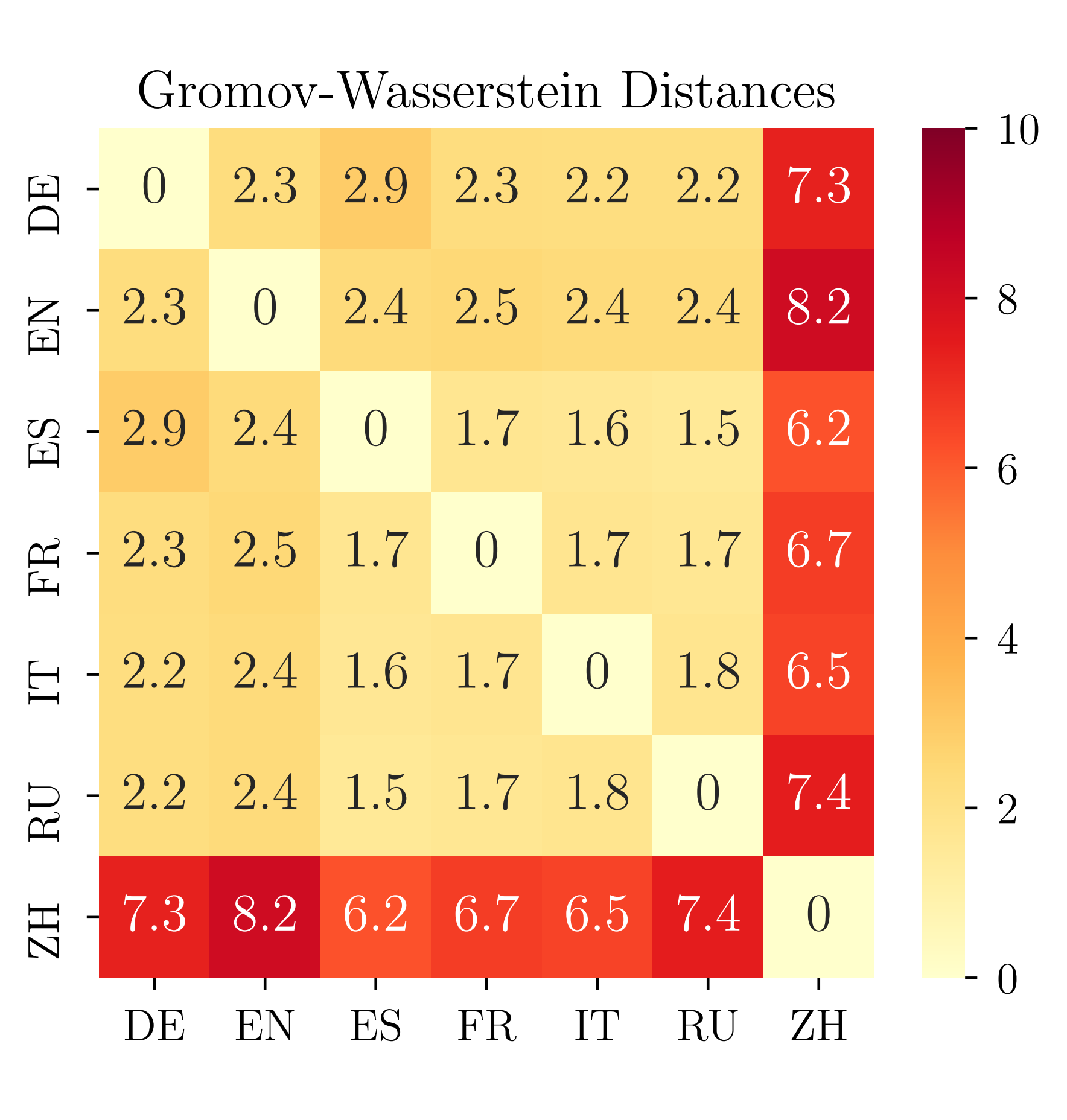
[redacted]

a linguistic distance

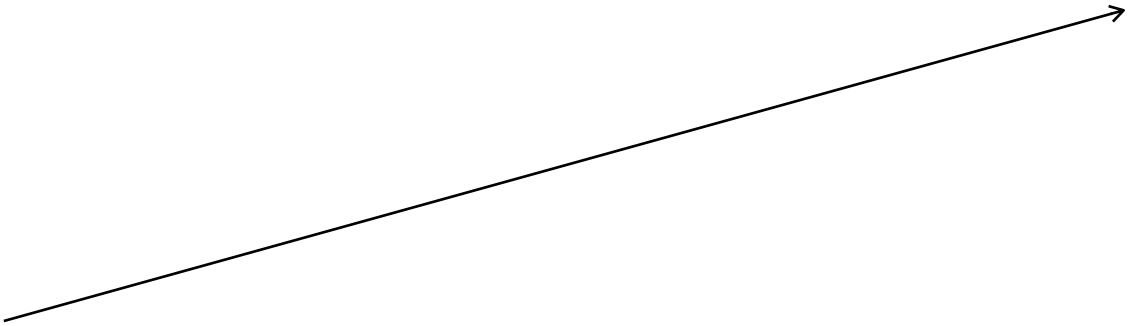
Gromov-Wasserstein:

