Naturalistic task framing improves older adults' ability to infer and navigate complex associative networks: Supplementary Slides

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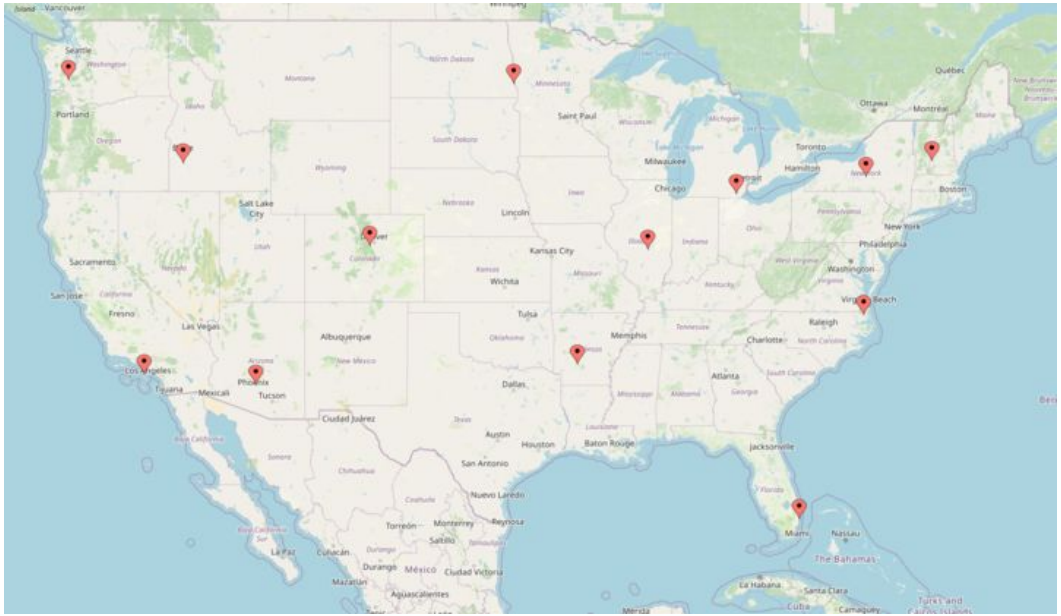
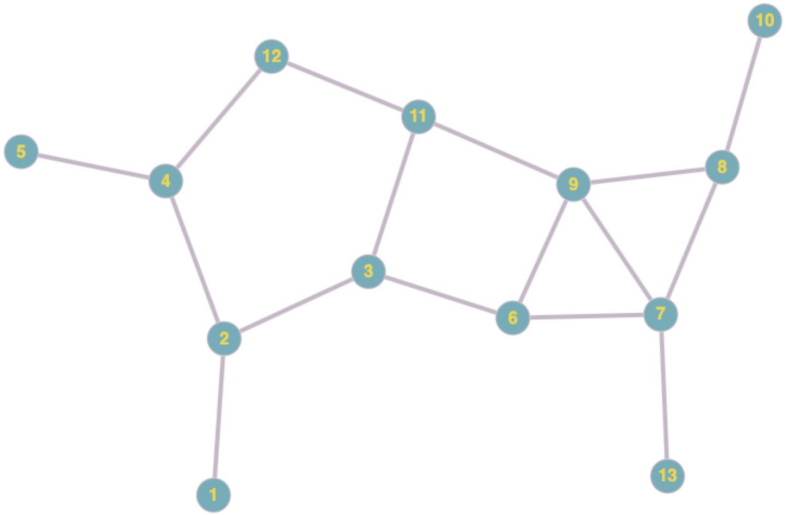
Naturalistic Cities on a US Map



City Validation data (26 YA, 24 OA)

	stimulus	familiar_rating	unique_rating	memorable_rating
0	Santa Monica, California	4.714286	3.190476	4.428571
1	Athens, Georgia	4.615385	3.115385	4.384615
2	Cambridge, Massachusetts	4.444444	2.611111	4.000000
3	Boise, Idaho	4.400000	3.700000	3.600000
4	Pasadena, California	4.360000	3.480000	4.000000
5	Tallahassee, Florida	4.333333	3.833333	4.166667
6	Reno, Nevada	4.300000	3.850000	4.200000
7	Boulder, Colorado	4.250000	2.700000	3.650000
8	Syracuse, New York	4.214286	3.750000	3.750000
9	Concord, New Hampshire	4.047619	2.333333	2.809524
10	Toledo, Ohio	4.040000	3.200000	3.560000
11	Scottsdale, Arizona	3.965517	2.724138	3.310345
12	Salem, Oregon	3.952381	2.904762	3.761905
13	Berkeley, California	3.916667	3.166667	3.708333
14	Decatur, Illinois	3.842105	3.473684	3.263158
15	New Haven, Connecticut	3.730769	2.423077	3.115385
16	Norfolk, Virginia	3.708333	3.125000	3.208333
17	Olympia, Washington	3.692308	2.846154	3.653846
18	Fargo, North Dakota	3.636364	3.136364	3.590909
19	Ann Arbor, Michigan	3.636364	3.681818	3.636364
20	Palo Alto, California	3.608696	4.130435	3.565217
21	Topeka, Kansas	3.600000	3.800000	3.400000
22	Fort Wayne, Indiana	3.586207	2.482759	2.793103
23	Dover, Delaware	3.400000	2.750000	3.150000
24	Gainesville, Florida	3.380952	2.380952	2.285714
25	Abilene, Texas	3.320000	3.560000	3.320000
26	Annapolis, Maryland	3.300000	3.266667	3.433333
27	Carson City, Nevada	3.285714	3.107143	3.178571
28	Bozeman, Montana	3.285714	4.047619	3.476190
29	Burlington, Vermont	3.272727	2.318182	2.772727
30	Yakima, Washington	3.200000	4.150000	3.400000
31	Peoria, Illinois	3.120000	3.480000	3.120000
32	Helena, Montana	3.111111	2.703704	3.333333
33	Montpelier, Vermont	3.095238	4.000000	2.904762
34	Cheyenne, Wyoming	3.090909	3.227273	3.363636
35	Stamford, Connecticut	3.080000	2.800000	2.880000
36	Terre Haute, Indiana	3.080000	4.240000	3.240000
37	Youngstown, Ohio	3.000000	2.684211	3.052632
38	Champaign, Illinois	2.961538	2.923077	3.269231
39	Ithaca, New York	2.937500	3.812500	3.375000
40	Fort Collins, Colorado	2.916667	2.666667	2.625000
41	Frankfort, Kentucky	2.888889	2.222222	2.666667
42	Newport News, Virginia	2.714286	3.619048	3.476190
43	Pueblo, Colorado	2.695652	3.434783	3.130435
44	Muncie, Indiana	2.545455	3.909091	3.090909
45	Marquette, Michigan	2.531250	3.843750	3.125000
46	Altoona, Pennsylvania	2.500000	4.115385	3.115385
47	Dubuque, Iowa	2.454545	3.772727	2.590909
48	Bellingham, Washington	2.450000	3.350000	2.450000
49	Las Cruces, New Mexico	2.434783	3.608696	2.956522
50	Rock Springs, Wyoming	2.320000	2.400000	2.920000
51	McKinney, Texas	2.235294	2.588235	2.529412
52	Dothan, Alabama	2.000000	3.500000	2.545455
53	Hagerstown, Maryland	1.750000	3.666667	2.916667

Current Graph Statistics

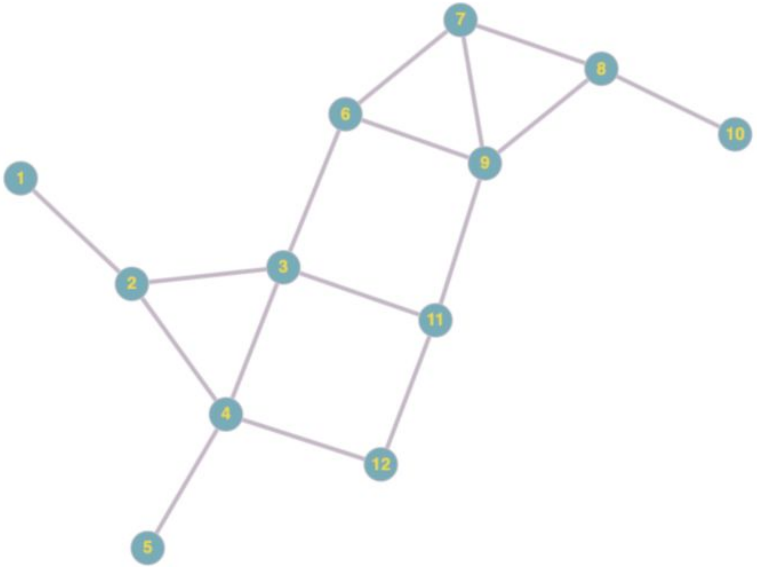


Edges Apart	# of Pairs
2 Edges	22
3 Edges	19
4 Edges	11
5 Edges	7
6 Edges	3

Edge Diff	# of Pairs
1 Edge Diff	167
2 Edge Diff	119
3 Edge Diff	56
4 Edge Diff	13

Edge Diff Pairs	# of Pairs
2,3	130
3,4	61
4,5	28
5,6	12
2,4	69
3,5	38
4,6	12
2,5	37
3,6	19
2,6	13

Rmus et al. 2022 Graph



Edges Apart	# of Pairs
2 Edges	20
3 Edges	16
4 Edges	8
5 Edges	4
6 Edges	2

Edge Diff	# of Pairs
1 Edge Diff	167
2 Edge Diff	73
3 Edge Diff	31
4 Edge Diff	9

Edge Diff Pairs	# of Pairs
2,3	106
3,4	41
4,5	14
5,6	6
2,4	46
3,5	19
4,6	8
2,5	20
3,6	11
2,6	9

Current Graph modeled on an Autoencoder