaridou, 2020). Many of these studies emphasise morphosyntactic phenomena to illustrate their claims. This presentation however, focuses on phonemic structures.

This study presents a survey of phonemic voicing contrasts in plosives in Western Asia, based on existing descriptive research and reference grammars. The aims are (1) to identify the areal fault-lines along which this typological distinction arises, (2) to examine the extent to which this phenomenon aligns with previous models, such as the proposed "buffer" and "transition" zones, and (3) to test the aforementioned proposals of "pan-regional features."

Existing aggregate research on the phonemic voicing contrasts is often limited (1) by genealogy (ie. related varieties), or (2) in scope (ie. *The World Atlas of Language Structures Online*, which maps out the distribution of voicing contrasts (Maddieson, 2013), but limits data to two-way voicing contrasts). Common plosive voicing patterns in Western Aisa include:

•	a two-way contrast	(ie. $/p^{(h)}/ - /b/)$
٠	a three-way contrast	(ie. $/p^{h}/ - /p/ - /b/$ or $/p^{h}/ - /p'/ - /b/$)
٠	a four-way contrast	(ie. $/p^{h}/ - /p/ - /p'/ - /b/)^{1}$

In Western Asia, languages from the following families are present: Indo-European (IE) (Iranian (i), Hellenic (h), Armenian (a), Romance (r) branches), Semitic (SM), Turkic (TR), Kartvelian (KR), Nakh-Daghestanian (ND) and Abkhazo-Adyghean (AA).

Constast pattern	Language	Family	Source
2-way	Standard Turkish	TR	Kornfilt (1997)
	Istanbul Judeo-Spanish	IE- r	Hualde and Saul (2011)
	Sorani Kurdish	IE- i	Thackston (2006)
	Western Armenian	IE-a	Donabedian-Demopoulos (2018)
	Anatolian Arabic	SM	Akkuş (2020)
3-way	Standard Georgian	KR	Shosted and Chikovani (2006)
	Eastern Armenian	IE-a	Seyfarth et al. (2023)
	Iron Ossetic	IE- i	Job and Schäfer (2006)
	Kurmanji Kurdish	IE- i	Haig and Öpengin (2018)
	Christian Urmi Neo-Aramaic	SM	Khan (2016)
4-way Lezgian		ND	Haspelmath (1993)

The following table is a non-exhaustive sampling of languages grouped by contrast pattern.

The above examples demonstrate that unrelated languages can type similarly, and closely related languages can type differently in regards to their voicing contrast systems, further confirming the need to examine areal impacts on the typological trends in the region.

¹If one considers coarticulations, some languages of the Caucasus have even more contrasts.

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