[redacted]

with Optimal Transport

Aligning Hyperbolic Spaces

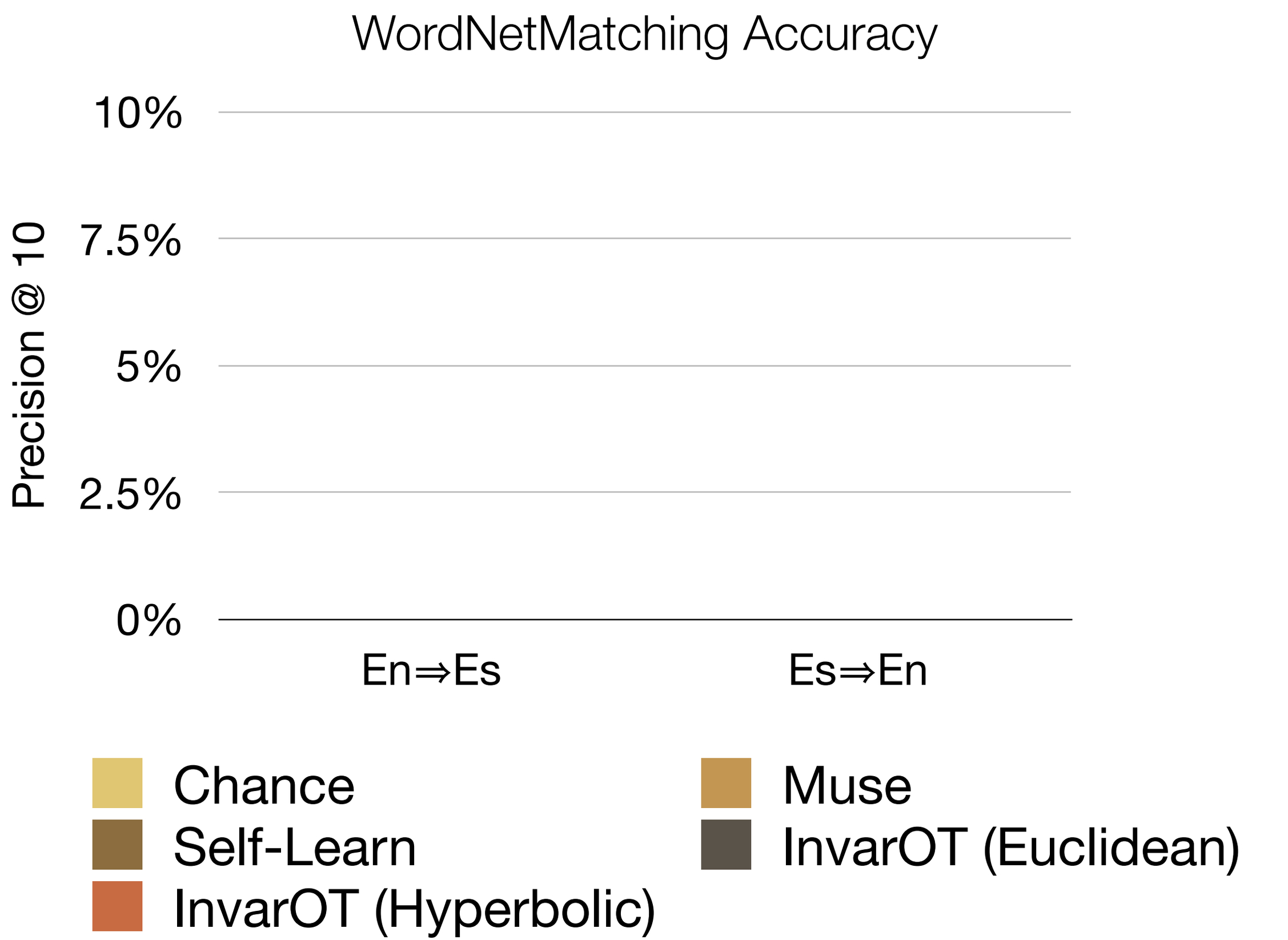
60

- OT problem is well defined over general Riemannian manifolds [Villani 2008]

