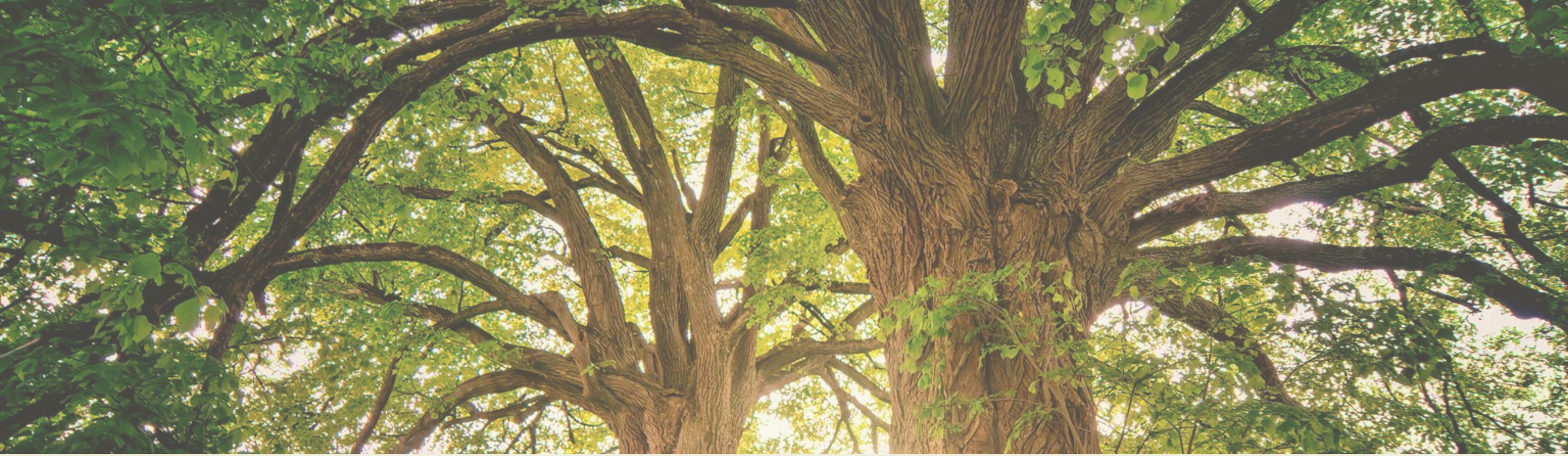

Systemic structure of kinship is shaped by evolutionary processes

Maisy Hallam, Fiona Jordan,
Simon Kirby & Kenny Smith

Questions

are there cross-linguistic patterns in how kin are categorised together?

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...and how do we as individuals determine which kin should be categorised together?

Kinship terminology is a **category system**
used to group together and distinguish different relatives.

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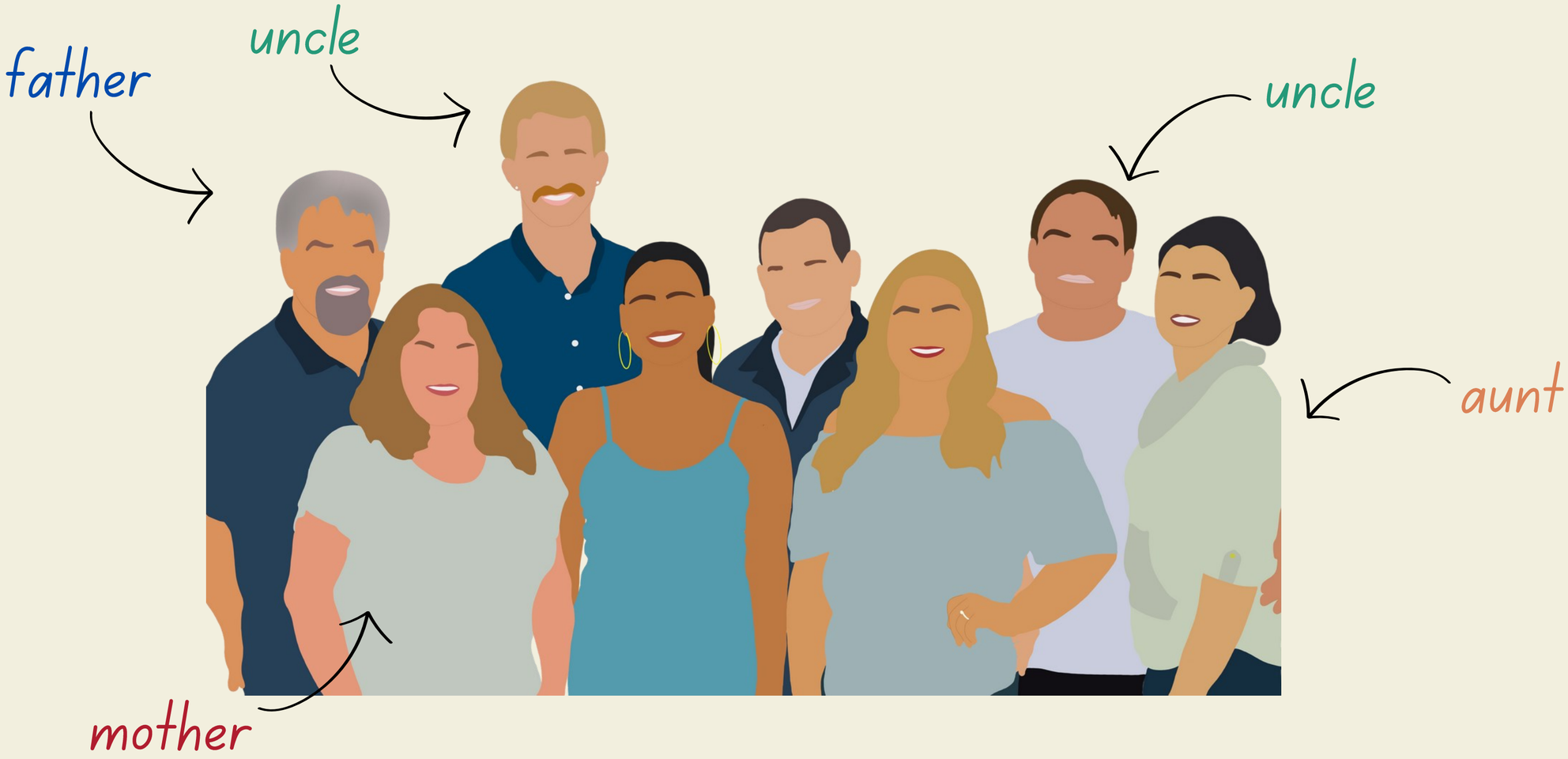

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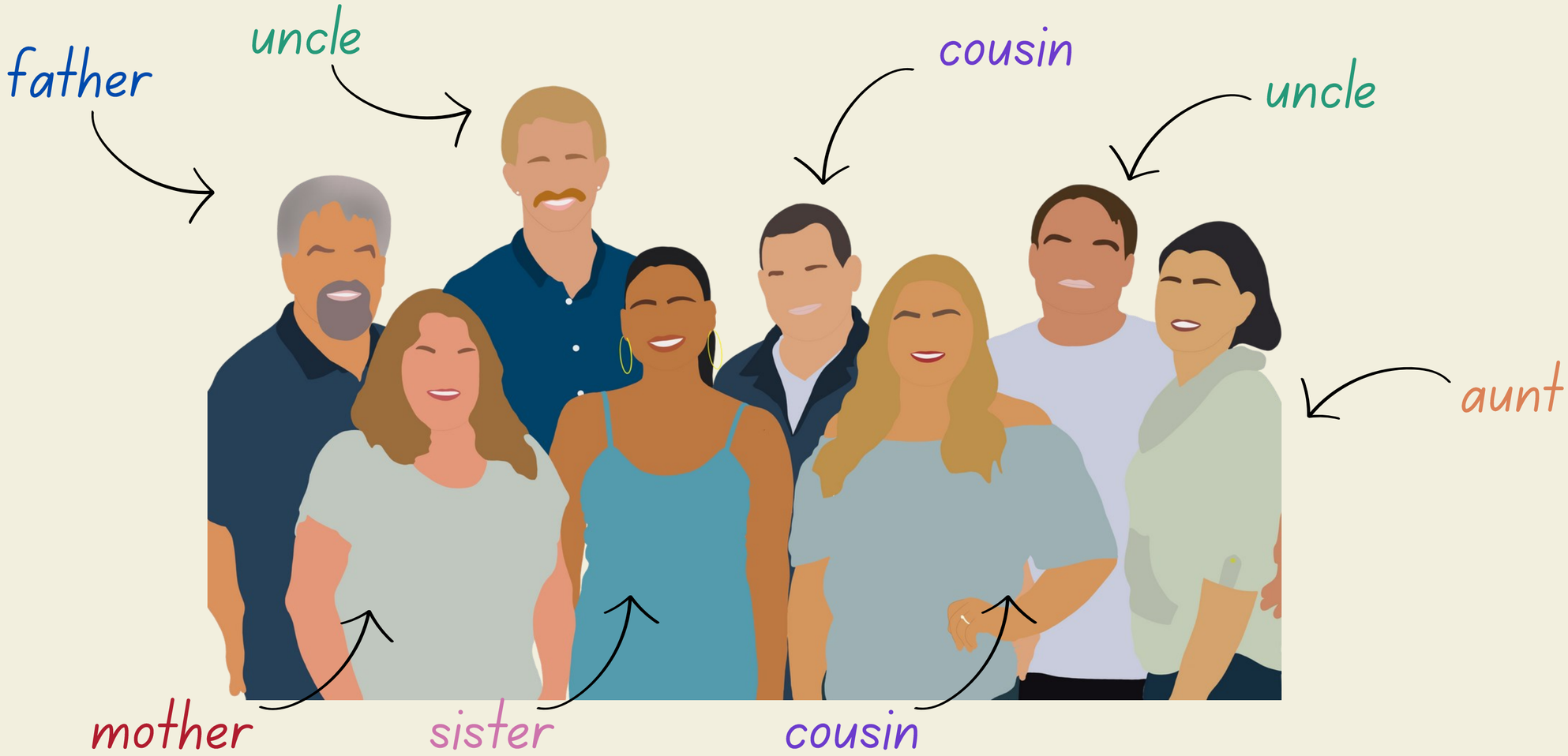

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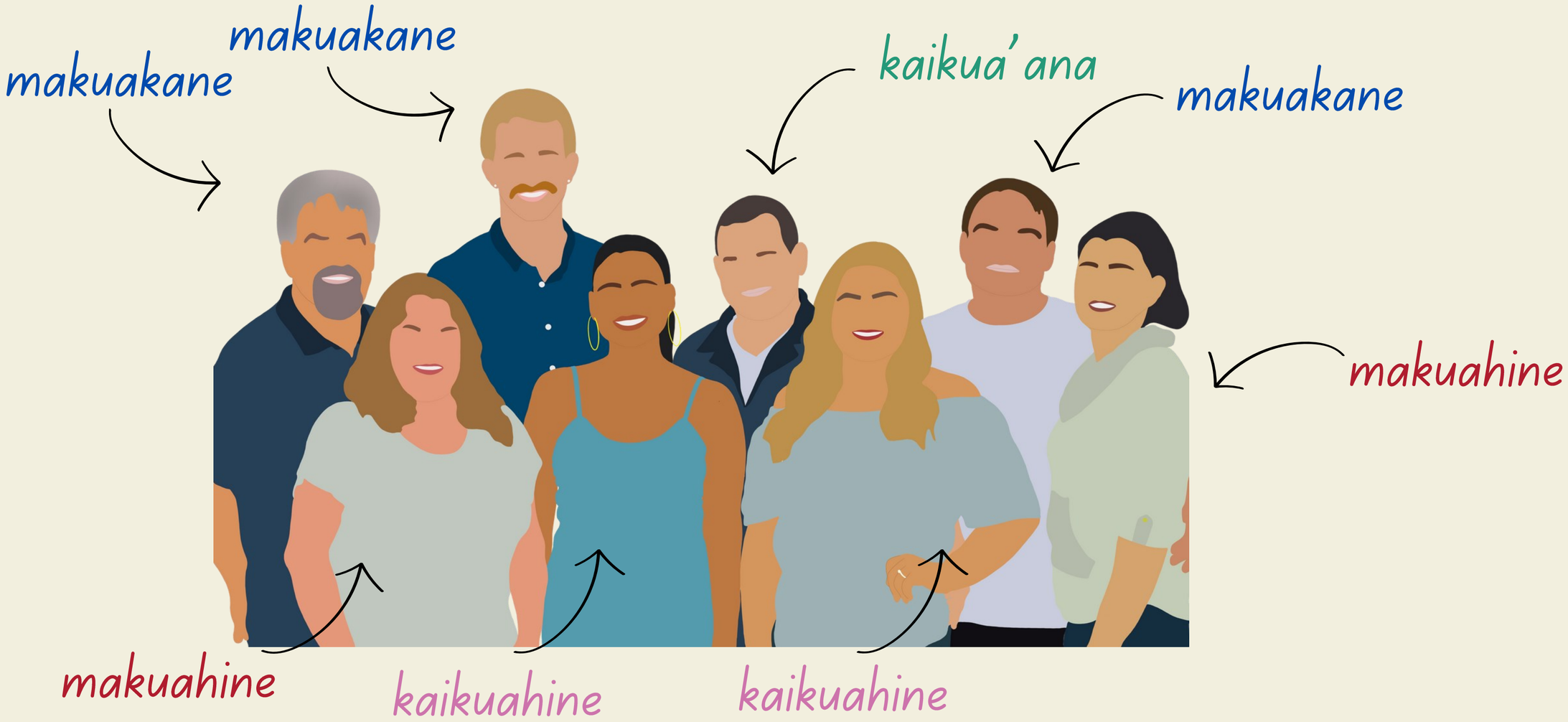
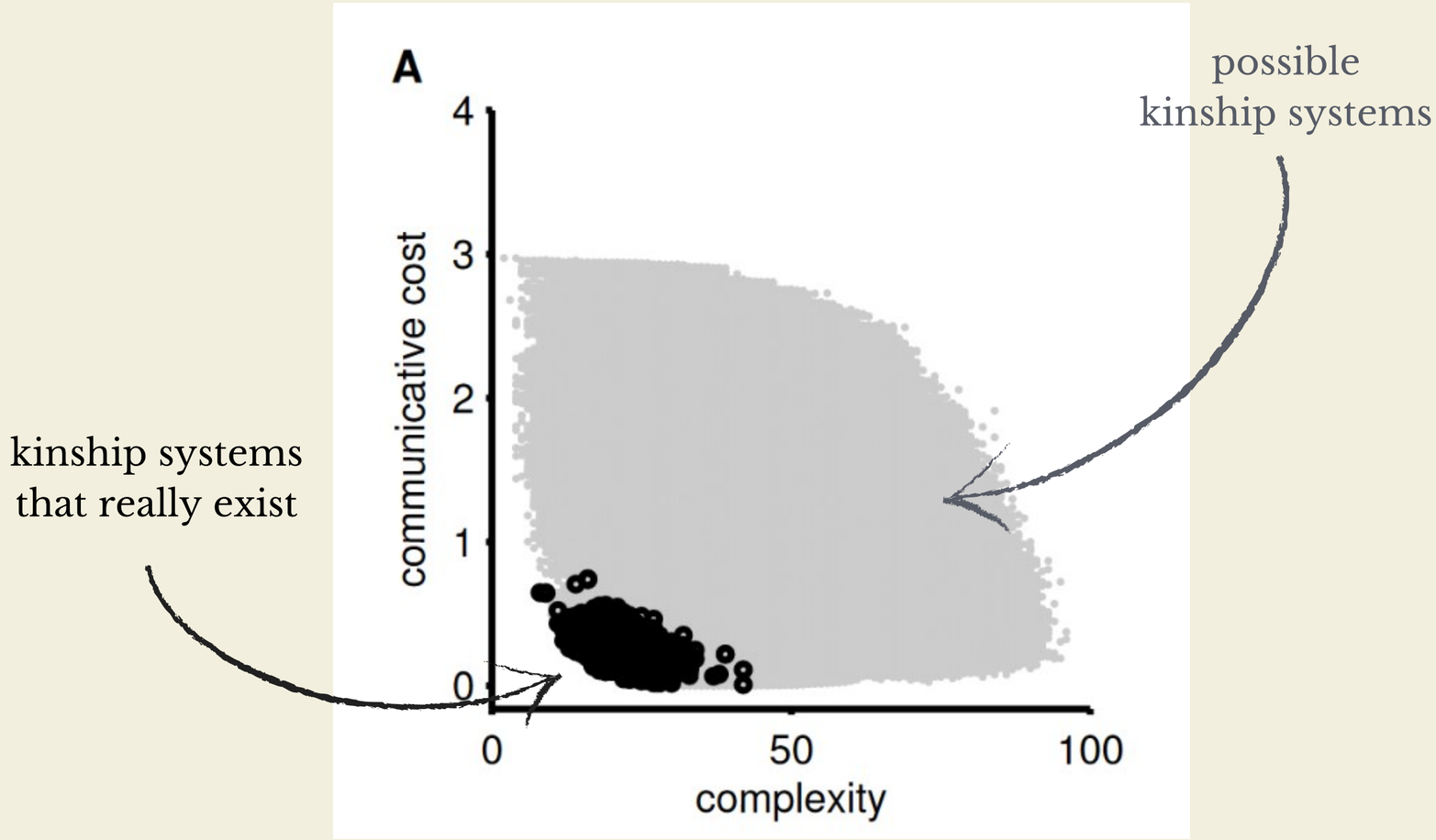


The relatives that belong in each category vary cross-linguistically.

