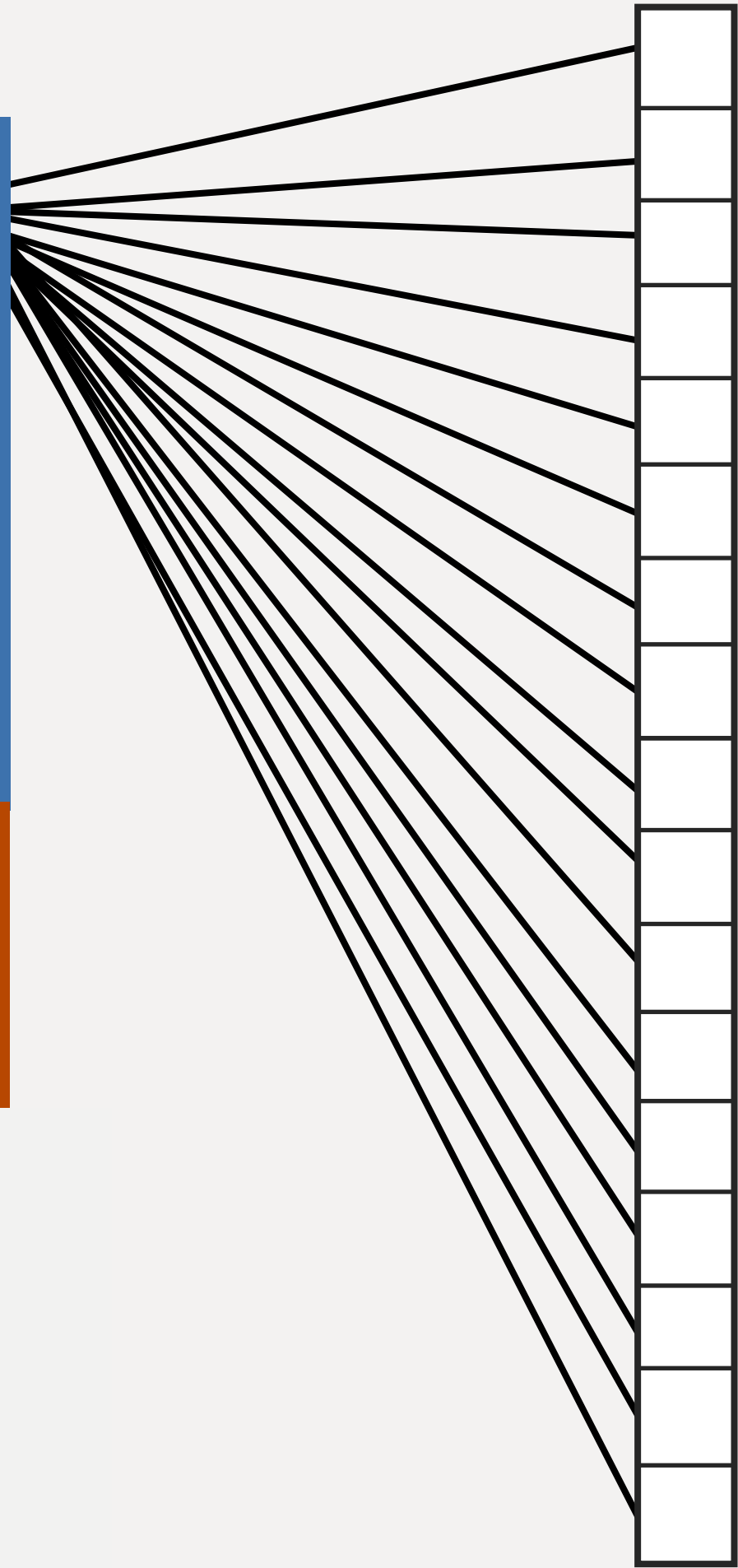
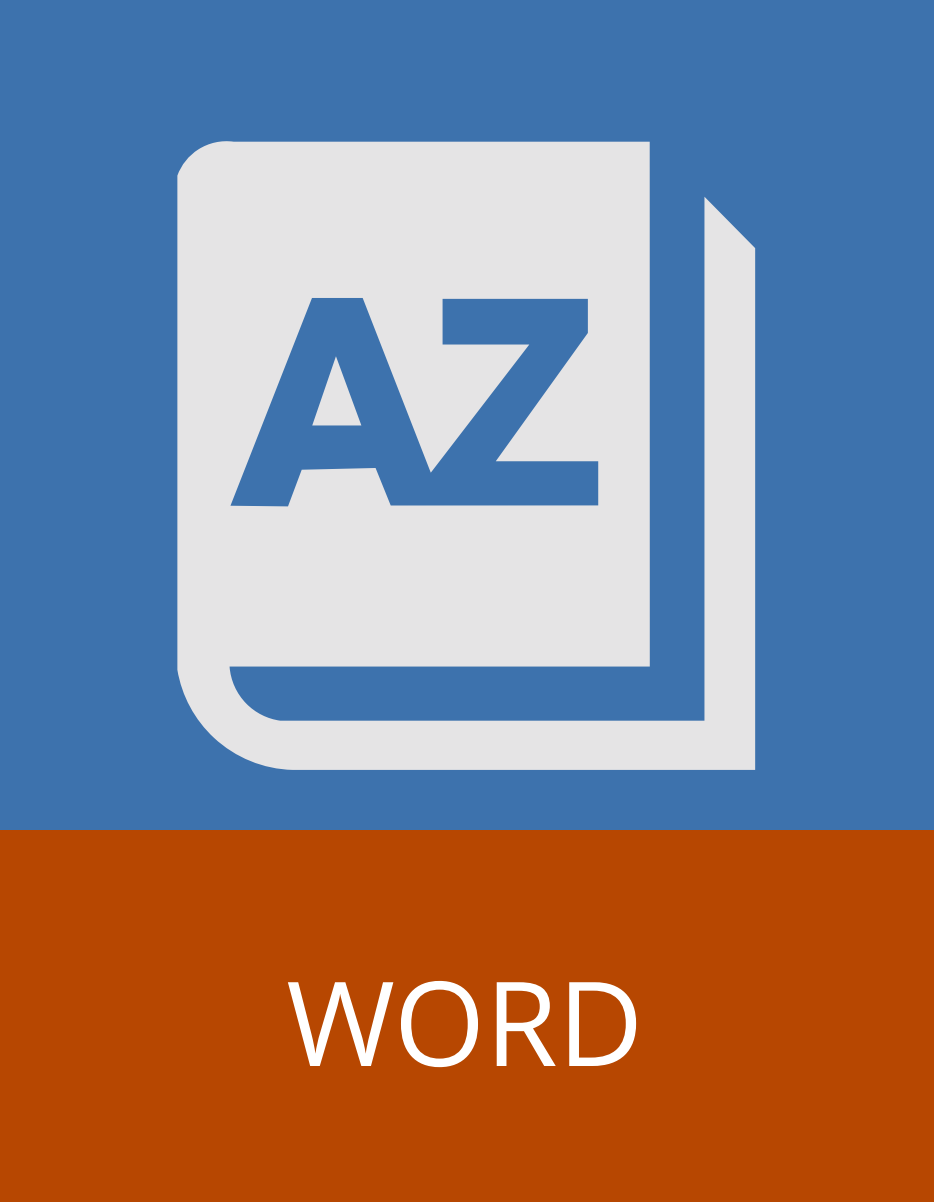
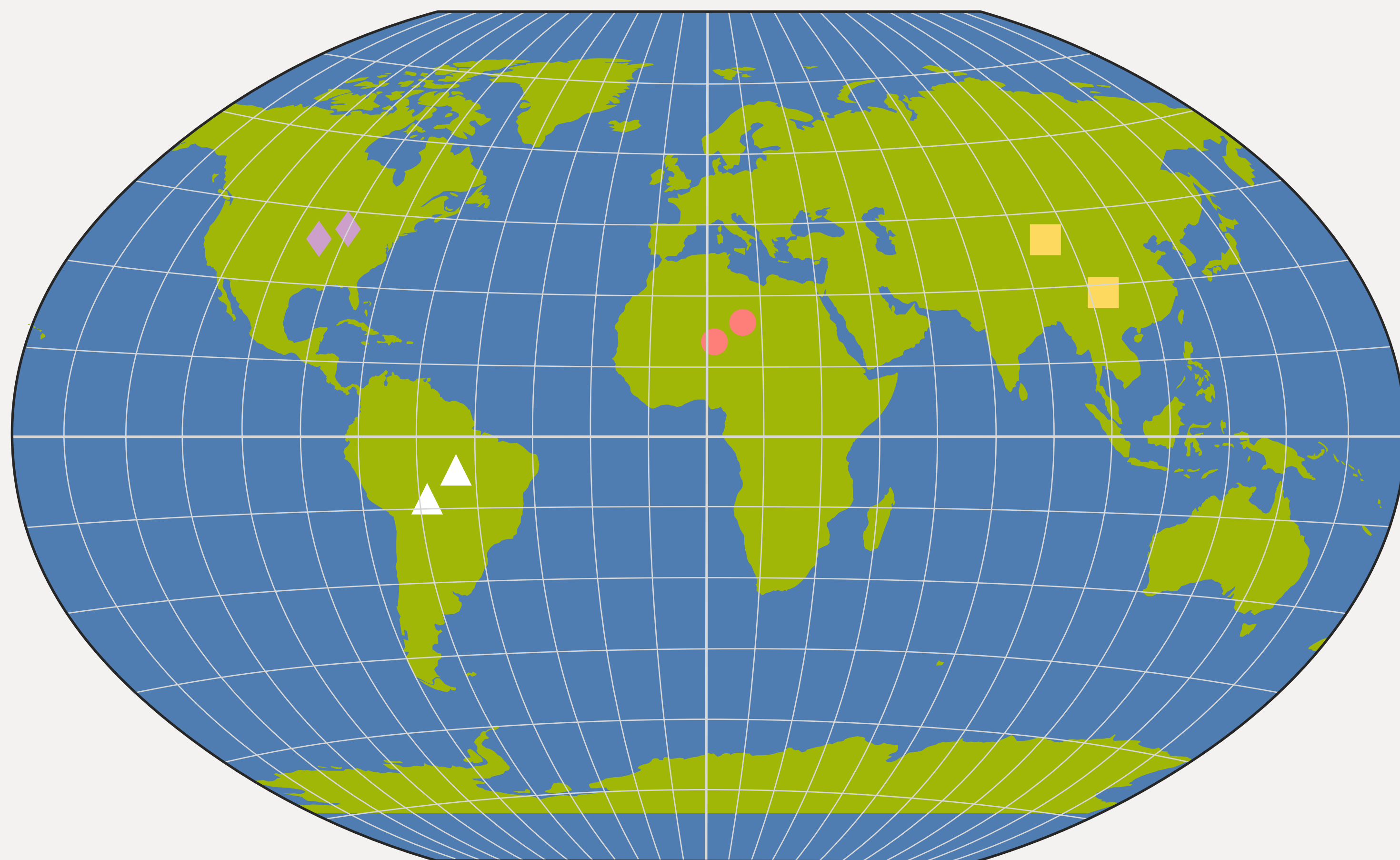


Introduction to the Concept of Word Vectors

Word Vectors

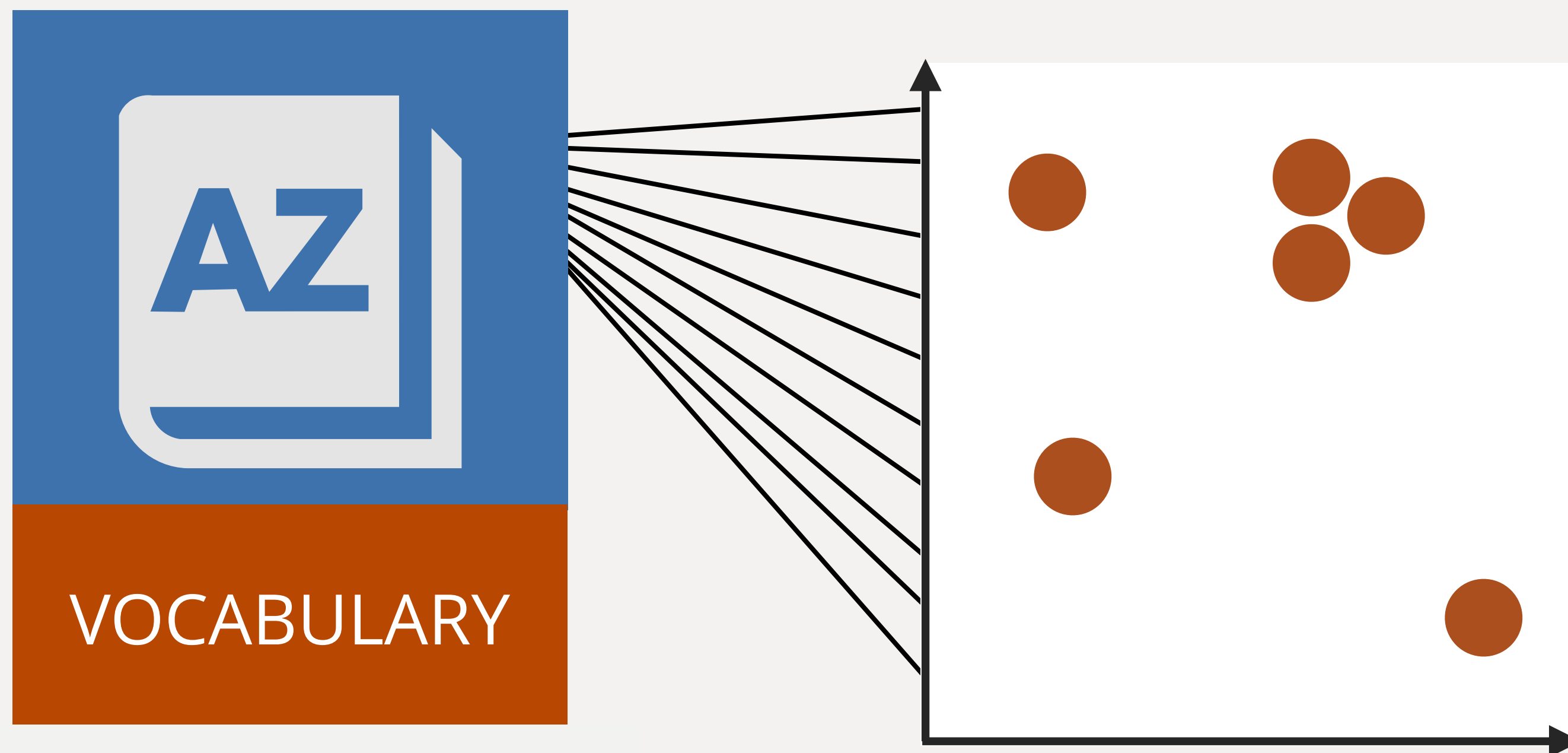






Similarities Based on Proximity

- Points nearby spatially are likely similar
- Points further away are likely different



Mapping Vocabulary

- Each word in vocabulary is mapped to a point in 2D space
- If two words are close they will be more related or synonymous
- If two words are further apart they will be more dissimilar

Word Mapping

1	2	3	4	•	•	•	v

vocabulary words

Word Mapping

	1	2	3	4	•	•	•	V
longitude								
latitude								

vocabulary words

Word Mapping

	lawyer 1	attorney 2	3	4	●	●	●	V
longitude	78.8986	79.0558						
latitude	35.9940	35.9132						

vocabulary words

Word Mapping

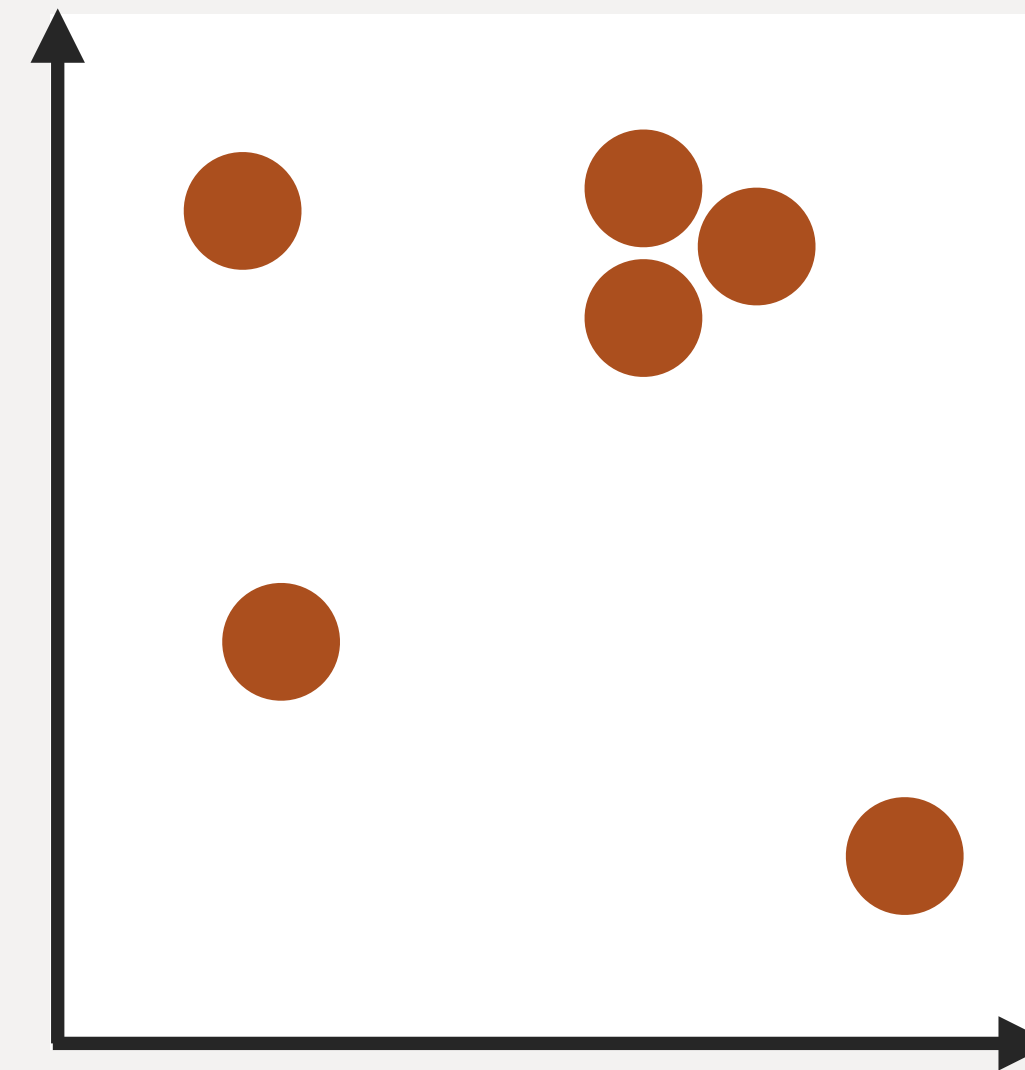
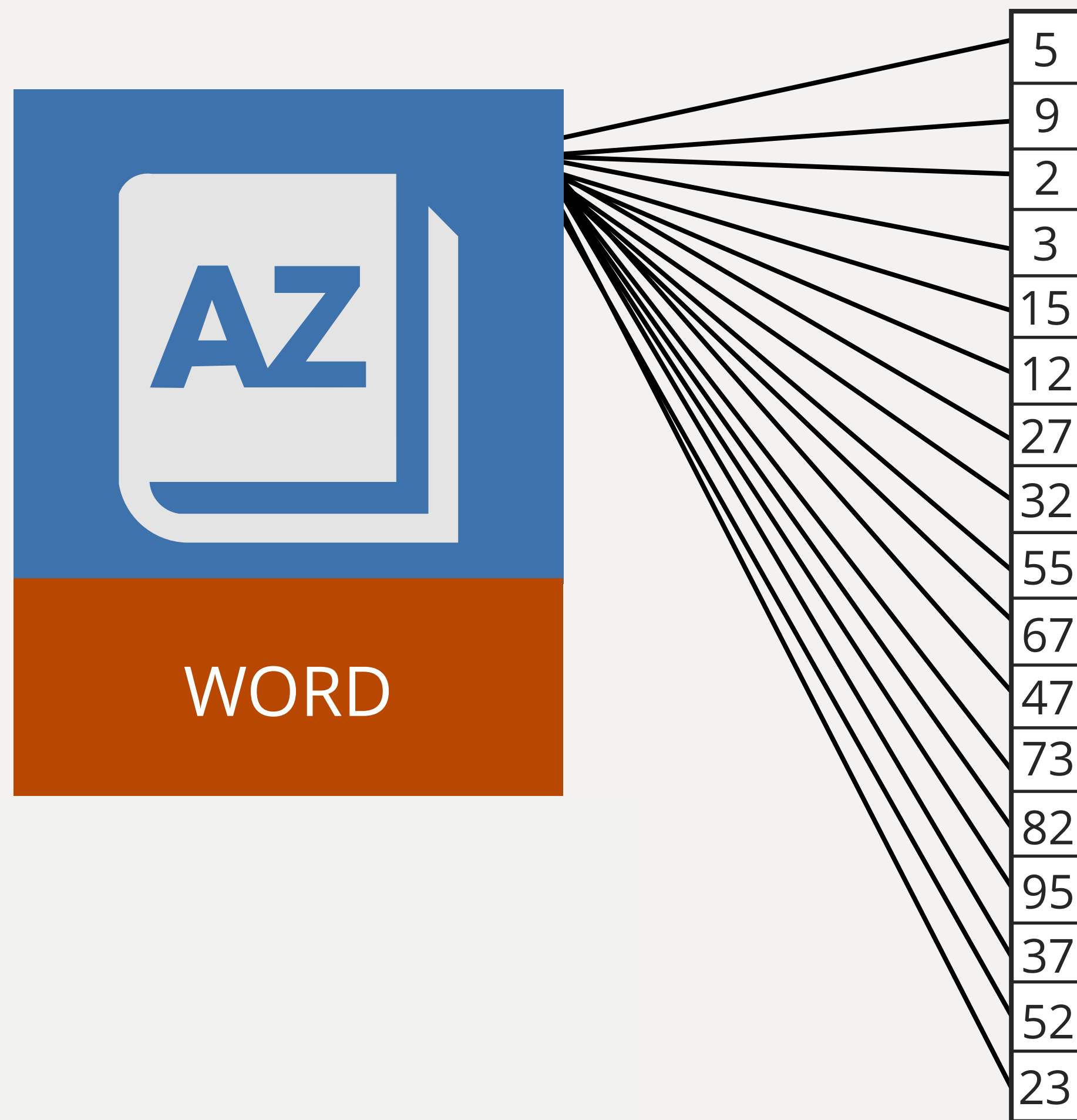
	lawyer 1	attorney 2	penguin 3	apple 4	•	•	•	V
longitude	78.8986	79.0558	135.0000	74.0060				
latitude	35.9940	35.9132	82.8628	40.7128				

vocabulary words



police

witness suspect prison victim arrest death murder investigation criminal guilty sentence prosecutor lawyer attorney case trial jury judge court justice



Word Vectors for Neural Text Modeling

- Words are not numbers and not well suited for computation
- Map each word to vectors
- Vectors may be more than two dimensions

Word Mapping

	lawyer 1	attorney 2	penguin 3	apple 4	•	•	•	V
longitude	78.8986	79.0558	135.0000	74.0060				
latitude	35.9940	35.9132	82.8628	40.7128				

vocabulary words