- Solution exists and is unique [McCann, 2001]

- Smoothness of solution not guaranteed for general manifolds

- But it is for hyperbolic spaces with specific choices of cost function!!! [Lee & Li, 2012]


WordNetMatching Accuracy
Precision @ 10
10%
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En⇒Es
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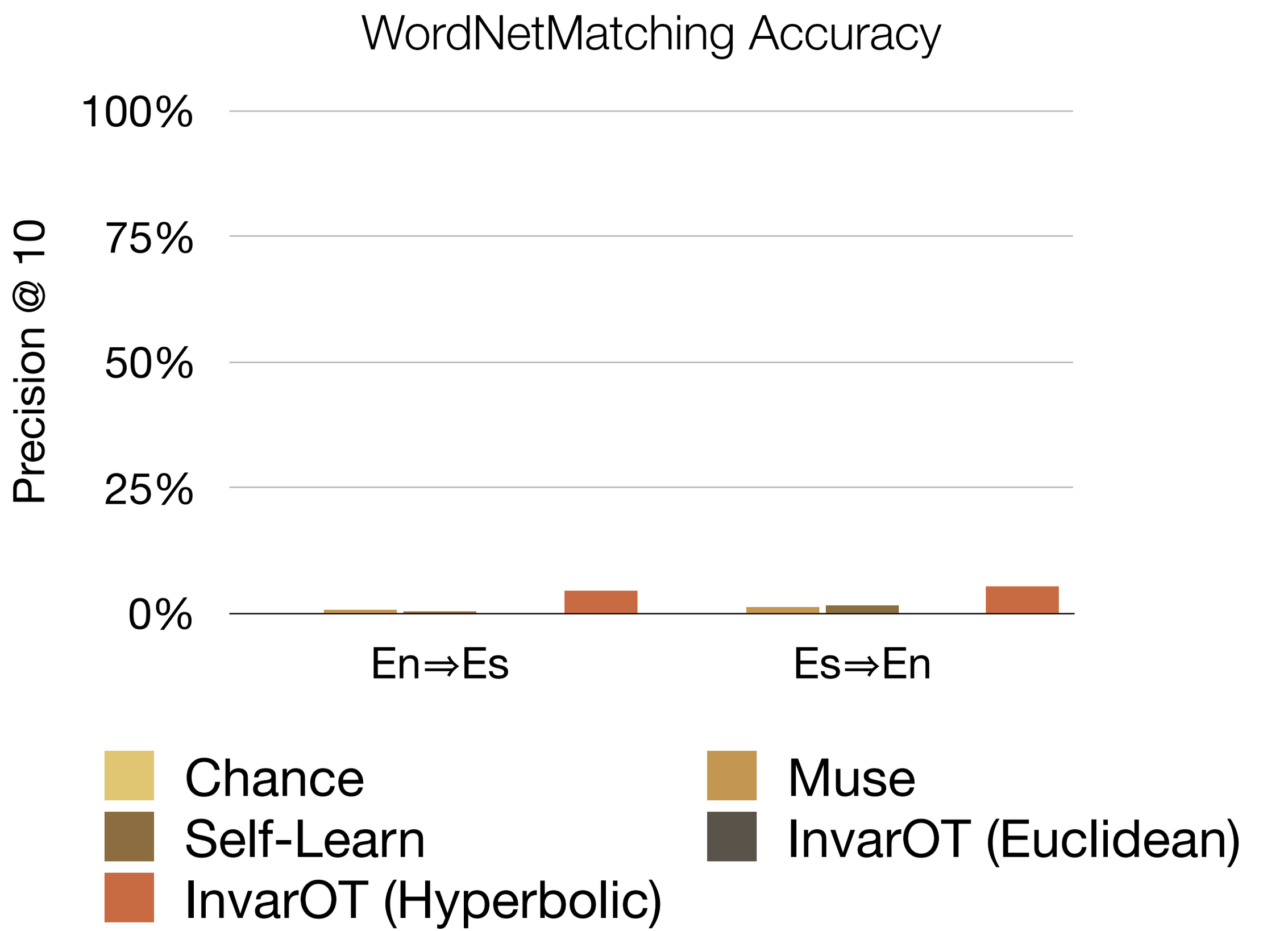
Chance
Self-Learn
InvarOT (Hyperbolic)
Muse
InvarOT (Euclidean)

Does the theory extend?