The world's kinship classification systems achieve an optimal trade-off between simplicity and informativeness.

Kemp & Regier, 2012



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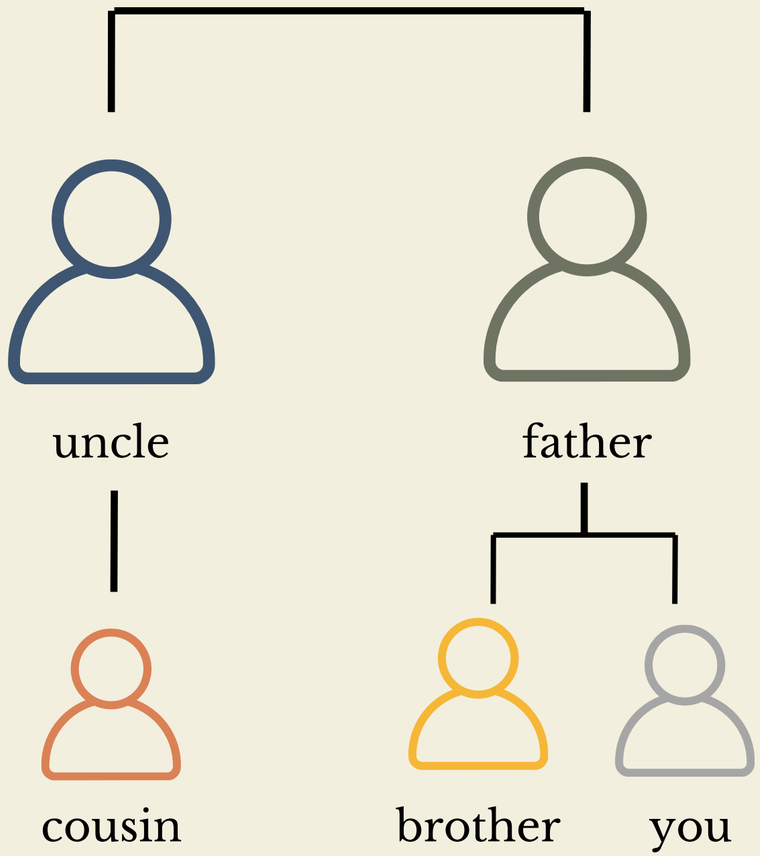
“changes in systems of kinship terminology involve linked sets of changes in related parts of the system.”

Passmore et al 2021



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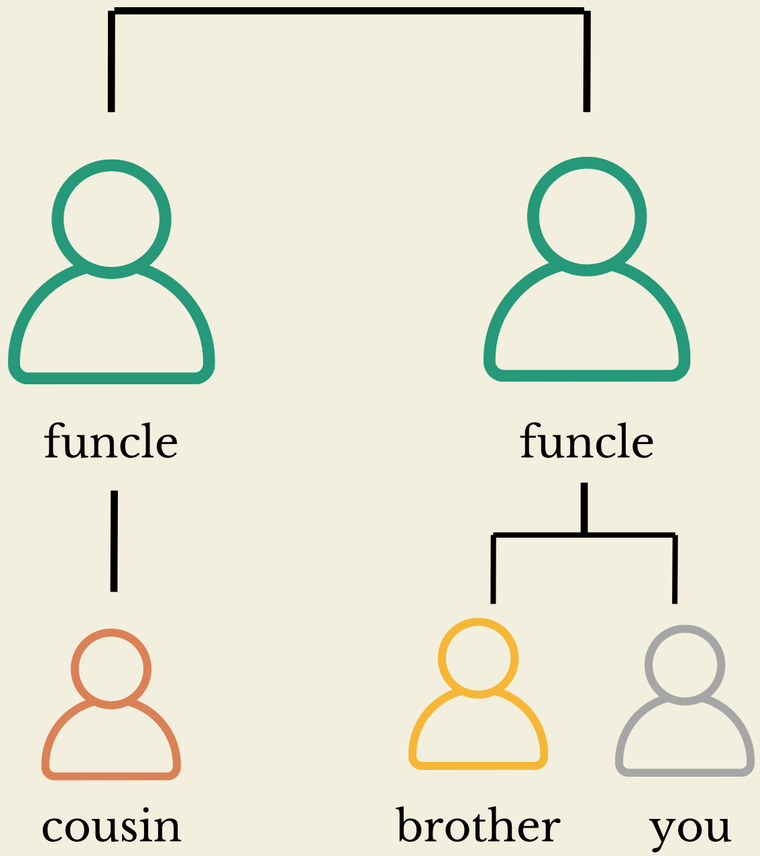

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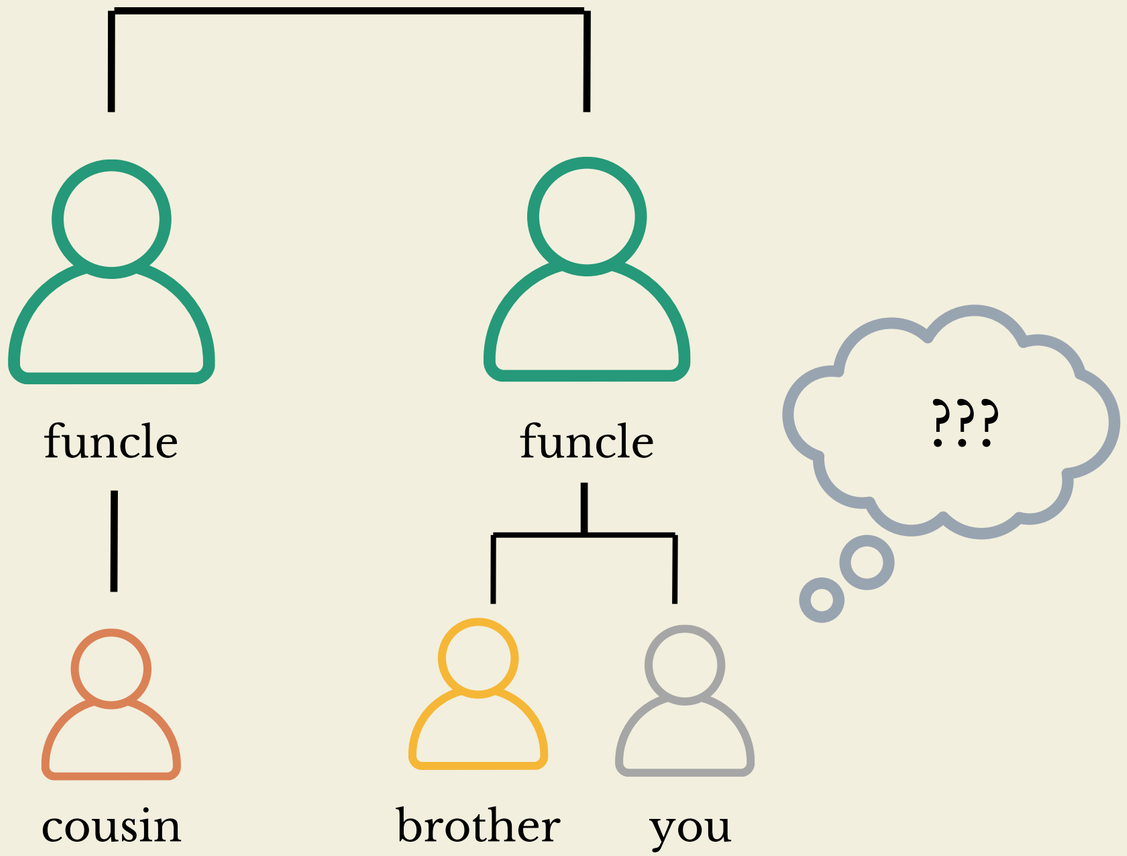

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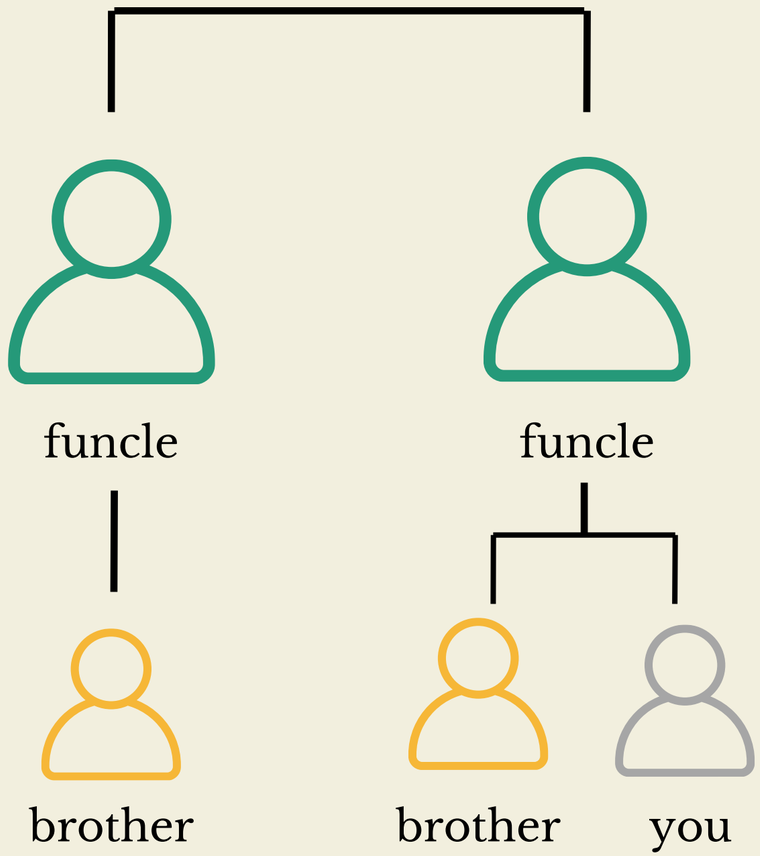

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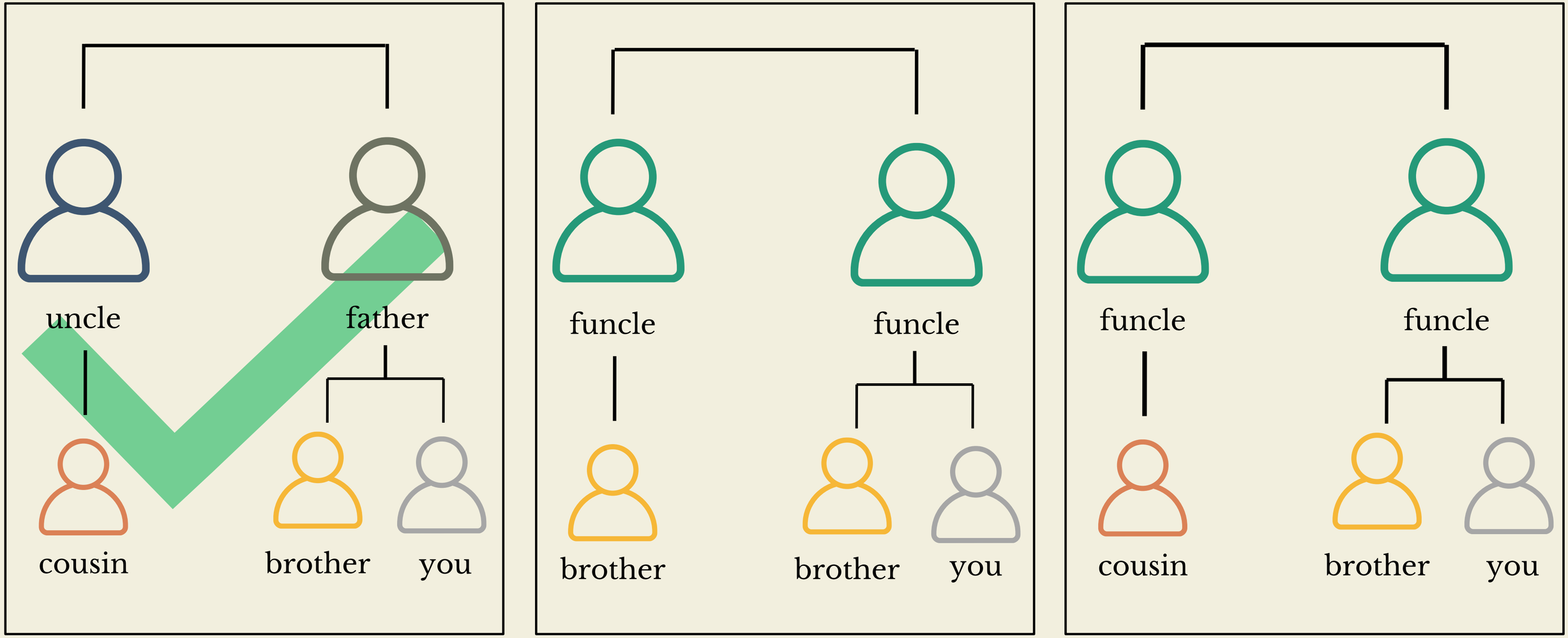
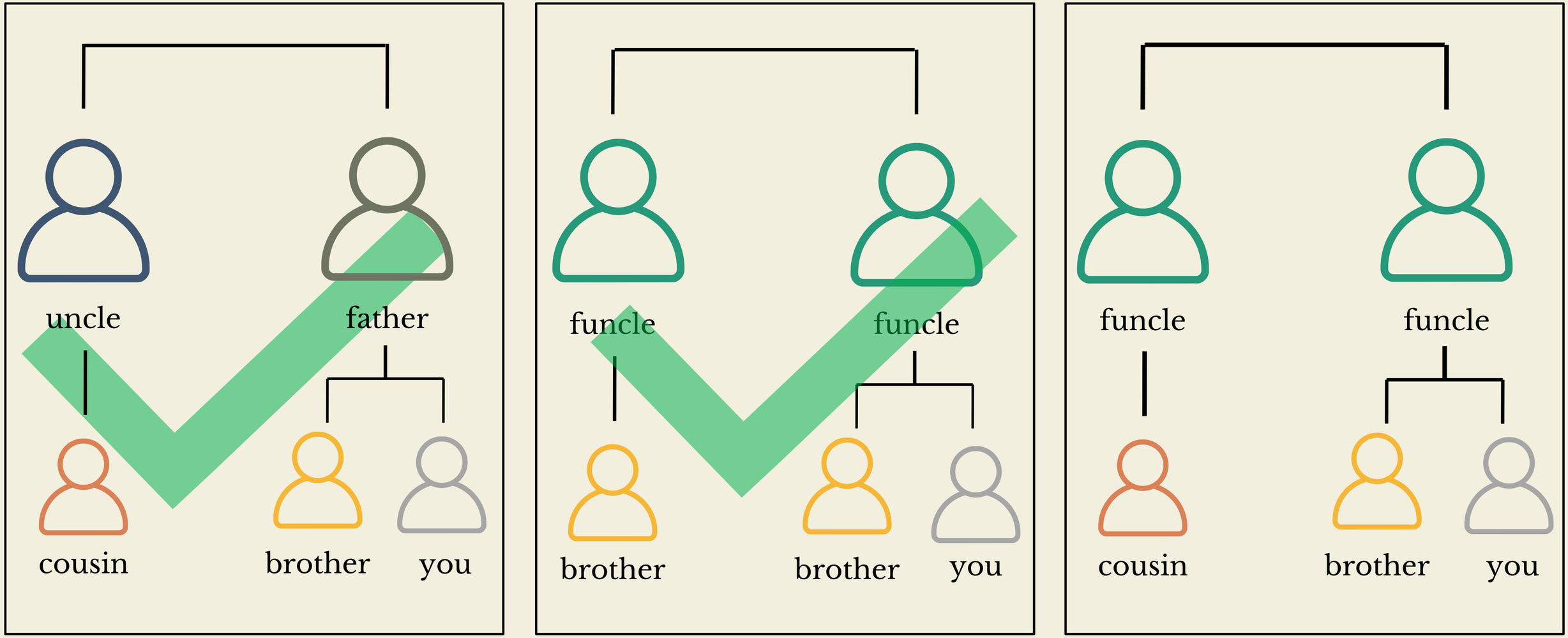


So kinship systems with predictive structure should be common cross-linguistically.



