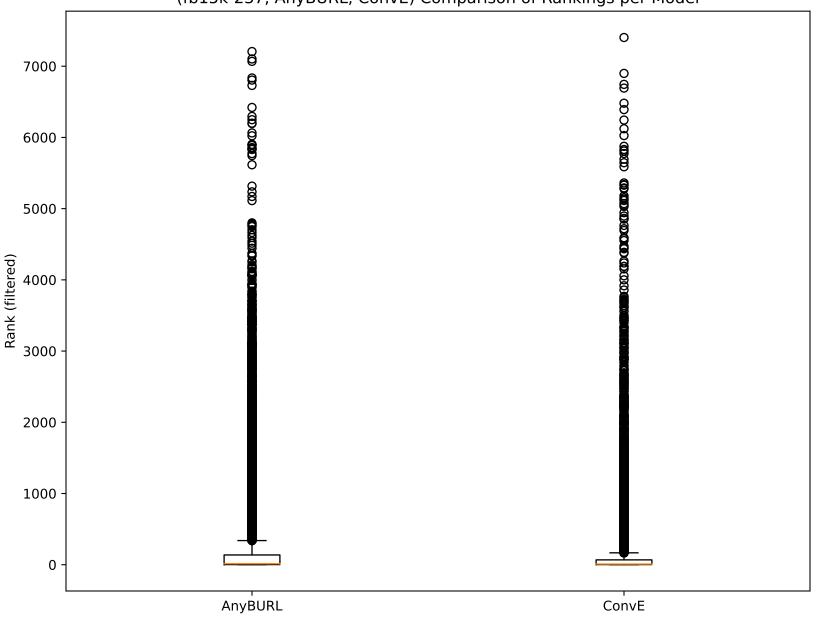
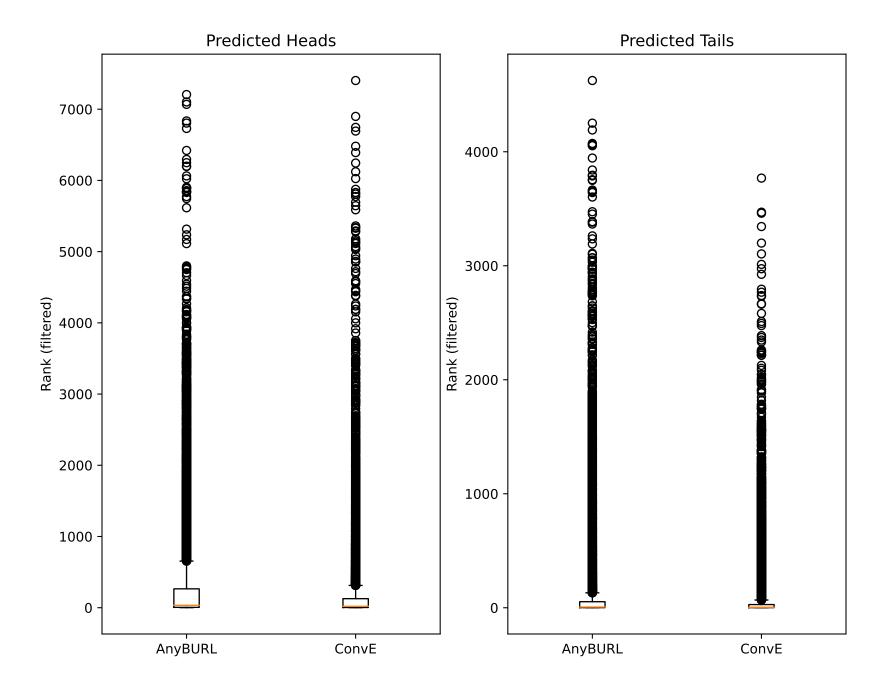
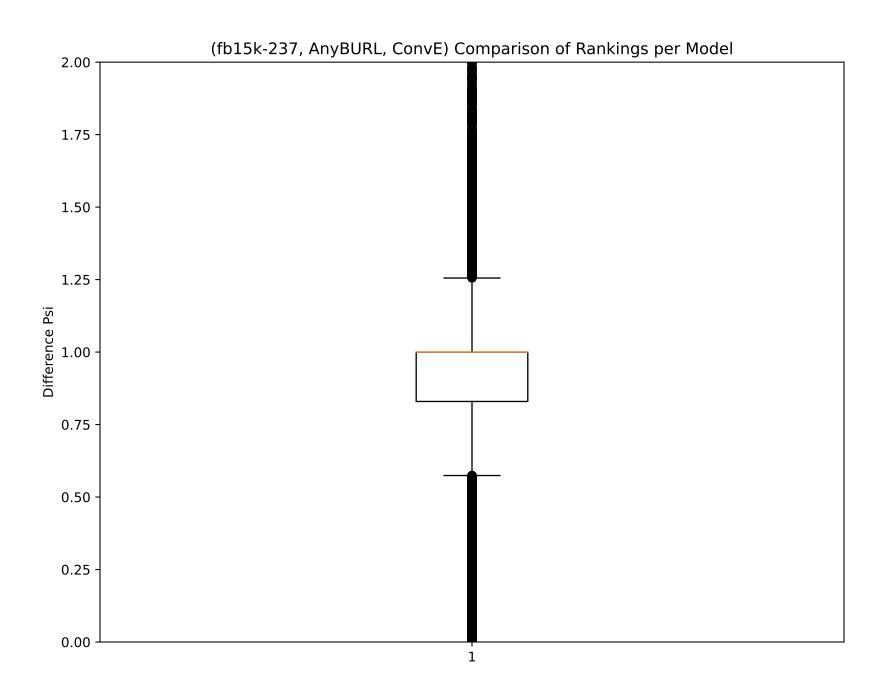
## (fb15k-237, AnyBURL, ConvE) Metrics