Does it work in practice?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Precision @ 10
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InvarOT (Hyperbolic)
Muse
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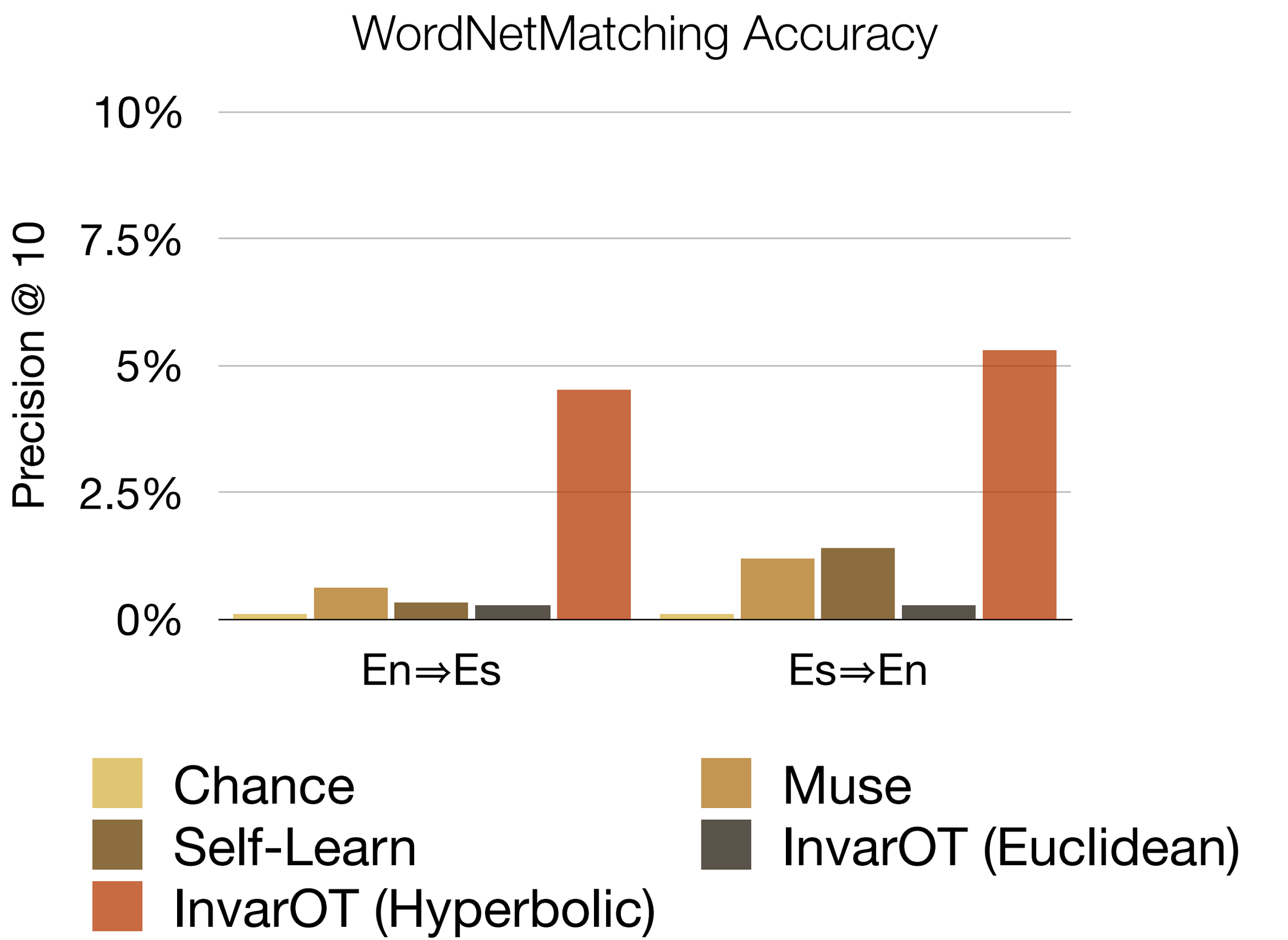
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Aligning Hyperbolic Spaces with Optimal Transport