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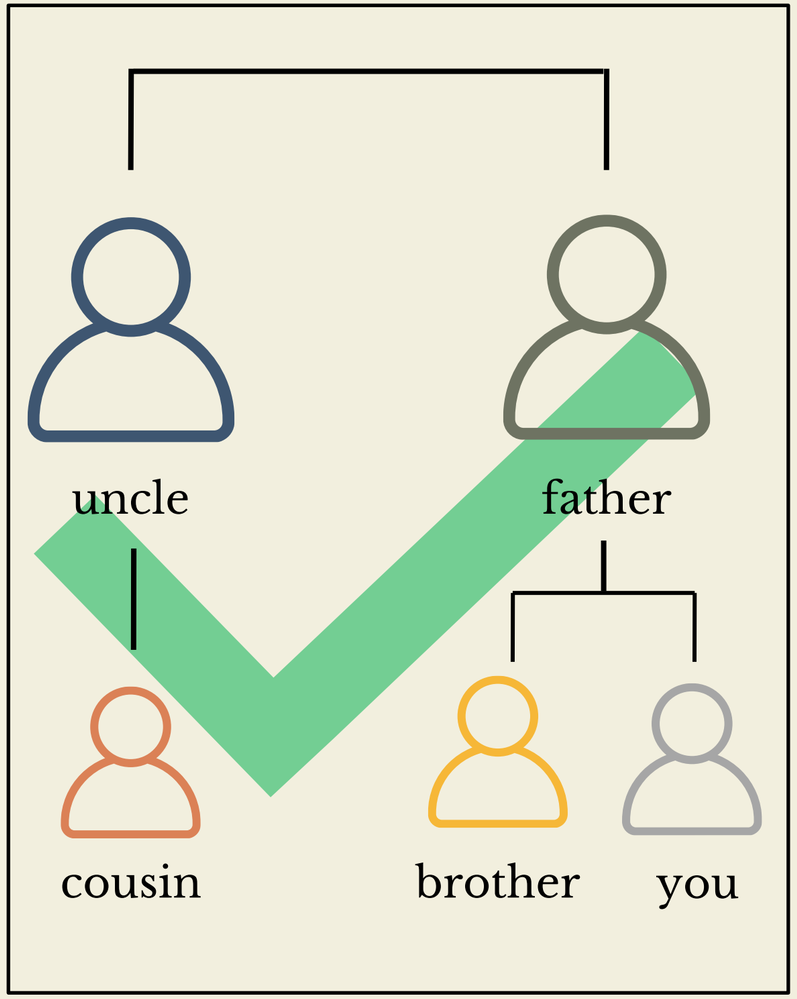

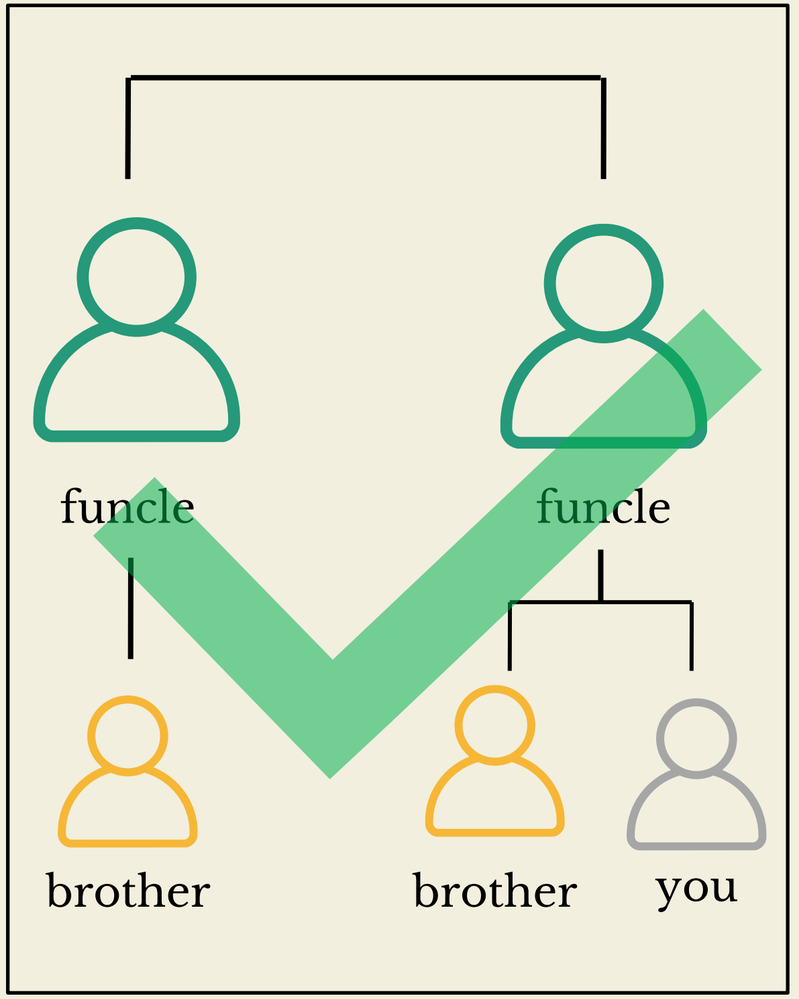

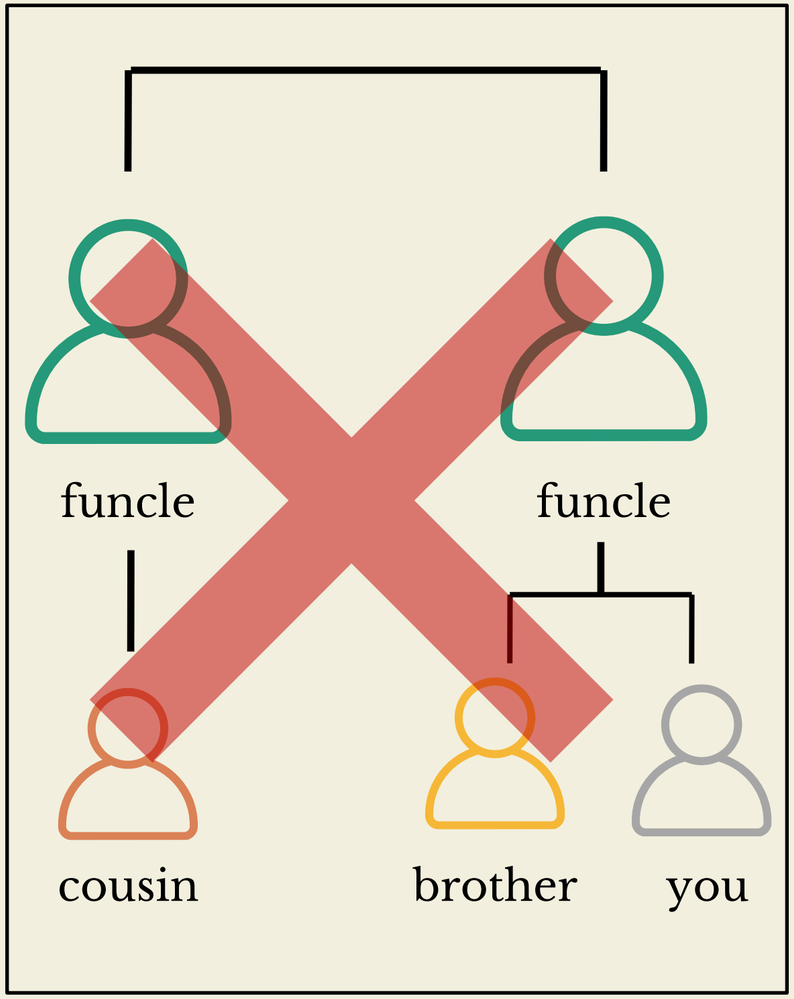

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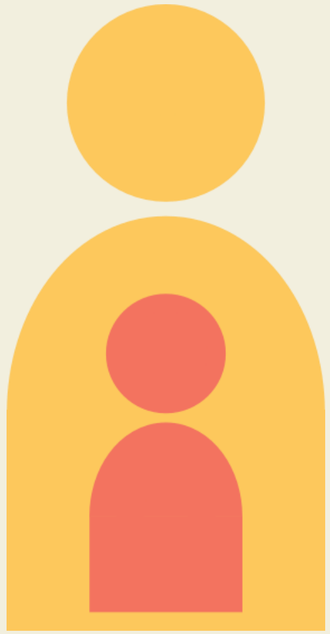
Is predictive structure a universal feature of kinship?



vs.

Data from KinBank*:

kinship terms for 544 languages including parents, nuncles, siblings and cousins

Simulated kinship data:

random permutations of existing kinship systems

*Passmore, S. et al. (2023). Kinbank: A global database of kinship terminology. PLOS ONE, 18(5)

Natural languages will have more predictive structure than chance.

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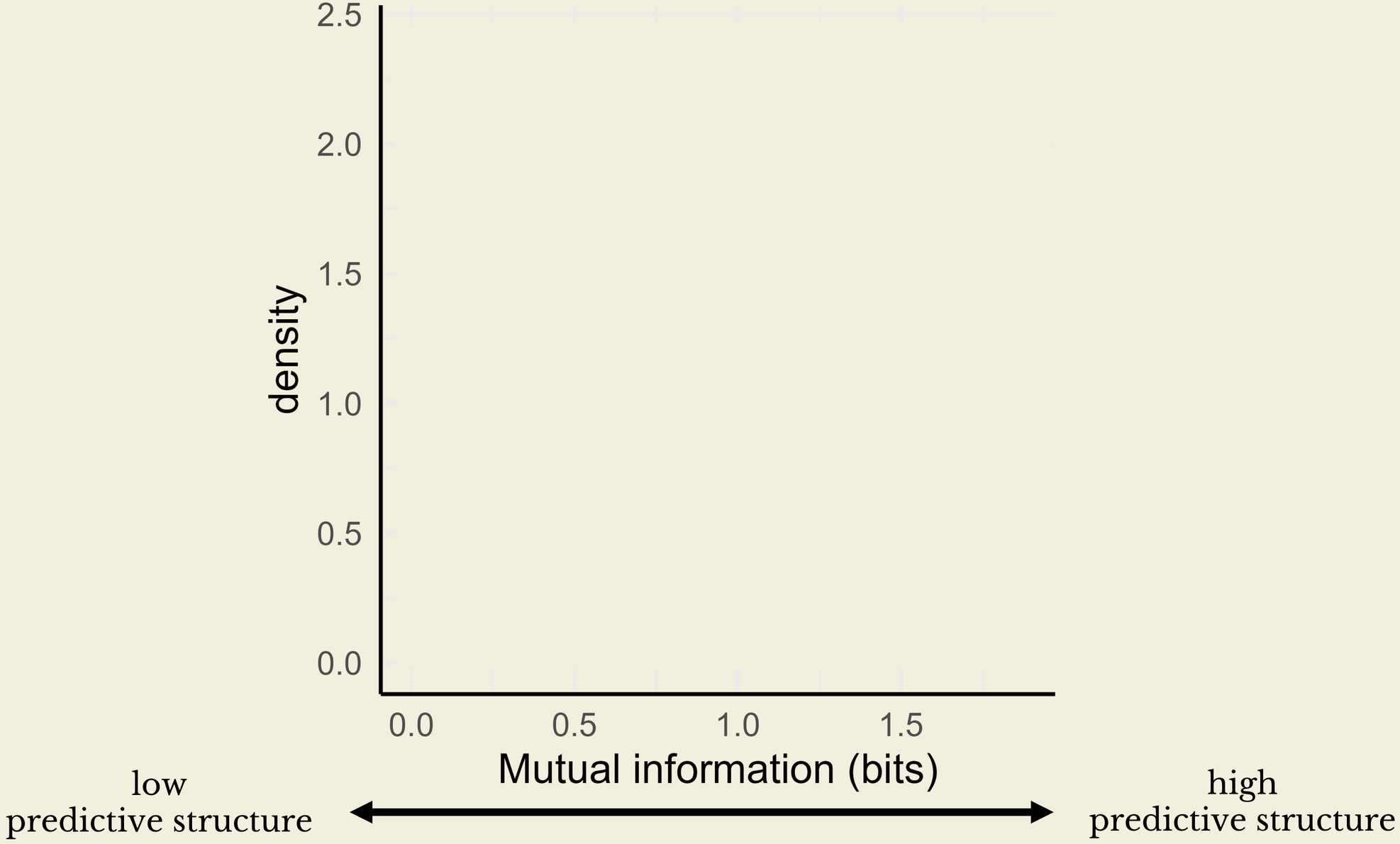