49

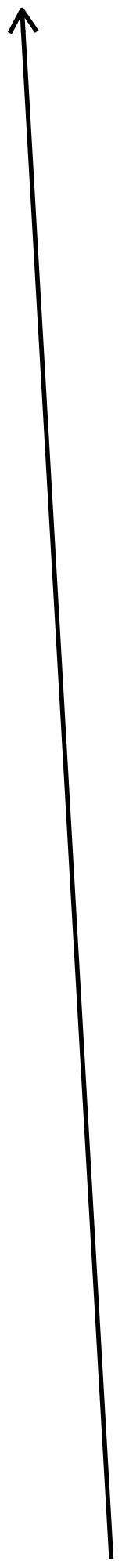

Gromov-Wasserstein Distances
DE
EN
ES
FR
IT
RU
ZH
0 2.3 2.9 2.3 2.2 2.2 7.3
2.3 0 2.4 2.5 2.4 2.4 8.2
2.9 2.4 0 1.7 1.6 1.5 6.2
2.3 2.5 1.7 0 1.7 1.7 6.7
2.2 2.4 1.6 1.7 0 1.8 6.5
2.2 2.4 1.5 1.7 1.8 0 7.4
7.3 8.2 6.2 6.7 6.5 7.4 0
DE
EN
ES
FR
IT
RU
ZH
10
8
6
4
2
0

Romance languages cluster

G-W induces a (true) metric



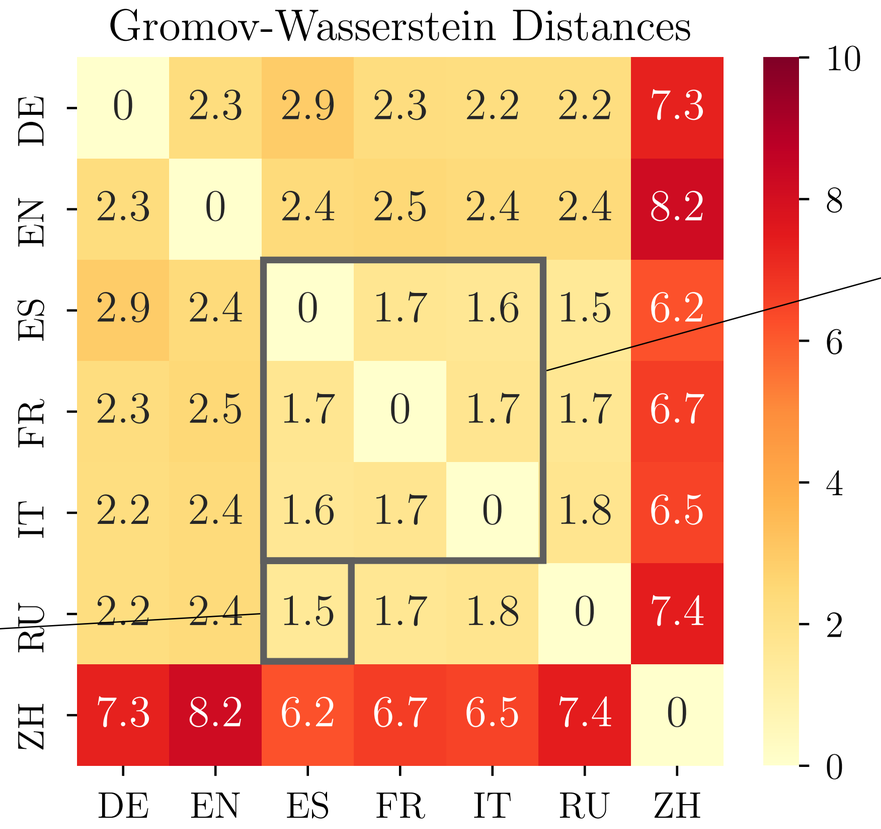
Russian is close to Spanish (!)



We can interpret it here as linguistic 'semantic' distance

Gromov-Wasserstein:
a linguistic distance

G-W induces a (true) metric ⟶ We can interpret it here as linguistic 'semantic' distance



Romance languages cluster

Russian is close to Spanish (!)

OT with Invariances
choosing the right approach