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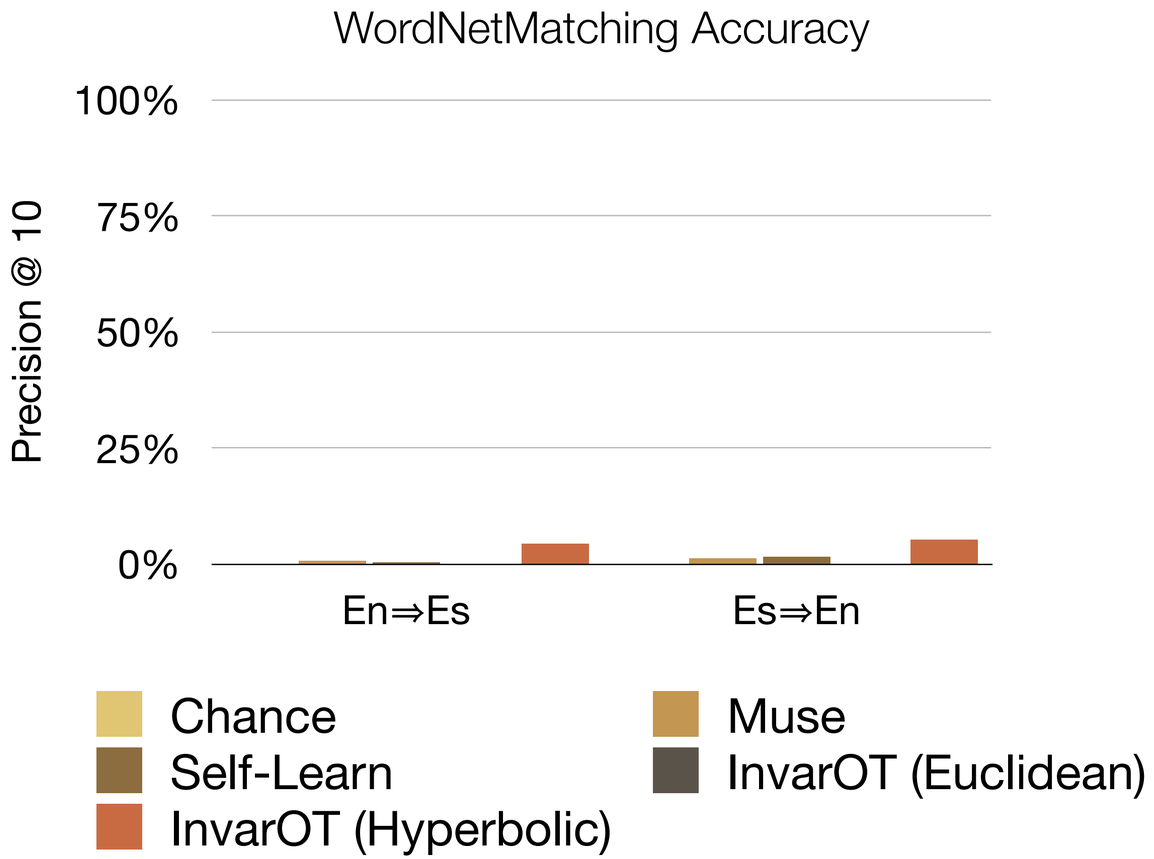

What went wrong?
Branch Invariance