

Within List Dynamics

Initially, we evaluated whether SAT functions for neutral and emotional trials exhibited the same patterns observed in previous studies (McElree, 2006). To do so, SAT functions for the 3 SPs were fit with sets of nested models that systematically varied the 3 parameters in Equation 1. Models ranged from a null model consisting of functions fitted with a single asymptote (λ), rate (β), and intercept (δ) across SPs, to a fully saturated model in which each SP function was fit with a unique asymptote (λ), rate (β), and intercept (δ). The null model that allocated a single asymptote (λ), rate (β), and intercept (δ) was significantly improved by a $3\lambda-1\beta-1\delta$ model that allocated three unique asymptotes for the three serial positions (*Adjusted-R²* for the average data increased from .909 to .930 and from .914 to .937 for emotional and neutral trials respectively), with a reliable improvement in the *Adjusted-R²* statistics across our participants [$t(15) = 2.57$, $P < .022$ for emotional trials; $t(15) = 2.58$, $P < .021$ for neutral trials]. In addition, consistent with previous research (e.g., McElree & Doshier, 1989; Öztekin & McElree, 2007; 2010) allocating a unique rate parameter for the most recent serial position further improved the model (*Adjusted-R²* for the average data increased from .930 to .951 and from .937 to .958 for emotional and neutral trials respectively), yielding a further significant improvement on the *Adjusted-R²* statistics across participants [$t(15) = 3.39$, $P < .004$ for emotional trials; $t(15) = 3.41$, $P < .004$ for neutral trials].

Accordingly, among these models, $3\lambda-2\beta-1\delta$ and $3\lambda-1\beta-2\delta$ provided the best fit of the empirical data. Similar patterns were observed for both stimuli types when dynamics of retrieval were assessed as a function of SP. Specifically, The $3\lambda-1\beta-2\delta$ model allocated a common rate to all serial positions, one intercept for SPs 1–2, and another intercept for SP 3. The intercept for the most recently studied probe was significantly faster compared to the intercept for SPs 1–2, [$t(15)$

= 5.18, $P < 0.01$, $d = 1.543$ for emotional trials, and $t(15) = 7.59$, $P < 0.01$, $d = 1.115$ for neutral trials]. *3l-2b-1d* model allocated a separate asymptote to each serial position, one rate for SPs 1–2, another rate for SP 3 (the most recently studied item), and a common intercept for all the three serial positions. The rate for the last SP (SP 3) was faster compared to SPs 1 and 2 for both emotional [$t(15) = -6.38$, $P < 0.01$, $d = 1.775$] and neutral trials [$t(15) = -5.58$, $P < 0.01$, $d = 1.846$]. In addition, the intercept parameter was slower for emotional compared to neutral trials, $t(15) = -2.31$, $P < 0.036$, $d = 0.580$. This finding is further evaluated in the Results section under; Within and Composite List Dynamics. Parameter estimates for each serial position across participants as well as the average data for E and N trials are reported in Tables S1A, S1B and S2A, S2B.

In summary, the data could be best accounted by two models that allocated faster speed of retrieval (by allocating either two intercepts or two rates) for the most recently studied image across both emotional and neutral study material. These results are consistent with previous research that implicates the most recent item benefits from a privileged state in the focus of attention (McElree & Doshier, 1993; Öztekin et al., 2012; Öztekin & McElree, 2007, 2010; Wickelgren et al., 1980) and extends this phenomenon to emotional study material.

Table S1AParameter estimates from the 3λ - 2β - 1δ serial position fits for emotional trials

	Parameters						
	λ_1	λ_2	λ_3	β_1	β_2	δ	R^2
Average	3.67	3.98	3.98	3.52	6.05	.306	0.95
Participants							
1	3.58	4.11	4.1	5.61	9.05	.359	.9
2	3.97	4.11	4.	3.47	6.18	.378	.942
3	4.17	4.15	4.05	6.07	13.73	.360	.949
4	3.90	4.27	4.08	5.56	11.93	.123	.773
5	3.47	3.70	3.82	13.98	15	.510	.94
6	3.60	3.73	3.92	2.67	2.46	.373	.966
7	3.79	4.25	4.14	4.46	5.41	.395	.959
8	3.31	3.73	3.84	4.97	8.29	.468	.916
9	3.86	3.66	4.	6.82	14.92	.384	.939
10	3.25	4.05	3.91	2.91	6.97	.366	.921
11	3.53	4.00	4.27	5.69	15	.334	.885
12	4.19	4.00	3.97	4.11	10.85	.284	.946
13	2.90	3.63	3.91	6.2	15.4	.366	.938
14	3.41	3.77	3.80	3.74	7.40	.288	.739
15	3.37	3.78	3.92	4.44	9.67	.357	.84
16	3.90	4.15	4.17	5.32	15	.354	.95

Note. Average parameters are based on data averaged over participants (not the average of individual parameters).

TableS1BParameter estimates from the 3λ - 2β - 1δ serial position fits for neutral trials

	Parameters						
	λ_1	λ_2	λ_3	β_1	β_2	δ	R^2
Average	3.70	3.98	4.02	3.69	6.03	.29	.957
Participants							
1	3.98	4.18	4.23	6.79	15	.346	.956
2	3.40	3.97	3.89	3.54	6.59	.368	.899
3	3.88	4.35	4.02	5.77	12.14	.299	.941
4	4.13	3.76	4.06	4.68	10.2	.087	.670
5	3.38	3.65	3.95	8.35	15.00	.461	.917
6	3.50	3.86	3.63	4.02	5.54	.406	.932
7	3.60	4.13	3.94	3.93	5.60	.371	.923
8	3.11	3.61	4.19	7.27	6.04	.406	.88
9	4.16	3.96	4.19	5.07	7.59	.340	.902
10	3.34	3.93	4.03	2.72	4.27	.313	.924
11	3.33	3.92	4.11	8.26	14.98	.291	.88
12	3.91	4.13	4.13	6.17	9.98	.265	.971
13	3.53	3.95	4.06	4.19	8.29	.324	.947
14	3.98	3.83	3.80	3.28	12.70	.376	.890
15	3.37	3.65	3.85	3.63	5.02	.305	.842
16	4	4.5	4.26	5.84	15	.354	.901

Note. Average parameters are based on data averaged over participants (not the average of individual parameters).

Table S2AParameter estimates from the 3λ - 1β - 2δ serial position fits for emotional trials

	Parameters						
	λ_1	λ_2	λ_3	β_1	δ_1	δ_2	R^2
Average	3.61	3.91	3.99	5.37	.37	.285	.976
Participants							
1	3.56	4.09	4.13	6.76	.38	.328	.914
2	3.9	4.05	4.11	4.23	.4	.3415	.947
3	4.15	4.12	4.12	7.25	.38	.295	.976
4	3.86	4.23	4.12	7.04	.16	.01	.763
5	3.48	3.71	3.79	15	.52	.503	.947
6	3.63	3.75	3.87	2.58	.373	.371	.965
7	3.88	4.34	4.09	3.77	.38	.297	.956
8	3.27	3.72	4.05	3.93	.4	.401	.907
9	3.86	3.66	4.13	6.59	.38	.326	.931
10	3.15	3.94	3.91	5.35	.47	.317	.949
11	3.42	3.84	4.25	10.4	.37	.298	.926
12	4.08	3.9	4.08	6.9	.35	.251	.954
13	2.83	3.53	4.06	7.78	.37	.328	.907
14	3.34	3.69	3.95	4.46	.3	.238	.72
15	3.3	3.69	3.9	8.28	.42	.331	.902
16	3.82	4.07	4.23	7.5	.38	.287	.953

Note. Average parameters are based on data averaged over participants (not the average of individual parameters).

Table S2BParameter estimates from the 3λ - 1β - 2δ serial position fits for neutral trials

	Parameters						
	λ_1	λ_2	λ_3	β_1	δ_1	δ_2	R^2
Average	3.63	3.91	4	5.95	.371	.287	.967
Participants							
1	3.93	4.11	4.17	9.93	.376	.282	.971
2	3.31	3.89	3.93	5.01	.408	.327	.93
3	3.79	4.26	4.04	10.88	.36	.291	.967
4	4.07	3.71	4.15	6.14	.143	.01	.655
5	3.35	3.62	3.89	15	.5	.447	.94
6	3.45	3.80	3.72	4.49	.41	.396	.928
7	3.63	4.15	3.92	4.07	.387	.289	.94
8	3.09	3.55	4.21	7.68	.4	.448	.89
9	4.10	3.90	4.15	7.87	.39	.335	.929
10	3.25	3.84	4.01	4.29	.4	.308	.942
11	3.28	3.87	4.19	9.66	.308	.261	.853
12	3.86	4.07	4.23	7.17	.32	.295	.965
13	3.47	3.89	4.16	5.19	.349	.266	.951
14	3.85	3.72	4.	4.14	.393	.249	.897
15	3.37	3.66	3.88	4.07	.332	.264	.865
16	3.85	4.22	4.17	13.30	.405	.32	.97

Note. Average parameters are based on data averaged over participants (not the average of individual parameters).

Table S3A

Parameter estimates from the composite list fit for emotional trials

	Parameters			
	λ	β	δ	R^2
Average	3.88	4.23	.308	.97
Participants				
1	3.93	6.71	.364	.934
2	4.02	4.19	.381	.960
3	4.12	7.81	.362	.989
4	4.09	6.08	.092	.913
5	3.66	15.00	.512	.953
6	3.75	2.60	.373	.985
7	4.05	5.00	.402	.985
8	3.68	3.92	.404	.941
9	3.84	7.99	.377	.987
10	3.7	4.11	.478	.952
11	3.81	11.72	.356	.994
12	4.04	5.46	.288	.991
13	3.46	8.28	.362	.934
14	3.61	9.69	.393	.784
15	3.60	11.07	.421	.965
16	4.03	7.56	.355	.992

Note. Average parameters are based on data averaged over participants (not the average of individual parameters).

Table S3B

Parameter estimates from the composite list fit for neutral trials

	Parameters			
	λ	β	δ	R^2
Average	3.90	4.32	.296	.96
Participants				
1	4.05	11.97	.363	.994
2	3.71	4.98	.384	.948
3	4.10	6.68	.294	.987
4	4.00	4.82	.037	.743
5	3.63	15.00	.484	.975
6	3.66	4.52	.407	.949
7	3.89	4.51	.377	.960
8	3.63	6.72	.404	.913
9	4.01	10.14	.390	.931
10	3.68	4.65	.379	.952
11	3.78	10.12	.297	.924
12	4.05	7.25	.312	.989
13	3.83	5.26	.323	.968
14	3.93	2.97	.288	.924
15	3.64	4.06	.309	.885
16	4.07	13.99	.385	.997

Note. Average parameters are based on data averaged over participants (not the average of individual parameters).

Table S4A

Parameter estimates from the two-process model fit for emotional trials

	Parameters						R^2
	λ_i	λ_e	β	δ_i	δ_e	γ	
Average	0.15	0.062	4.6	0.297	0.508	-0.0119	0.984
Participants							
1	0.14	0.01	4.59	0.258	0.472	-0.0223	0.944
2	0.21	0.154	5.54	0.396	0.3	-0.00303	0.975
3	0.01	0.01	5.83	0.298	0.3	-0.017	0.989
4	0.043	0.082	7.79	0.1	0.3	-0.00121	0.992
5	0.33	0.094	6.06	0.416	0.753	-0.0003	0.939
6	0.35	0.01	3.38	0.416	0.518	-0.00007	0.976
7	0.44	0.031	6.36	0.429	0.534	-0.0108	0.974
8	0.22	0.029	4.58	0.409	0.915	0.0125	0.968
9	0.088	0.092	6.8	0.334	0.972	-0.0106	0.964
10	0.087	0.17	4.44	0.335	0.997	-0.038	0.969
11	0.01	0.051	7.2	0.31	0.668	-0.0138	0.974
12	0.19	0.01	7.86	0.283	0.501	-0.00295	0.984
13	0.22	0.01	9.79	0.346	0.543	-0.0372	0.946
14	0.025	0.26	4.24	0.296	1.57	-0.015	0.924
15	0.01	0.17	6.13	0.344	0.412	-0.0334	0.962
16	0.088	0.01	7.33	0.317	0.673	-0.01098	0.99

Note. