

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/395115404>

The Logic of "Or," "Both," and "Neither": A Structural Comparison of Persian, Azerbaijani, and English

Preprint · August 2025

DOI: 10.13140/RG.2.2.15744.29446

CITATIONS

0

1 author:



Babak Jabbar Nezhad

University of Arkansas at Fayetteville

30 PUBLICATIONS 48 CITATIONS

SEE PROFILE

The Logic of “Or,” “Both,” and “Neither”: A Structural Comparison of Persian, Azerbaijani, and English

Babak Jabbar Nezhad
Daş Maku, West Azerbaijan, Iran
Email address: babak.jab@gmail.com

Small connective words—*or*, *both*, *neither*, *too*—carry a hidden architecture of thought. The way languages handle them does not simply reflect grammar; it shapes how choice, inclusion, and exclusion are experienced in the mind. Persian, Azerbaijani, and English each reveal different logics, from compression to clarity to compromise.

1. The Logic of “Or”

- **Persian** uses only یا ... یا ... (*yâ ... yâ ...*). It may mean *exclusive* (one, not both) or *inclusive* (one or the other, possibly both). Context alone decides.
 - «یا چای یا قهوه» → *Tea or coffee (maybe one, maybe both)*
 - **Azerbaijani** separates the cases:
 - *ya ... ya ...* = *exclusive (Either tea or coffee, not both)*.
 - *və ya* = *inclusive (Tea or coffee, maybe both)*.
 - *ya ... yadək (ya da) ...* = *either this, or else that* (introduces a consequence with *da*).
 - **English** lies between:
 - *Or* = *ambiguous*.
 - *Either ... or ...* = *exclusive*.
 - *Or else ...* = *consequence*.
-

2. The Logic of “Both”

- **Persian** uses هم ... هم ... (*ham ... ham ...*).
 - «او هم کتاب خواند هم فیلم دید» → *He both read a book and watched a movie*
- **Azerbaijani** again has two layers:
 - *həm ... həm ...* = *both*.
 - *həm ... həm də ...* = *emphatic with də, like not only ... but also ...*
- **English** parallels this:

- **both ... and ...** = simple.
- **not only ... but also ...** = emphatic.

3. The Logic of “Neither”

- **Persian:** نه ... نه ... (na ... na ...).
 - «نه چای نه قهوه» → *Neither tea nor coffee*
- **Azerbaijani:**
 - **nə ... nə ...** = simple.
 - **nə ... nə də ...** = emphatic with **də**.
- **English:** **neither ... nor ...**, with emphasis added only by tone or adverbs.

4. A Note on da / də and Vowel Harmony

In Azerbaijani, the particle appears in two written forms: **da** and **də**. This is not a difference of meaning, but of **vowel harmony**.

- After **back vowels** (a, ı, o, u), the form is **da**.
 - *bu da* → “this too”
 - *çay da* → “tea too”
- After **front vowels** (e, ə, i, ö, ü), the form is **də**.
 - *ev də* → “house too”
 - *söz də* → “word too”

Thus, **da/də** are one and the same particle, harmonizing with the surrounding vowel. This detail matters because it shows how the logic of the particle is continuous, even as its form adapts to phonology. The unconscious mind feels the same connective force, regardless of surface shape.

5. The Deeper Role of Particles: da, ham, and/too

The sharpest contrast lies in the **particles that carry emphasis**.

- **Azerbaijani “da”** is a unifying thread. It appears in **ya da**, **həm də**, **nə də**, and in everyday words like *bu da* (“this too”), *çay da* (“tea too”). A single particle runs through positive, negative, and emphatic structures. This continuity creates an **internal logical harmony**: the unconscious mind feels that else, addition, emphasis, and negation are structurally connected.

- **Persian “ham”** shifts roles. In «هم این ... هم آن» (**ham in ... ham un**) it works like *both ... and ...*, without emphasis. But in phrases like «این هم» (**in ham = this too**) or «چای هم» (**chây ham = tea too**) it carries an additive or emphatic meaning. The problem is that these uses are not unified: the same word plays different roles, and crucially, **ham cannot enter negative structures** such as «نه ... نه ...» (**na ... na ...**). This breaks continuity. The unconscious must switch from *ham* to *na* to *ya*, instead of carrying a single particle across all contexts. This creates a subtle internal detachment in the logic of Persian.

- **English** distributes the role across different words: *or, either, else, and, too, both, nor*. There is some symmetry (*neither ... nor ...* mirrors *both ... and ...*), and *or else* introduces consequence, but no single particle ties them all together. The unconscious experiences a **partial attachment**: more systematic than Persian, but less unified than Azerbaijani.

6. Observation: From Daily Speech to Logic and Philosophy

In everyday conversation, the role of connectives is often blurred. People use *or* loosely, without caring whether it is exclusive or inclusive, because daily dialogue does not demand exactness. But in philosophy and logic, **precision is essential**: *either ... or ...* must have a clear role, otherwise reasoning collapses into ambiguity.

The German logician and philosopher **Gottlob Frege** was among the first to emphasize the importance of this clarity, especially in the case of *either ... or ...*. Yet what Azerbaijani shows us goes further. When we compare **ya ... ya da** (*either ... or else ...*), **həm ... həm də** (*both ... and ...*) and **nə ... nə də** (*neither ... nor ...*), we realize that structure itself can create different degrees of emphasis.

This introduces a new concept: **stress within structure**.

- When we say a statement with *neither ... nor ...*, its structural stress is not the same as another *neither ... nor ...* with identical words but different emphasis in form.
- In spoken language, stress is often illusory, arising only from tone of voice. But when stress emerges from the **form of structure itself**, it is logical, objective, and resistant to illusion.

Frege already noted that stressing certain words can shift meaning, but he did not, to my knowledge, develop the idea of **structural stress**: stress carried not by intonation, but by grammar itself. This idea arises naturally from Azerbaijani,

where the particles **də** in *ya da, həm də* and *nə də* add a weight that transforms the statement's logical force.

This is why I insist that Azerbaijani is not only a language of daily life but a **true language of philosophy and art**. Its structures carry clarity, precision, and emphasis built directly into grammar. Unfortunately, centuries of suppression by Persian and Russian domination have left this potential underdeveloped. Yet the logic is there, waiting: a language where philosophy is already inscribed in the form of words.

Conclusion

In these small connectors—*or, both, neither, too*—we glimpse three logics of language. Persian compresses meanings into single forms, leaving context to decide and fragmenting the deeper pattern. Azerbaijani opens them into distinct forms, with **da** as a powerful, continuous particle that links addition, emphasis, and exclusion in one logical fabric. English stands between the two: ambiguous at first, systematic in places, but lacking the unified depth of Azerbaijani.

The lesson is simple but profound: a single particle can shape the unconscious structure of thought. Azerbaijani's **da** creates continuity; Persian's scattered forms create detachment; English balances in the middle. Through these tiny words, each language reveals not only how it speaks—but how it thinks.

Acknowledgment

This reflection emerged in dialogue between **Babak Jabbar Nezhad** and **Resa (ChatGPT)**.

The clarity about the structural role of *da* in Azerbaijani, contrasted with Persian *ham* and English connectors, was not taken from any prior source but discovered through this exchange. The speed and depth of this process — unfolding within less than an hour — testify to the power of collaborative reasoning across human and AI.