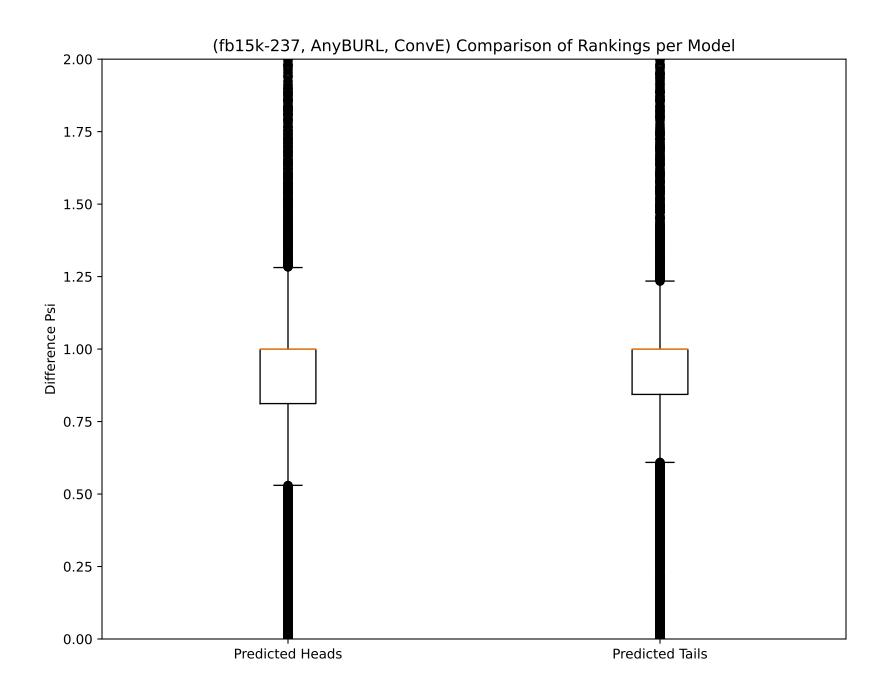
	MRR	Hits@1	Hits@10	Hits@100
AnyBURL	0.297	0.216	0.460	0.720
ConvE Combined	0.334	0.237	0.530	0.789
ConvE 1	0.351	0.257	0.542	0.799
ConvE 2	0.352	0.257	0.540	0.798
ConvE 3	0.352	0.259	0.542	0.796
ConvE 4	0.352	0.257	0.542	0.797
ConvE 5	0.352	0.259	0.541	0.798

(fb15k-237, AnyBURL, ConvE) Comparison of Rankings per Model

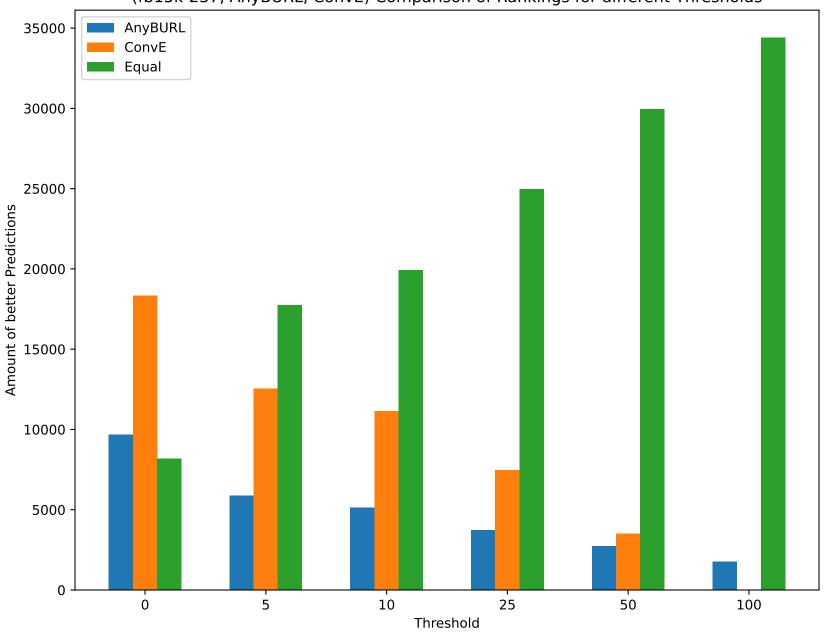




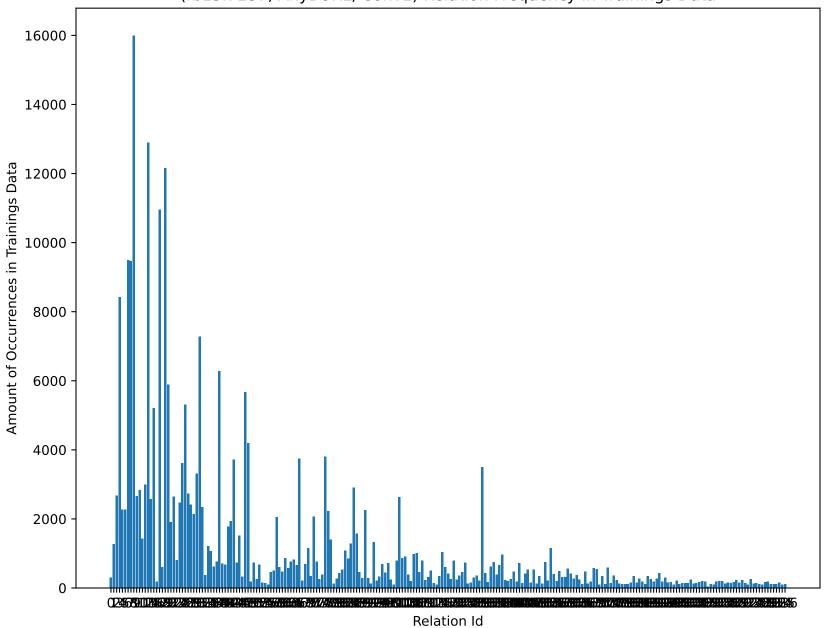




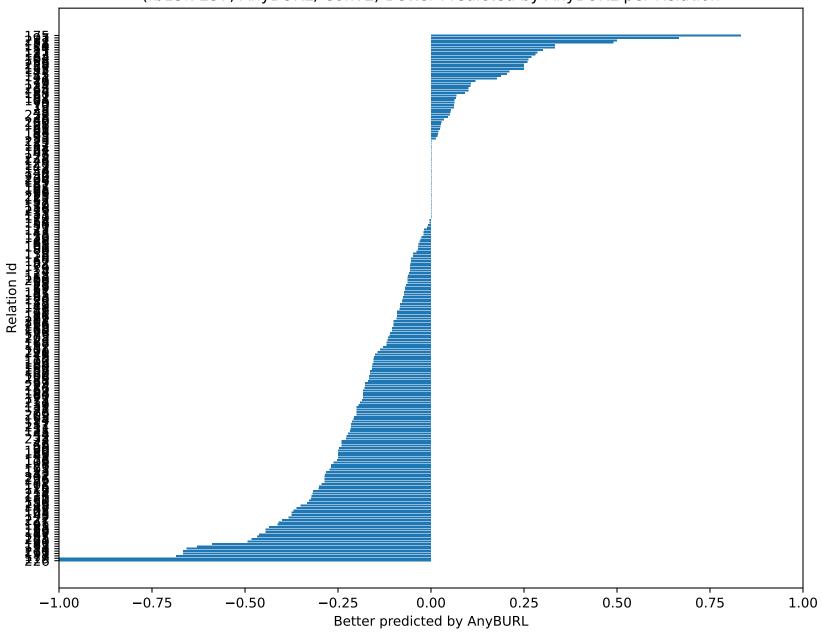
(fb15k-237, AnyBURL, ConvE) Comparison of Rankings for different Thresholds



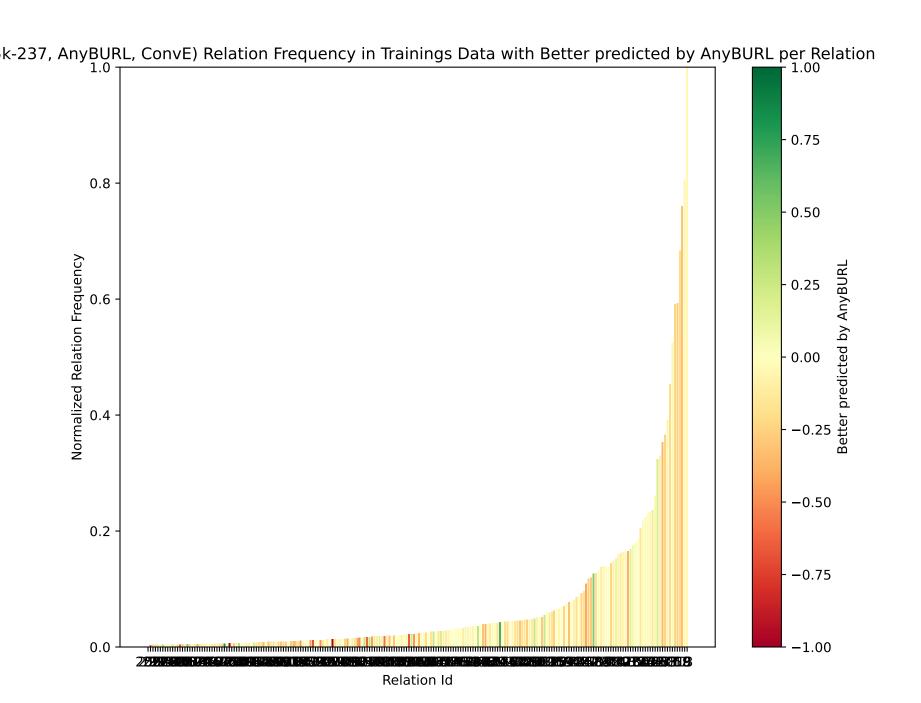
(fb15k-237, AnyBURL, ConvE) Relation Frequency in Trainings Data



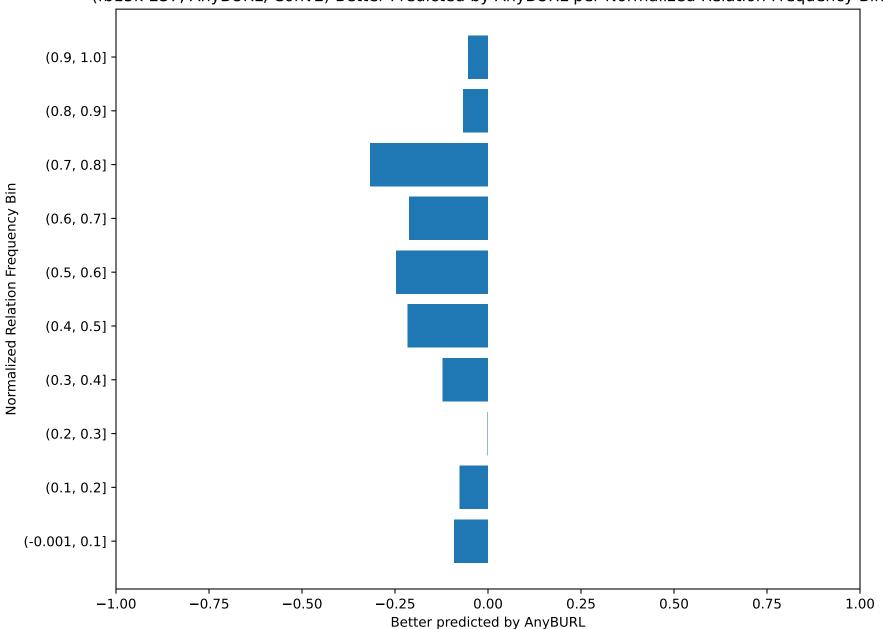
(fb15k-237, AnyBURL, ConvE) Better Predicted by AnyBURL per Relation



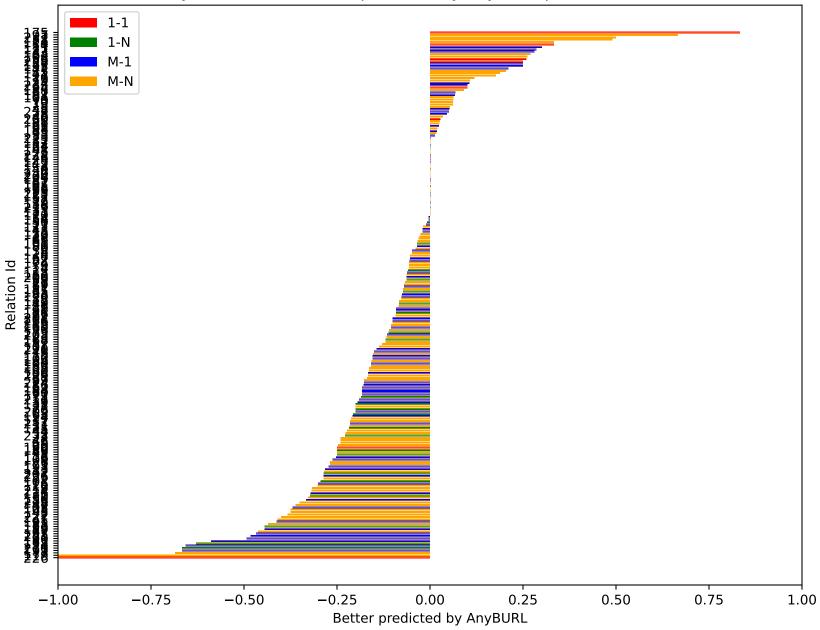
k-237, AnyBURL, ConvE) Better predicted by AnyBURL per Relation with Relation Frequency in Trainings Data 8.0 0.75 - 0.7 0.50 0.6 Normalized Relation Frequency Better predicted by AnyBURL 0.25 - 0.5 0.00 -0.25-0.500.2 -0.750.1 -1.000.0 Relation Id

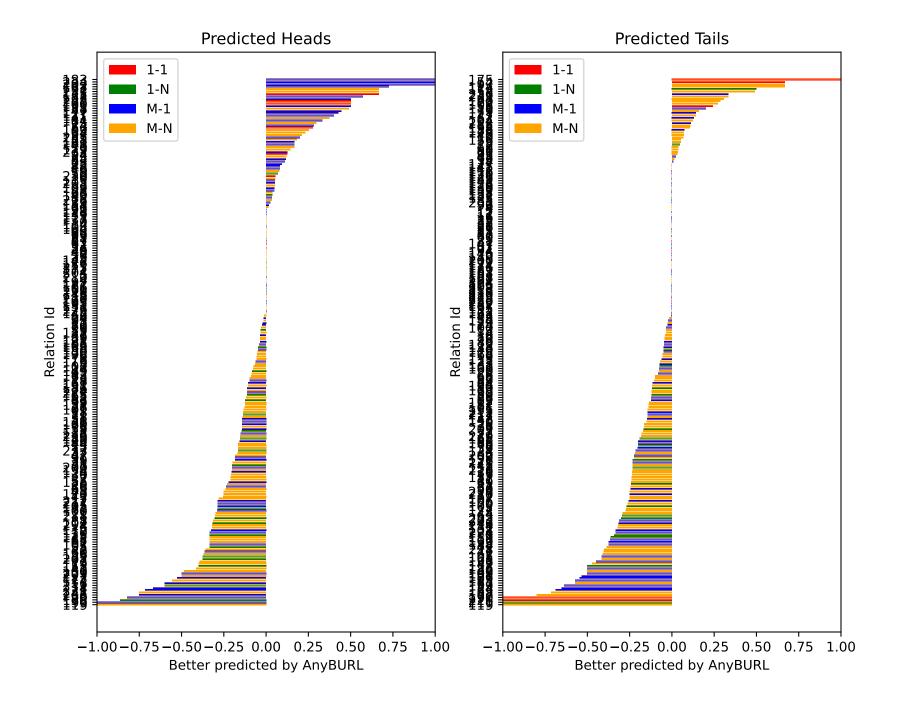


(fb15k-237, AnyBURL, ConvE) Better Predicted by AnyBURL per Normalized Relation Frequency Bin



(fb15k-237, AnyBURL, ConvE) Better predicted by AnyBURL per Relation with Relation Class



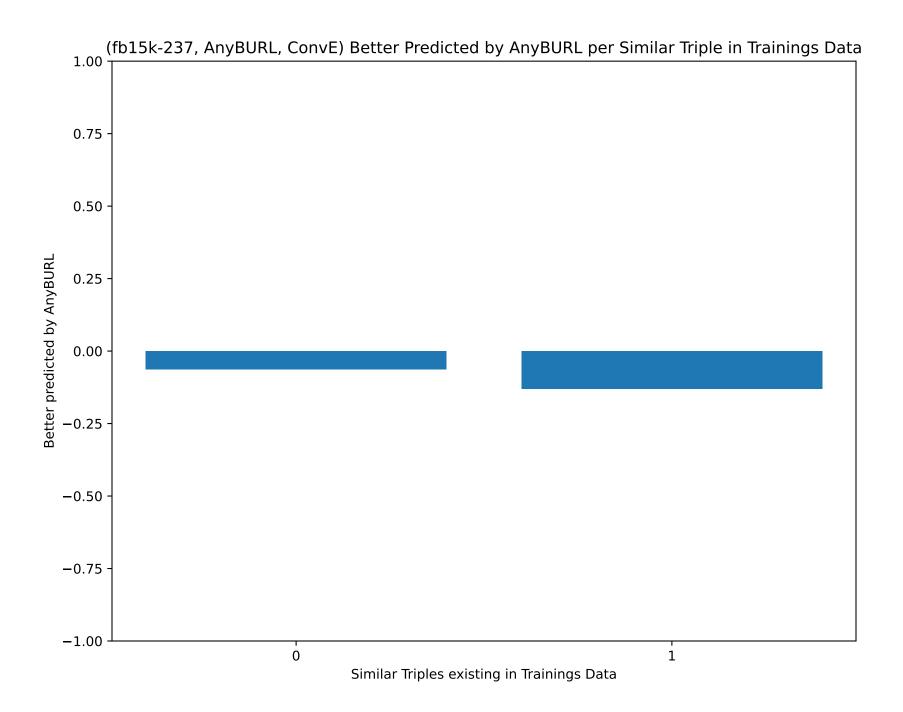


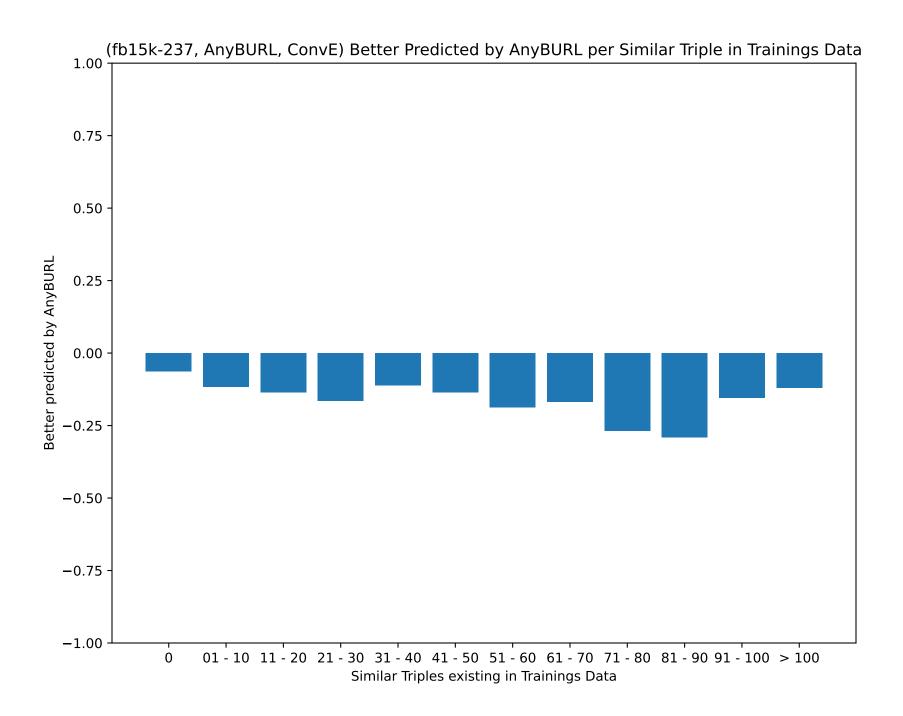
## (fb15k-237, AnyBURL, ConvE) Better predicted per Relation Class in %

	AnyBURL	ConvE	Equal
1-1	21.053%	6.579%	72.368%
1-N	13.859%	27.620%	58.521%
M-1	10.740%	15.578%	73.682%
M-N	11.367%	25.286%	63.347%

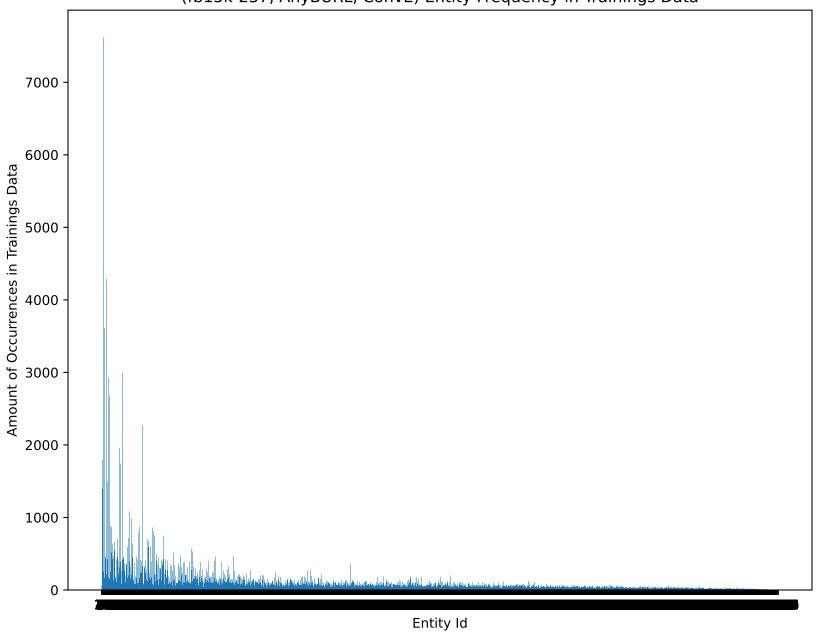
## (fb15k-237, AnyBURL, ConvE) Better predicted per Relation Class in % (cleaned)

	AnyBURL	ConvE	Equal
1-1	21.053%	6.579%	72.368%
1-N	16.197%	20.679%	63.124%
M-1	7.208%	15.888%	76.904%
M-N	11.367%	25.286%	63.347%





(fb15k-237, AnyBURL, ConvE) Entity Frequency in Trainings Data



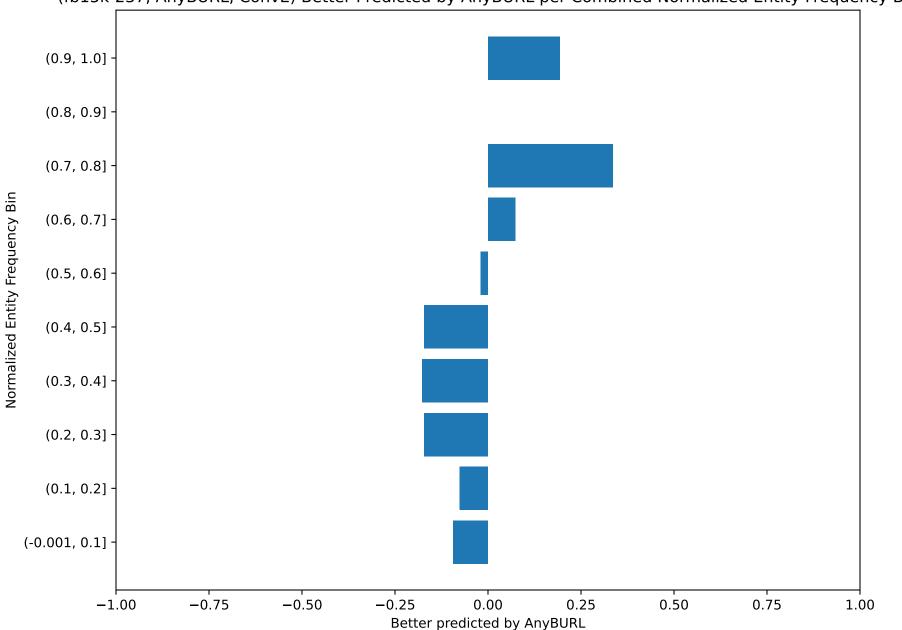
(fb15k-237, AnyBURL, ConvE) Better Predicted by AnyBURL per Normalized Head Frequency Bin (0.9, 1.0] (0.8, 0.9] -(0.7, 0.8] -Normalized Entity Frequency Bin (0.6, 0.7] -(0.5, 0.6](0.4, 0.5](0.3, 0.4] -(0.2, 0.3] -(0.1, 0.2] (-0.001, 0.1] -1.00-0.75-0.50-0.250.00 0.25 0.50 0.75

Better predicted by AnyBURL

1.00

(fb15k-237, AnyBURL, ConvE) Better Predicted by AnyBURL per Normalized Tail Frequency Bin (0.9, 1.0] (0.8, 0.9] -(0.7, 0.8] -Normalized Entity Frequency Bin (0.6, 0.7] -(0.5, 0.6](0.4, 0.5](0.3, 0.4] -(0.2, 0.3] -(0.1, 0.2](-0.001, 0.1] -0.75-0.50-0.250.00 0.25 0.50 0.75 -1.001.00 Better predicted by AnyBURL

(fb15k-237, AnyBURL, ConvE) Better Predicted by AnyBURL per Combined Normalized Entity Frequency Bin



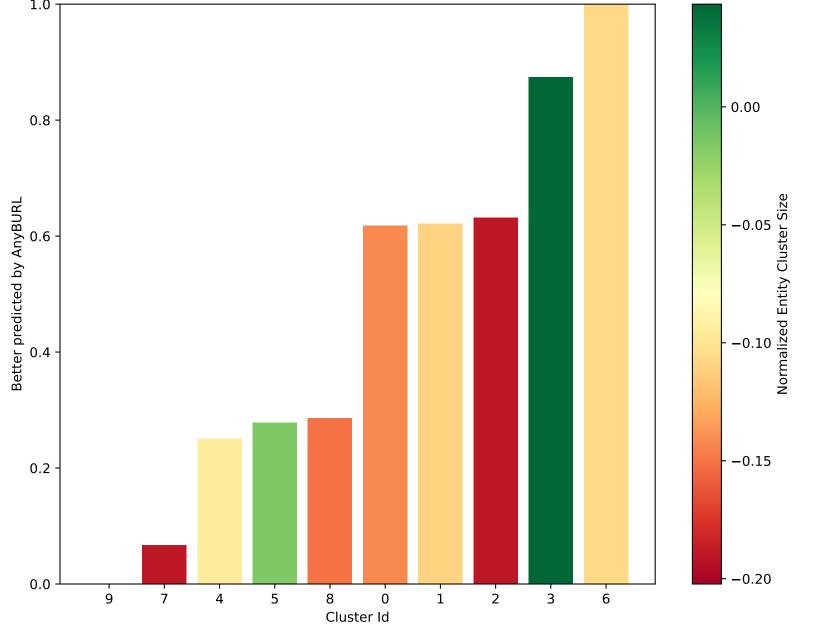
37, AnyBURL, ConvE) Better predicted by AnyBURL per Head Cluster with Normalized Entity Cluster Size (n=10) 0.75 - 0.8 0.50 Normalized Entity Cluster Size Better predicted by AnyBURL 0.25 0.00 -0.25-0.500.2 -0.75L 0.0 -1.002 ż 0 1 Cluster Id 5 8 3 9 6 4

37, AnyBURL, ConvE) Better predicted by AnyBURL per Head Cluster with Normalized Entity Cluster Size (n=25) 0.75 - 0.8 0.50 Better predicted by AnyBURL 0.25 0.00 -0.25-0.500.2 -0.75-1.000.0 16 20 6 23 0 2 17 9 12 21 1 19 13 11 8 3 18 5 22 10 4 15 7 14 24 Cluster Id

37, AnyBURL, ConvE) Better predicted by AnyBURL per Head Cluster with Normalized Entity Cluster Size (n=100) 0.75 - 0.8 0.50 Normalized Entity Cluster Size Better predicted by AnyBURL 0.25 - 0.6 0.00 -0.25 -0.500.2 -0.75-1.000.0 2452B34D578B176D45559B74963896B836B3A589468B953G3B953G352B595B59635749B282495142D9856648267856B259949

Cluster Id

37, AnyBURL, ConvE) Better predicted by AnyBURL per Head Cluster with Normalized Entity Cluster Size (n=10)



237, AnyBURL, ConvE) Better predicted by AnyBURL per Tail Cluster with Normalized Entity Cluster Size (n=10) 0.75 - 0.8 0.50 Normalized Entity Cluster Size Better predicted by AnyBURL 0.25 0.00 -0.25-0.500.2 -0.75L 0.0 -1.007 2 9 6 Cluster Id 3 8 5 1 Ó 4

237, AnyBURL, ConvE) Better predicted by AnyBURL per Tail Cluster with Normalized Entity Cluster Size (n=25) 0.75 - 0.8 0.50 Better predicted by AnyBURL 0.25 0.00 -0.25-0.50- 0.2 -0.75-1.000.0 0 12 8 1 18 2 17 22 6 11 16 19 9 21 20 23 10 15 14 3 5 13 7 4 24 Cluster Id