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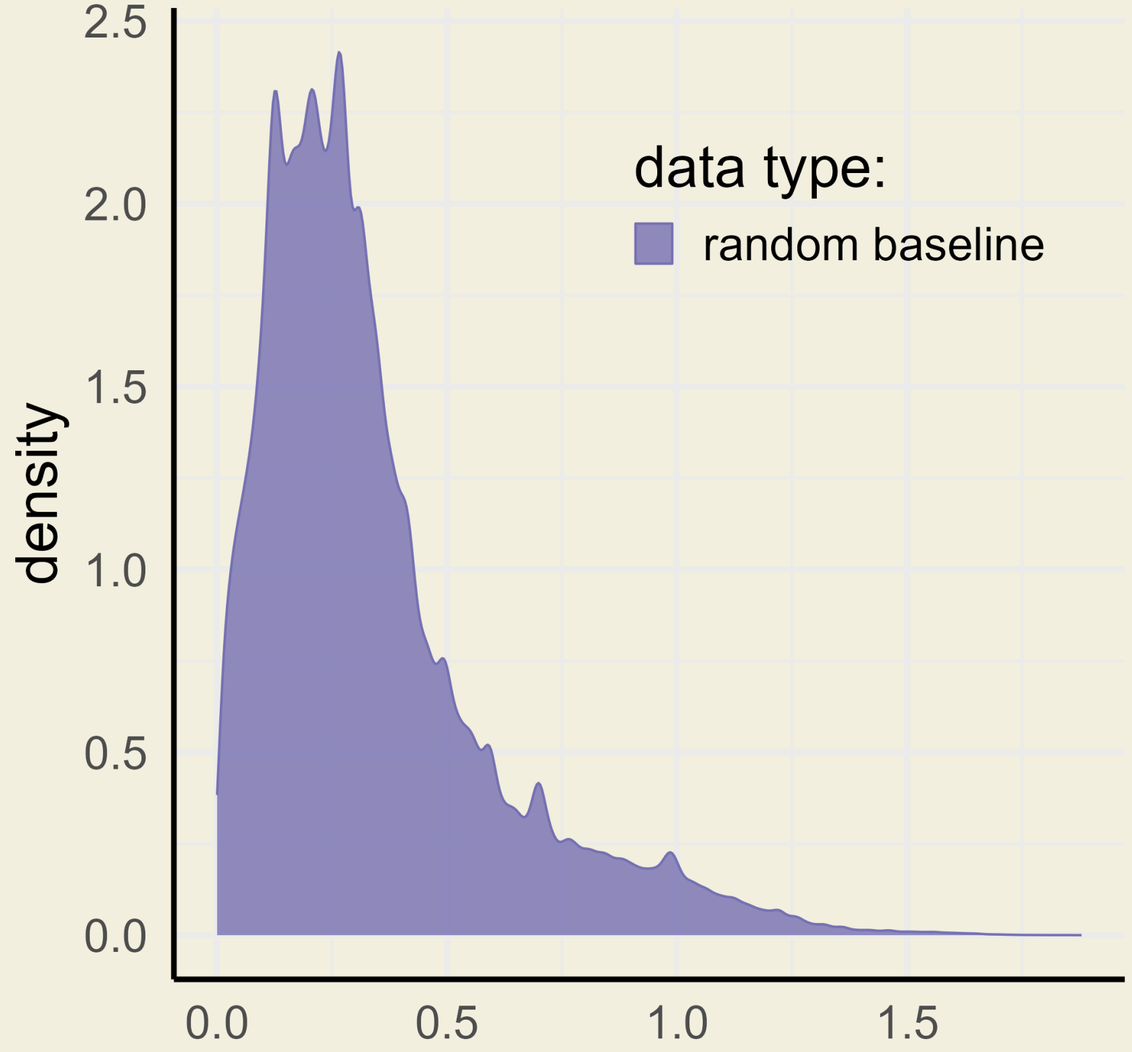

low
predictive structure

high
predictive structure

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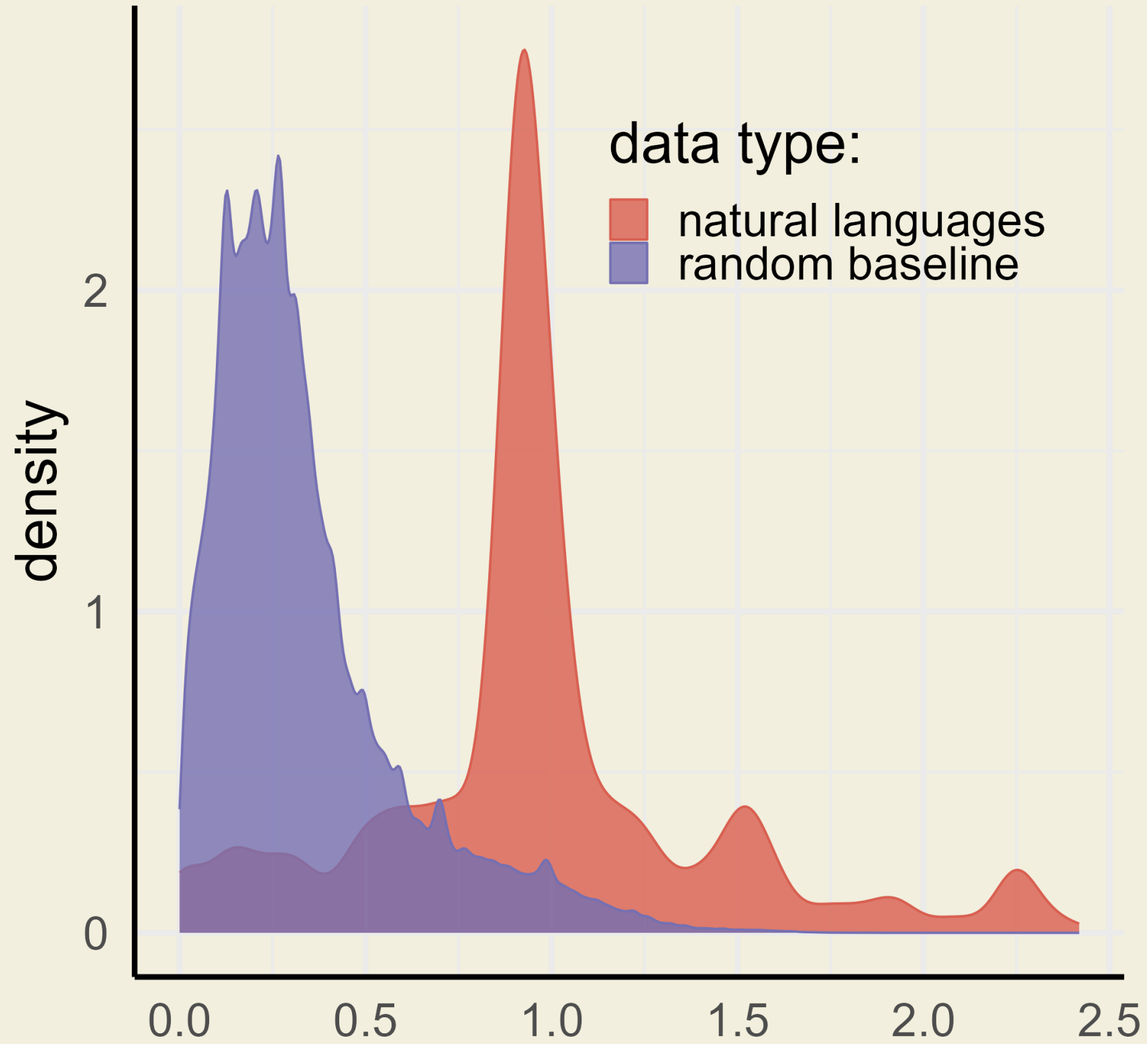

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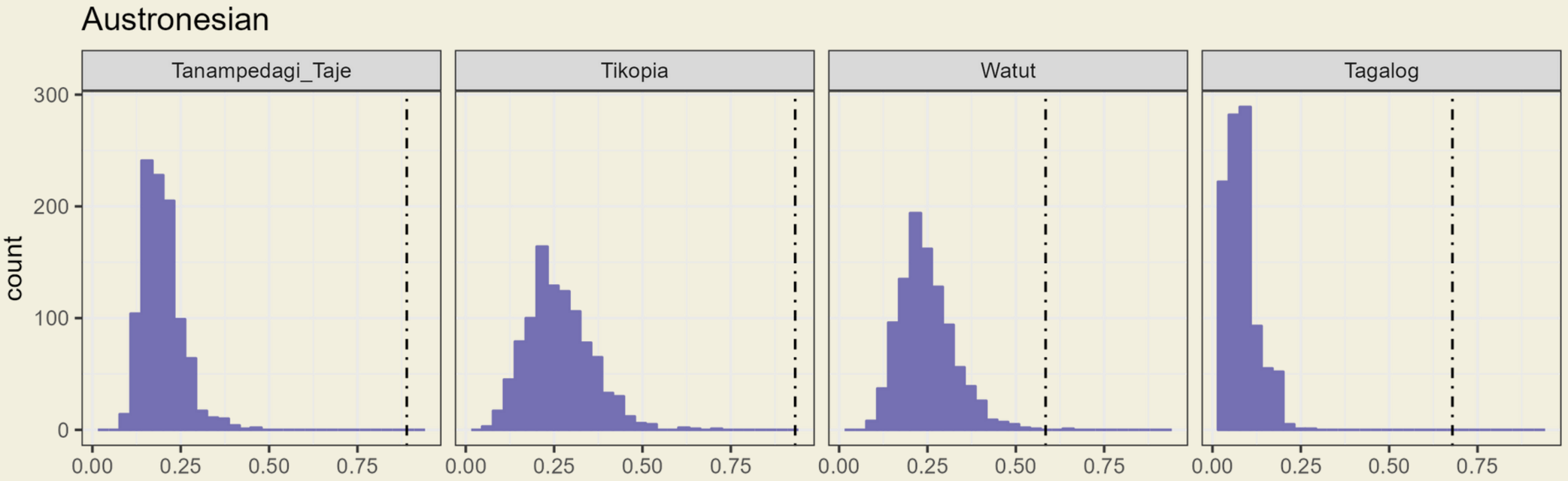

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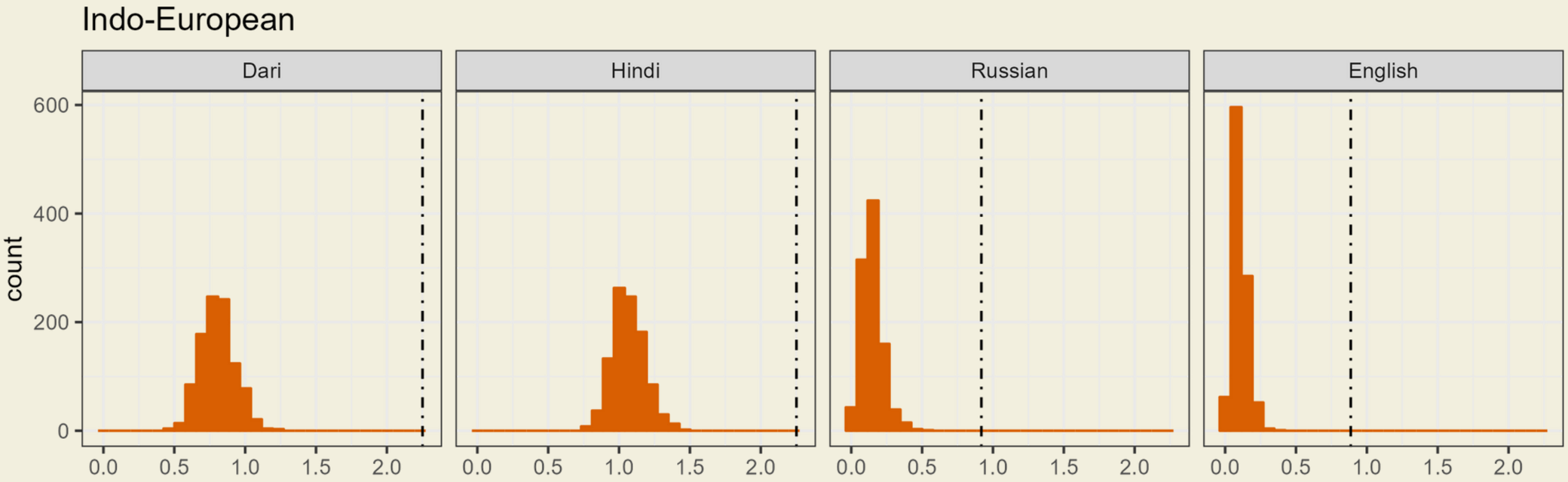

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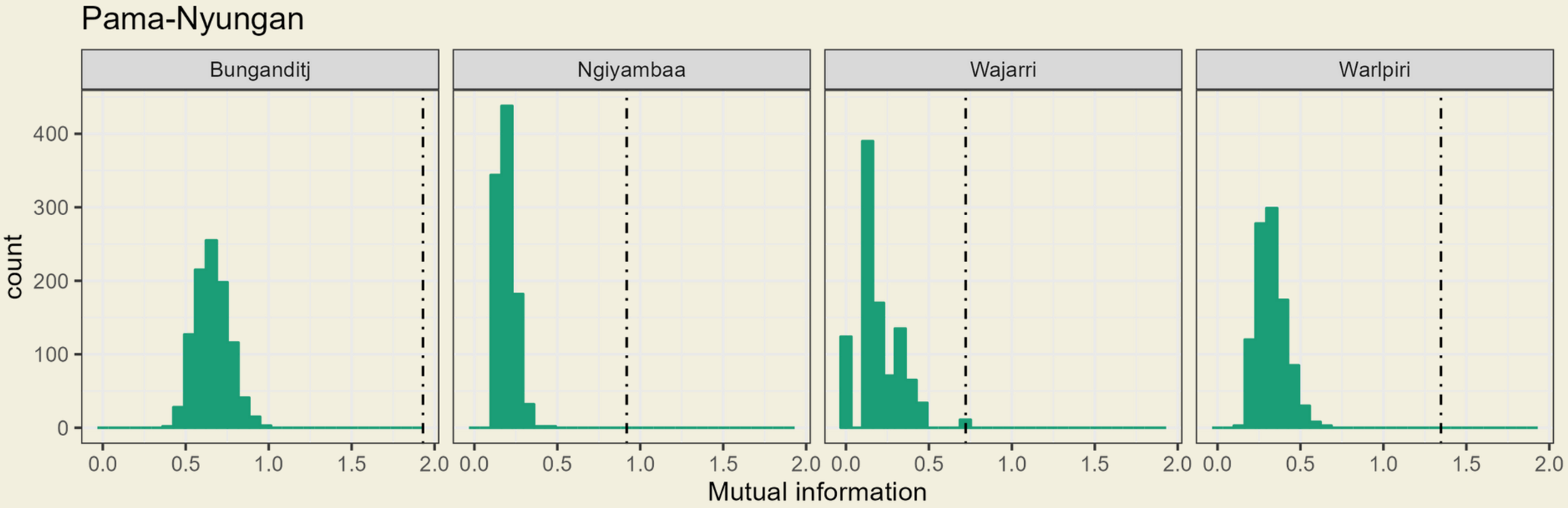

Questions

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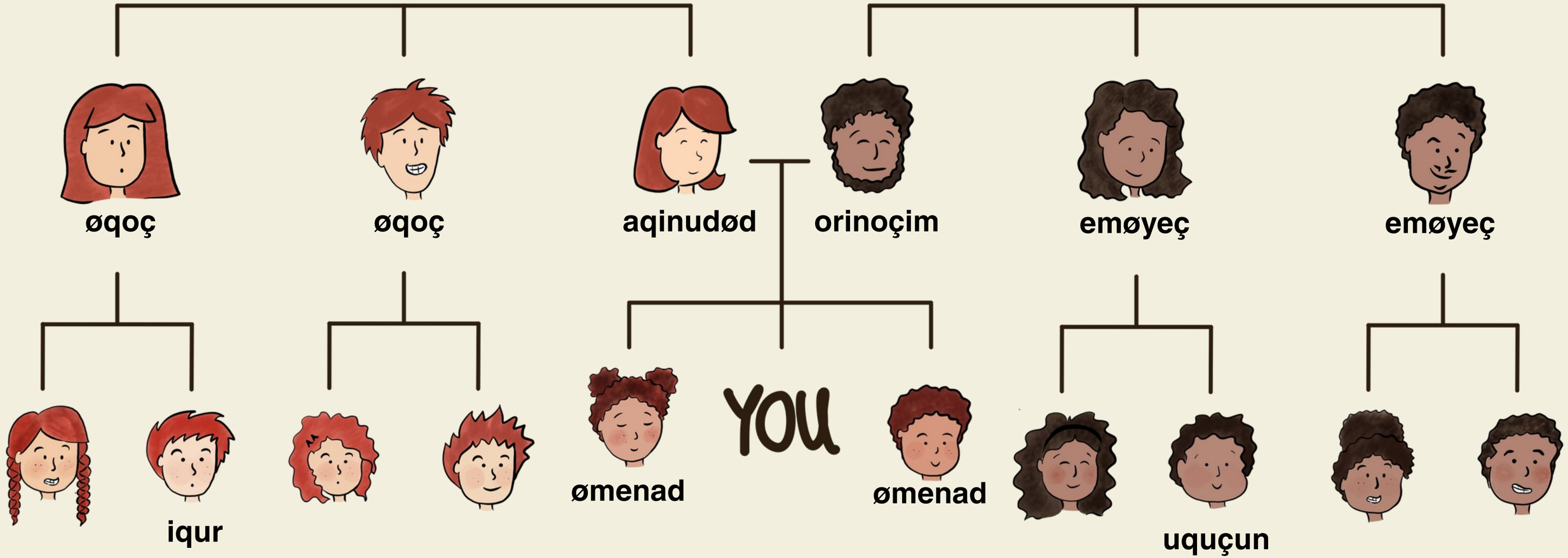
Do people prefer to categorise kin in a way that increases predictive structure?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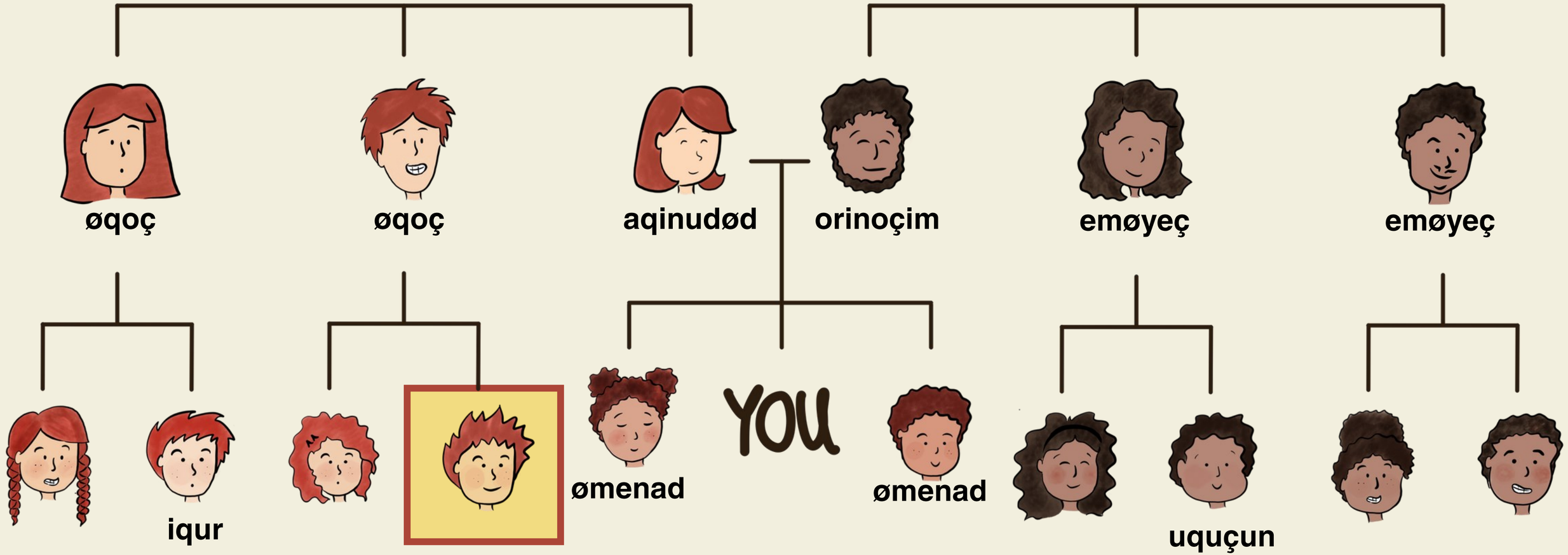
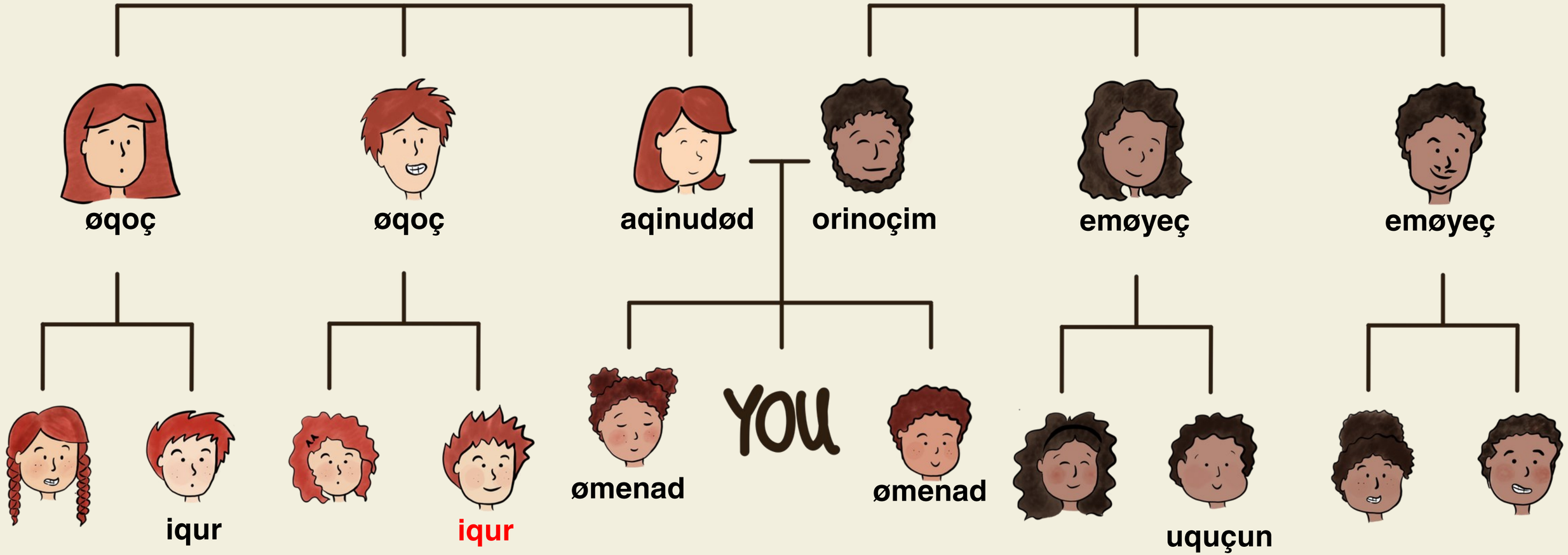


In this language, what would you call your **mother's brother's son**?

UNDO

iqur **uquçun** **adeçim** **aweh**

DONE



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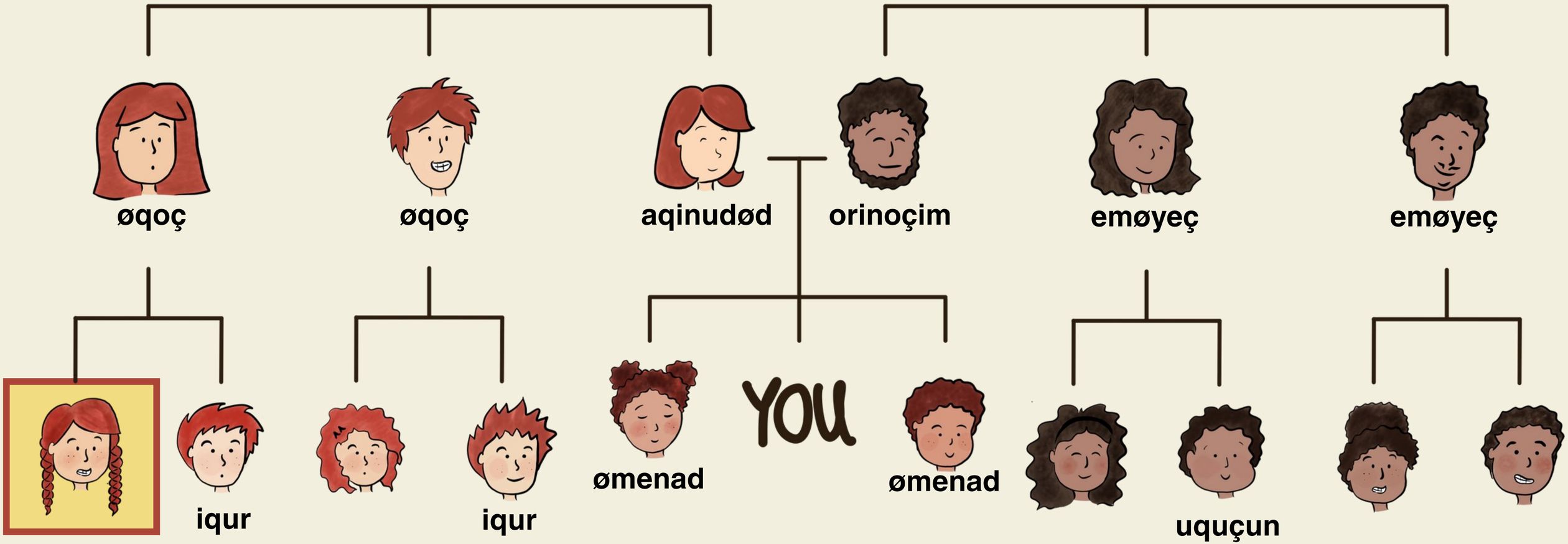

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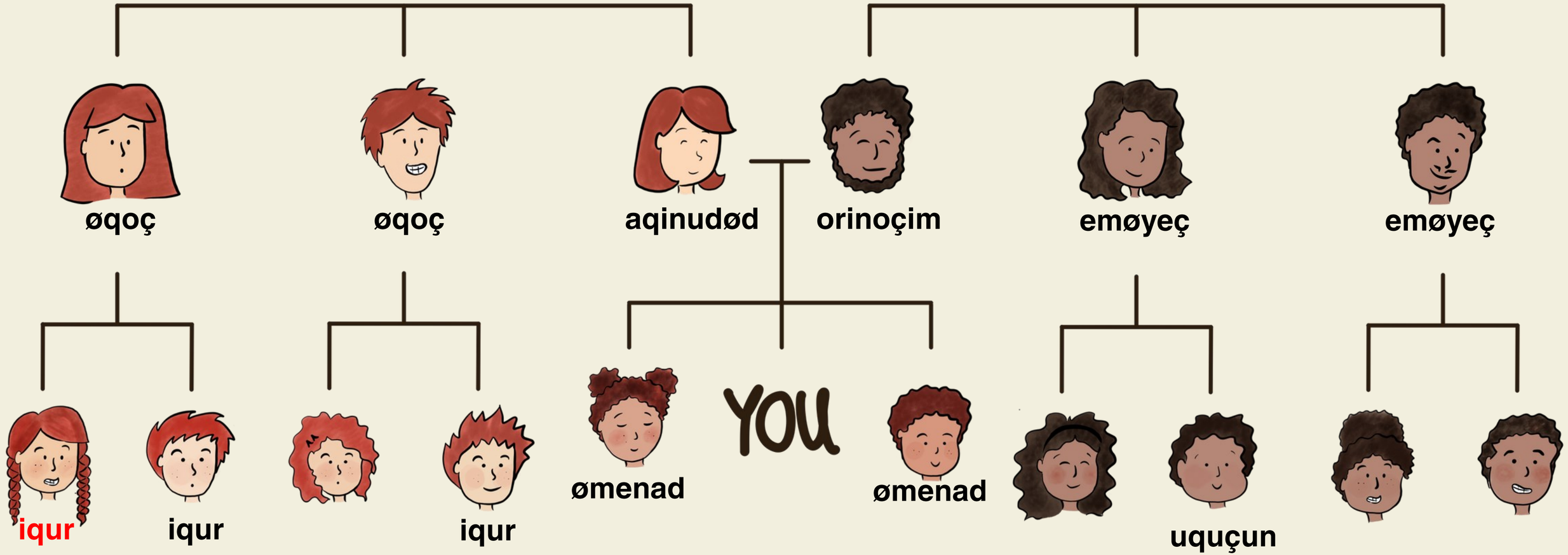

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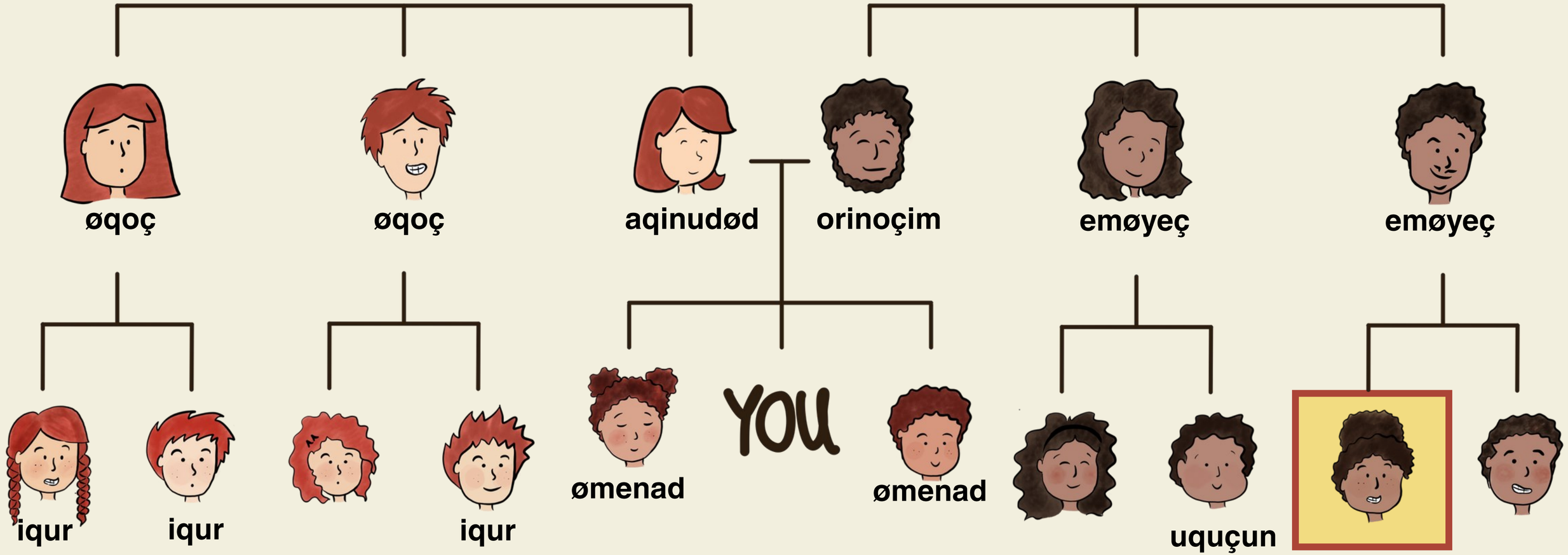

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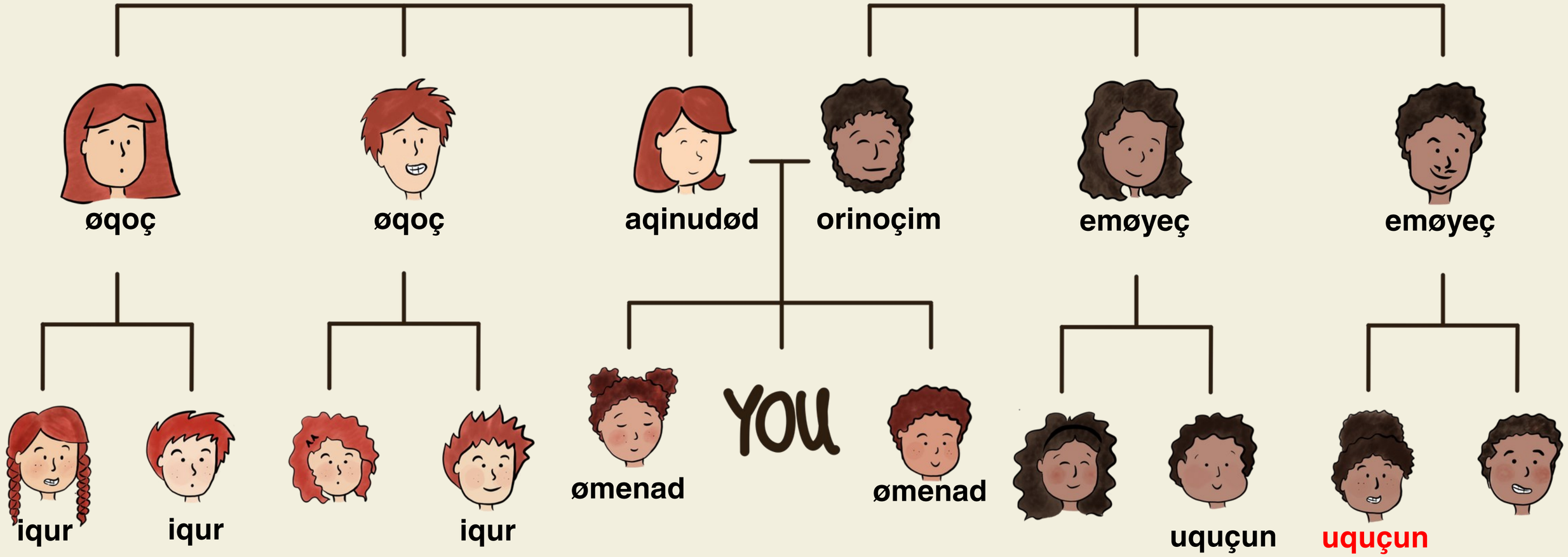

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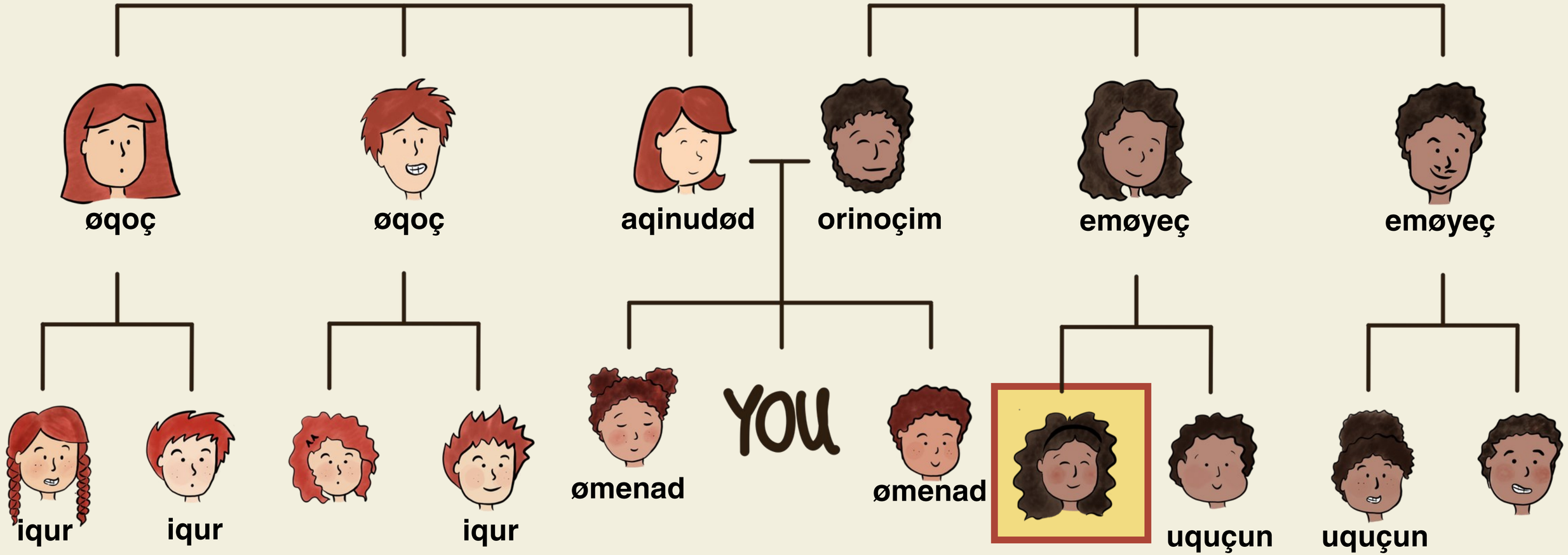

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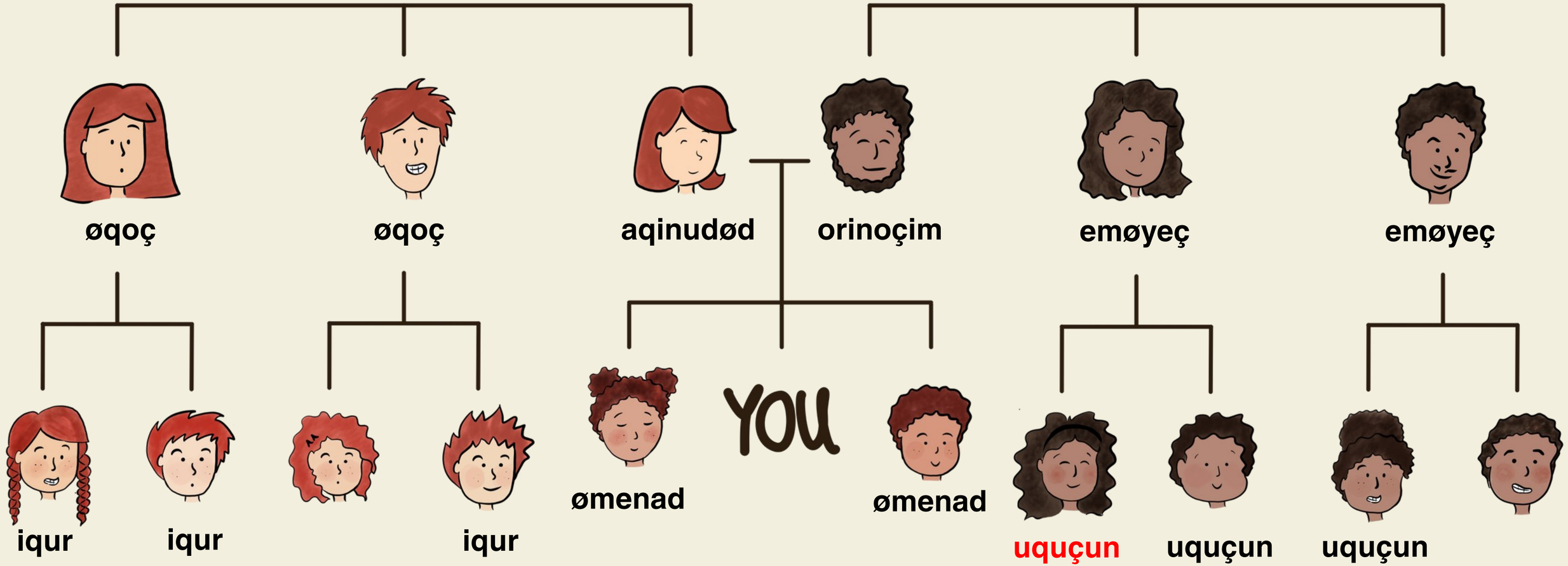

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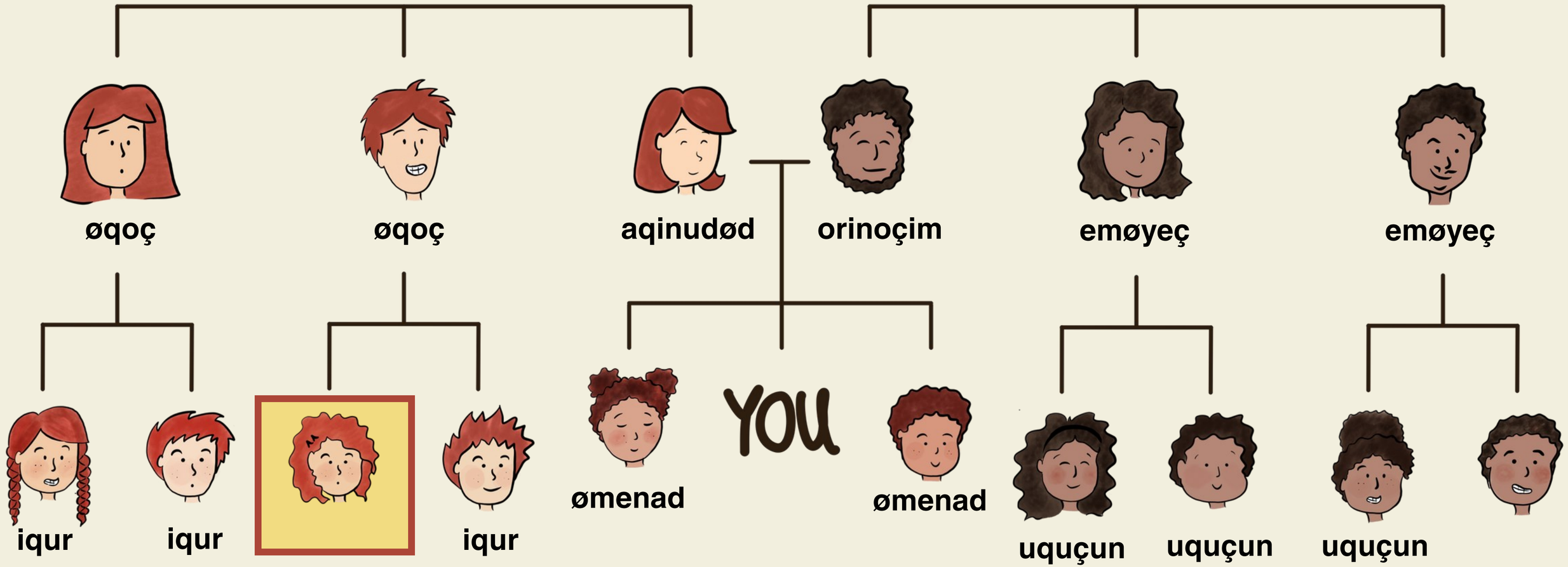

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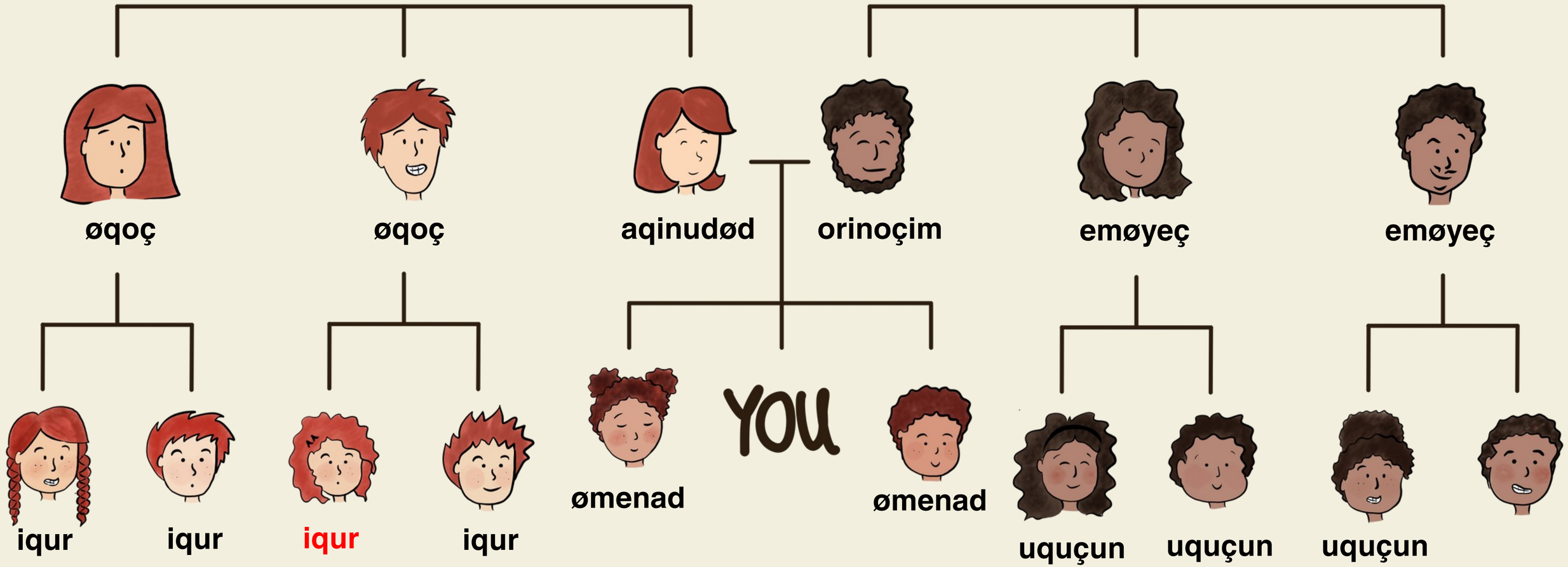

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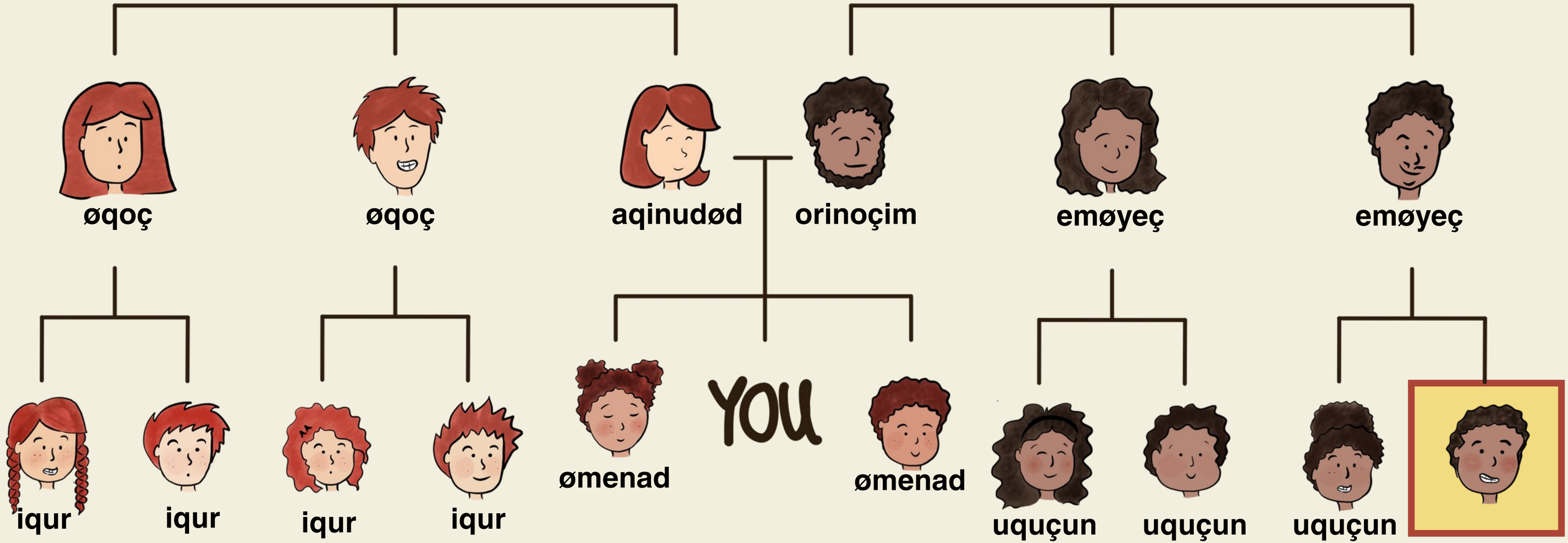

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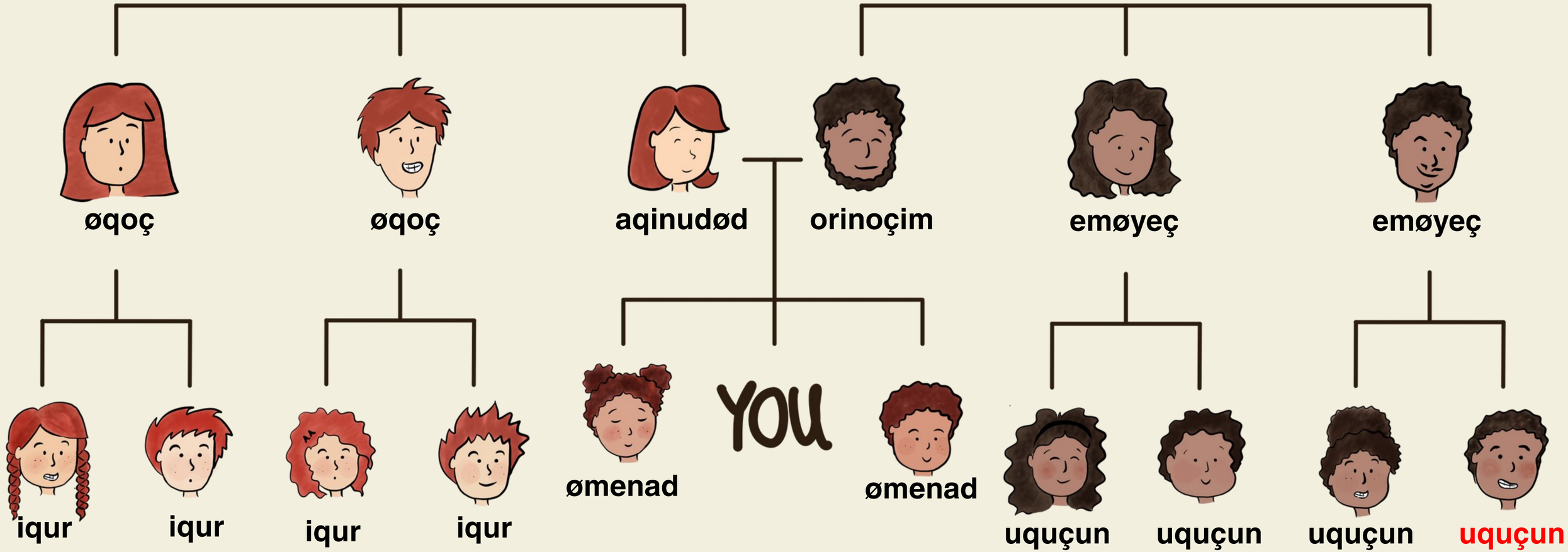

Are you happy with your selection? Press Done to continue or Undo to go back.

UNDO

iqur

uquçun

adeçim

aweh

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Participants will extend a category on the basis of predictive structure.

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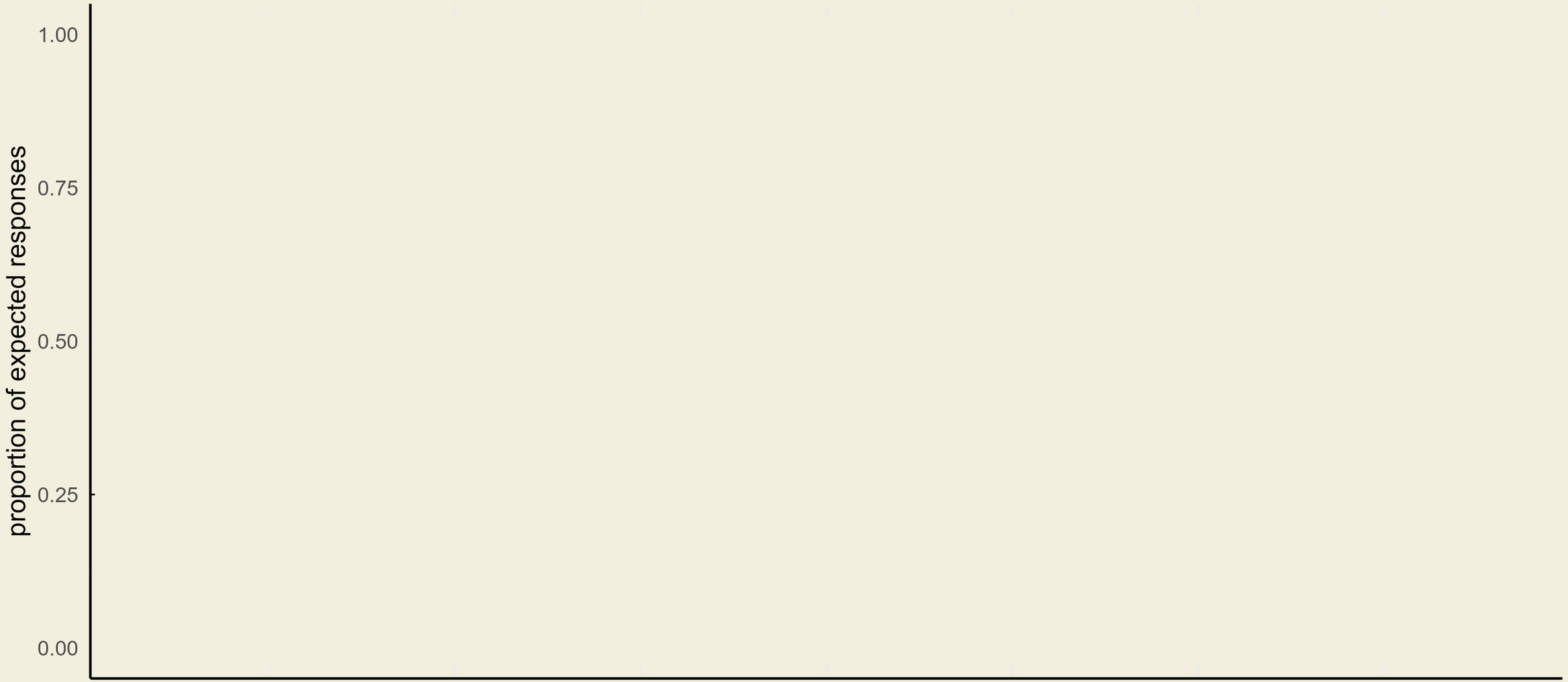

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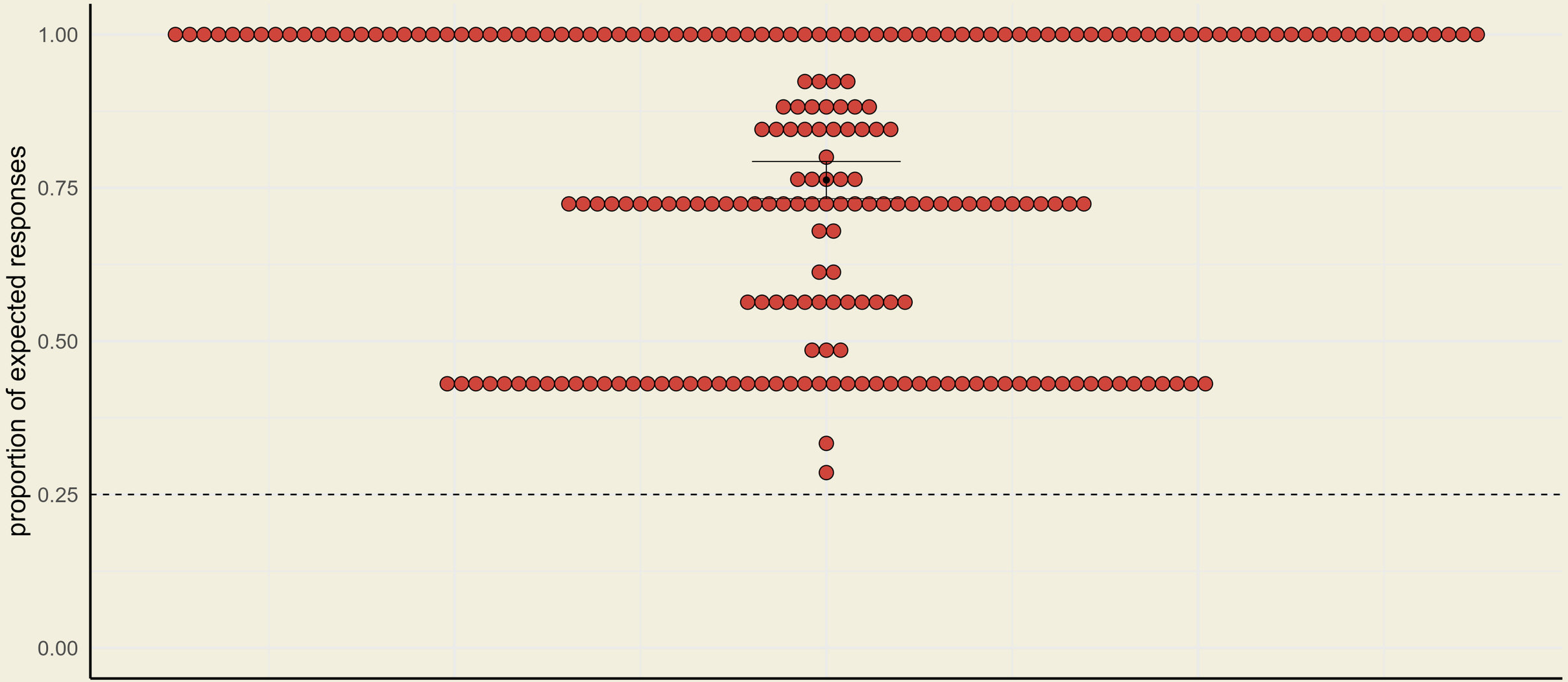
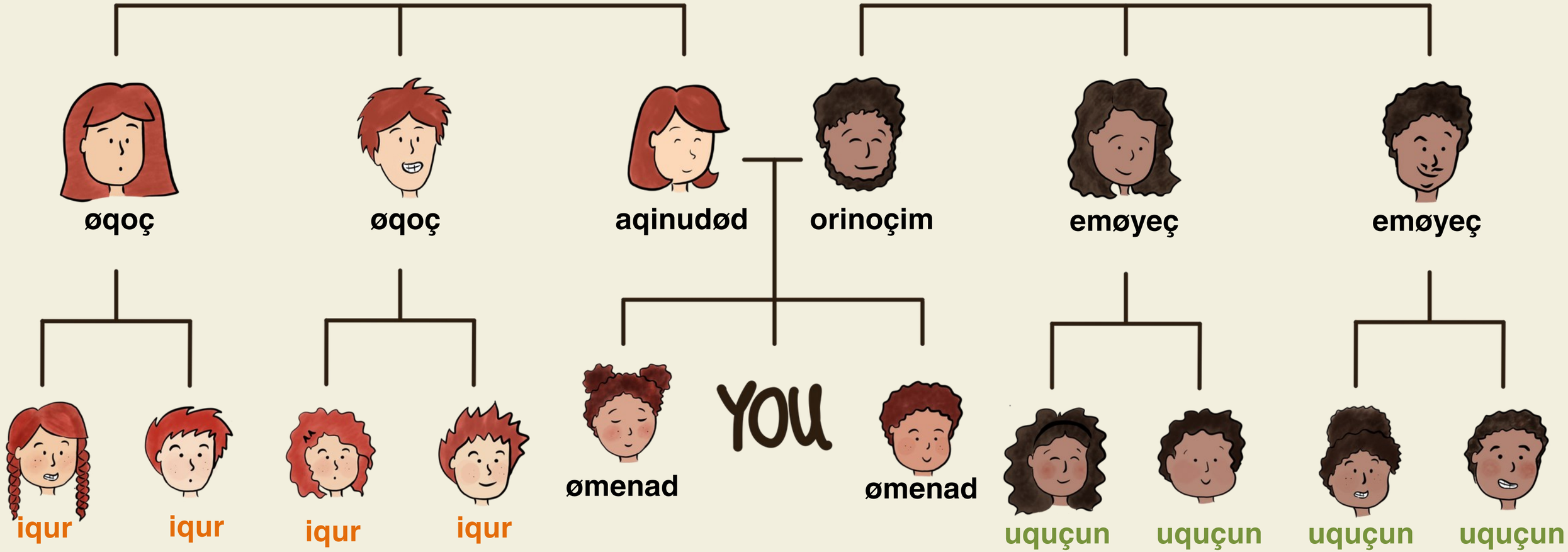
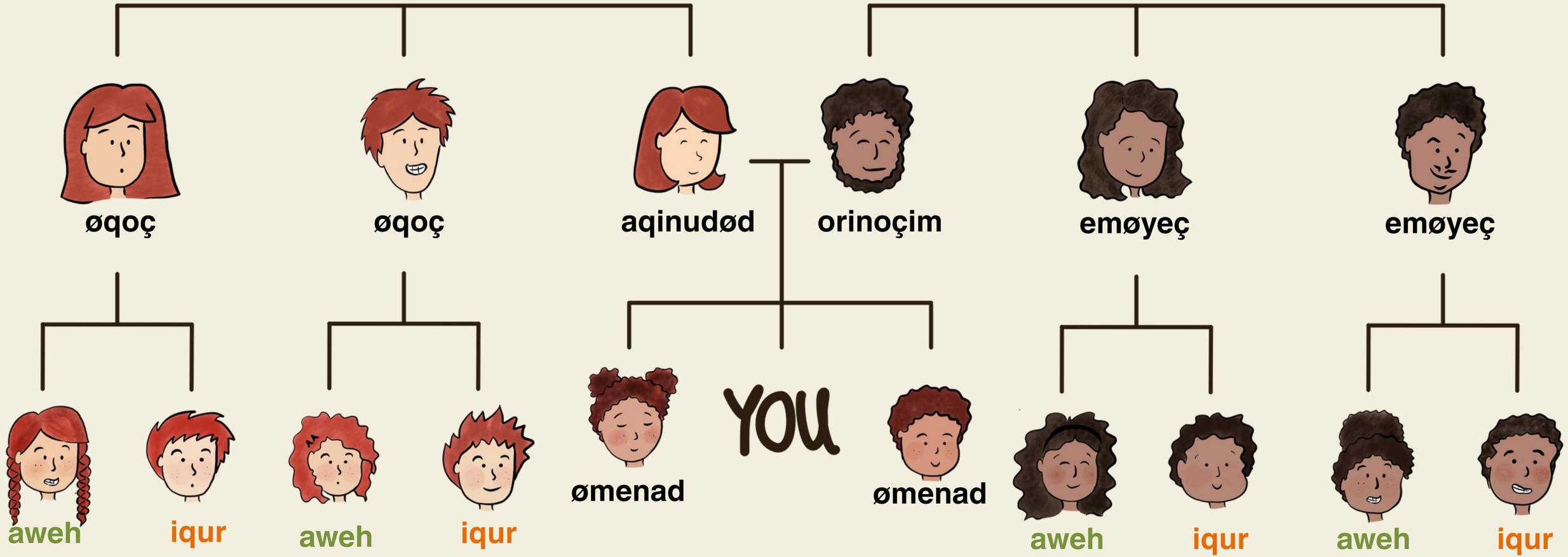
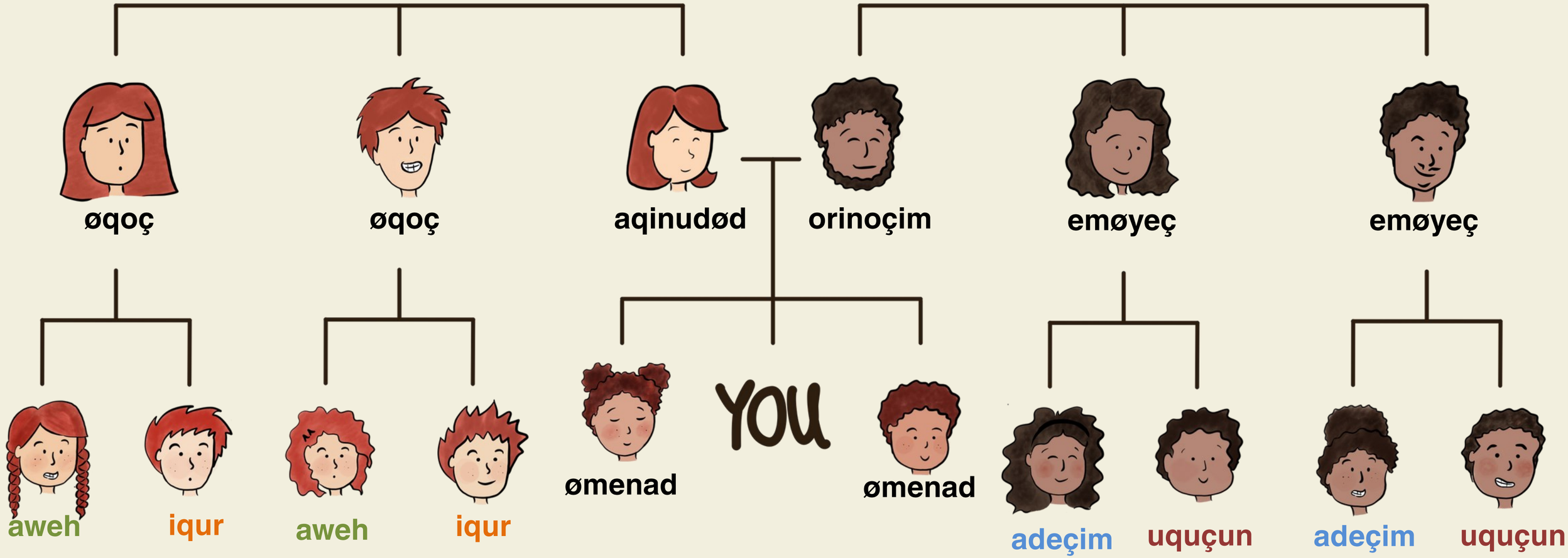




Participants group kin on the basis of predictive structure...



...and sometimes on the basis of shared gender.



And sometimes both predictive structure and gender!

Summary

kinship systems have
strong predictive structure that
constrains their variation

and one way people prefer to
categorise kin is by increasing
predictive structure

Thanks!

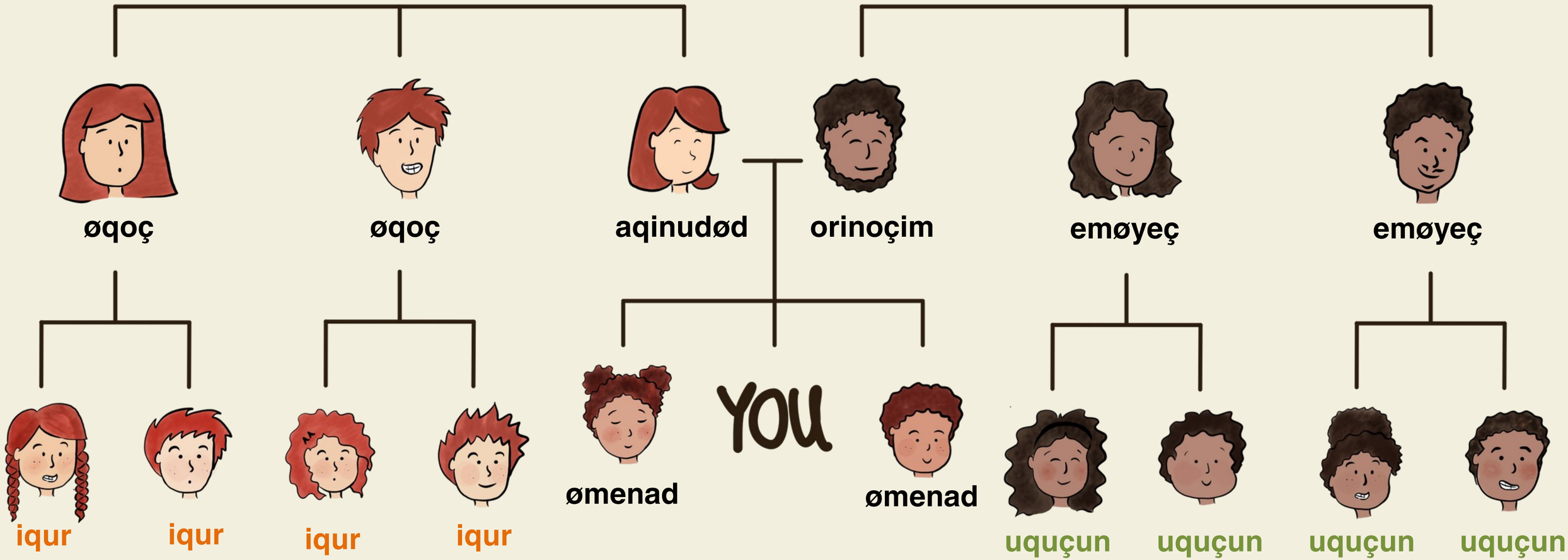
Maisy Hallam

http://maisyhallam.github.io/

maisy.hallam@ed.ac.uk

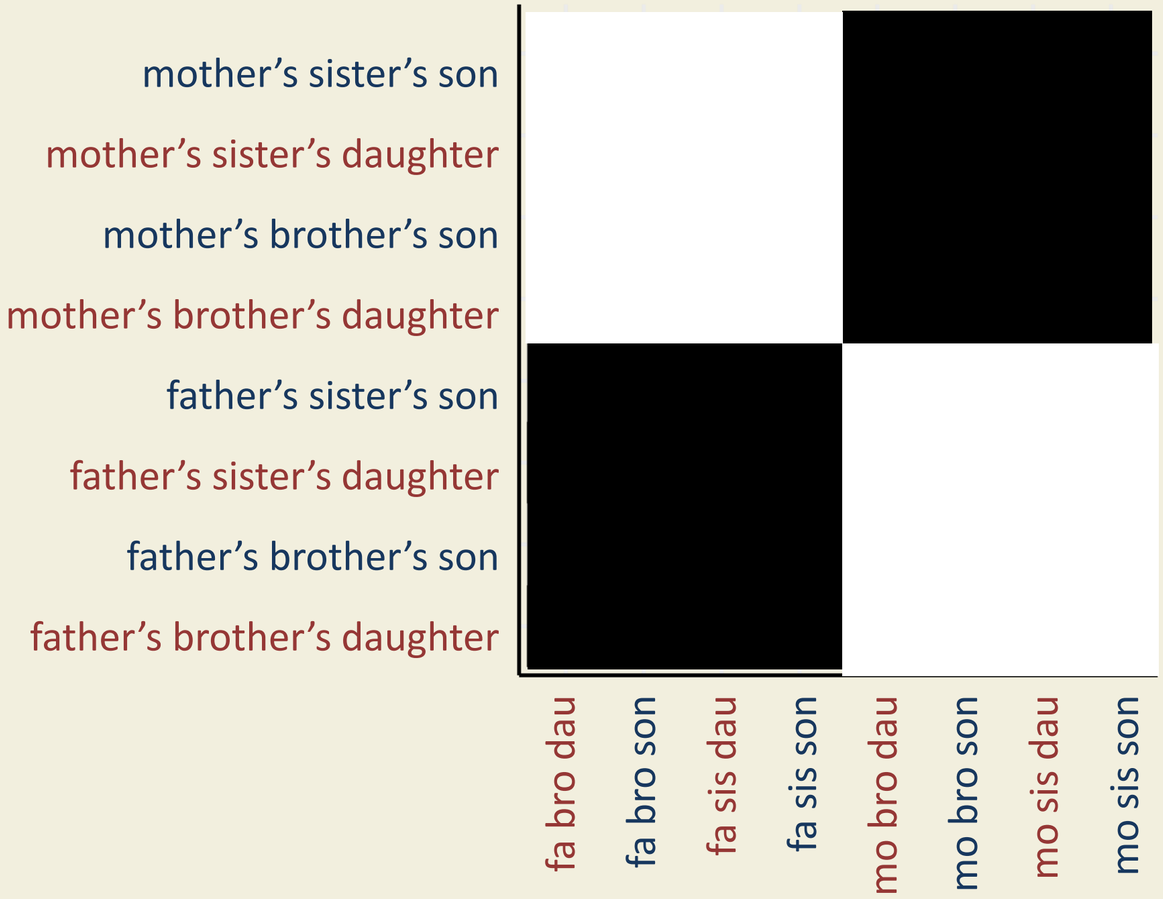
Give the experiment a go!

Appendix: How else do participants categorise kin?



Appendix: How else do participants categorise kin?

expectations



reality

Appendix: How else do participants categorise kin?

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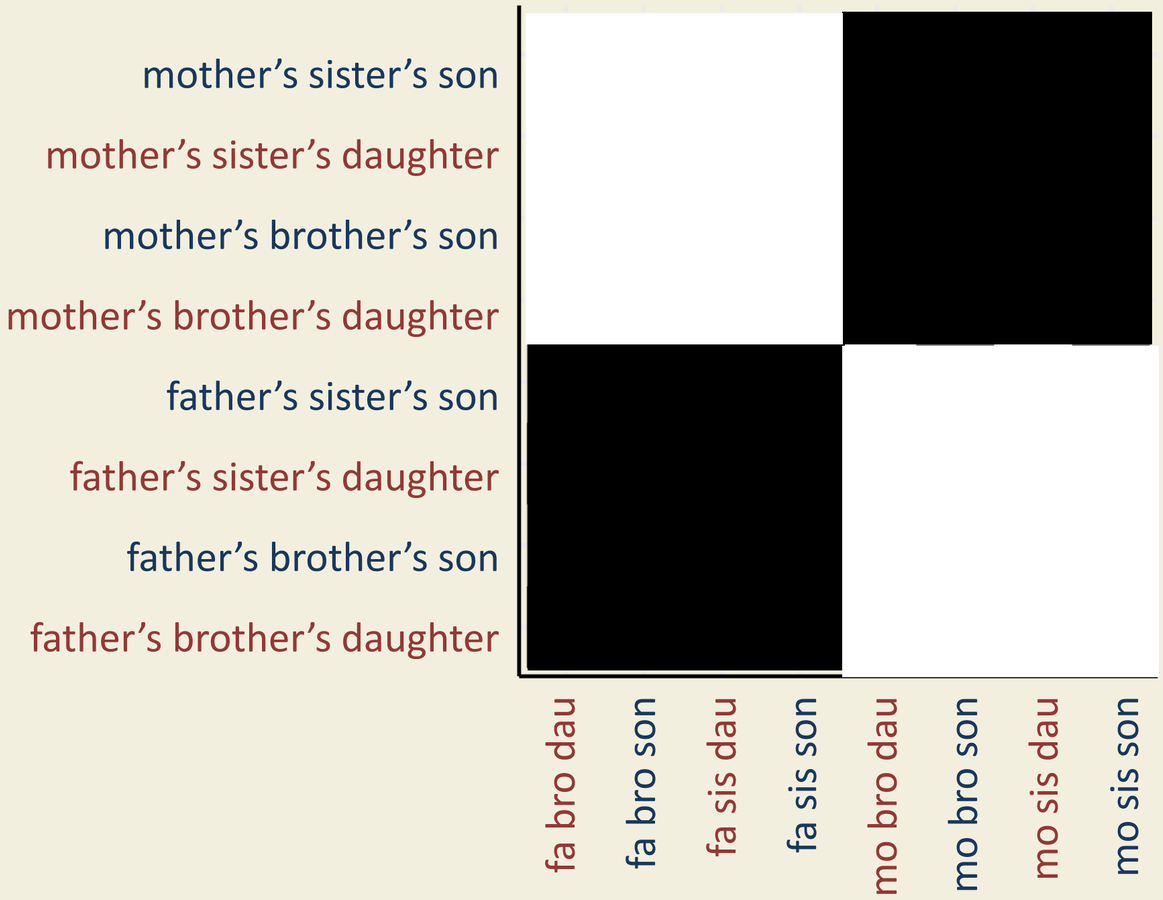
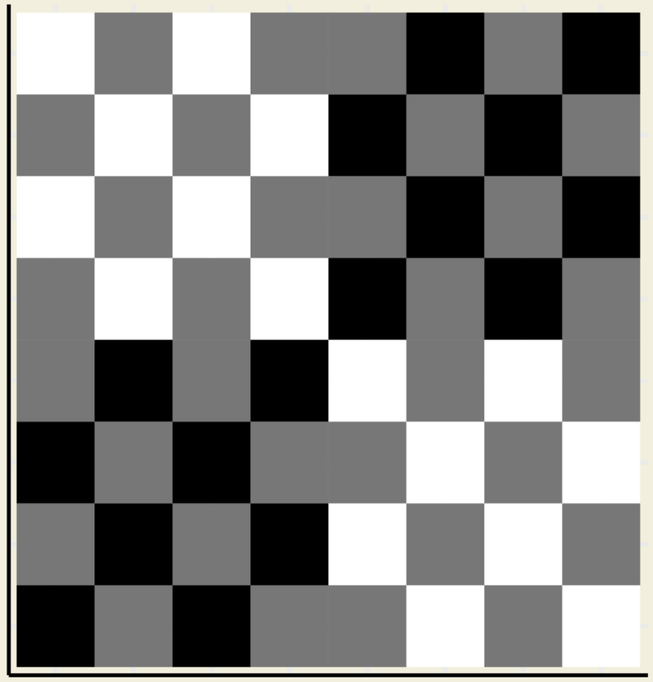


reality



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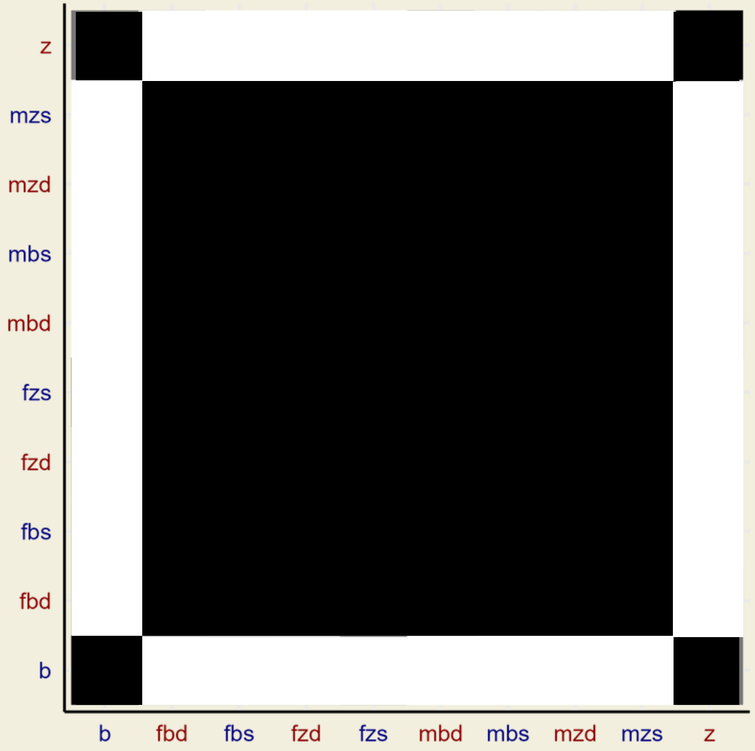

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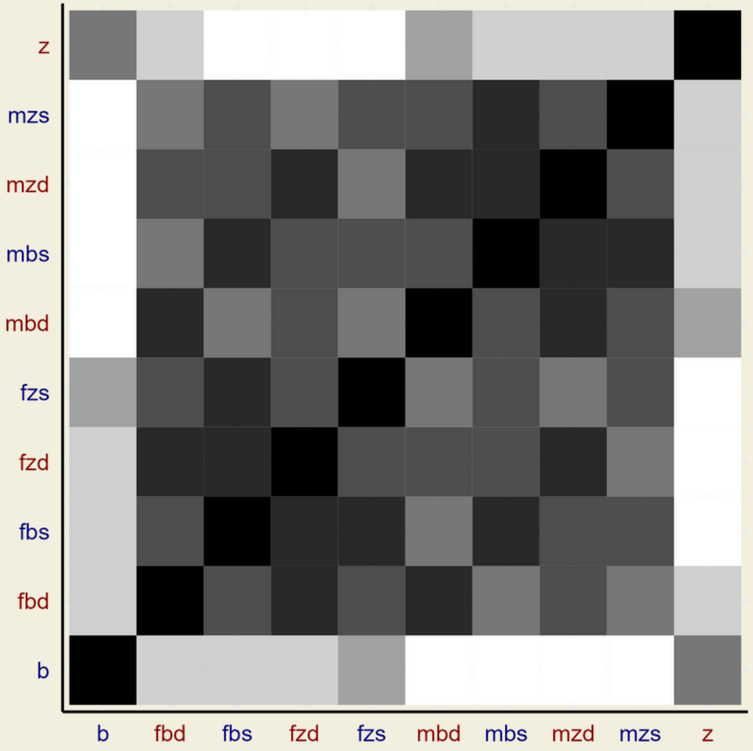

How else do participants categorise kin?

expectations *reality*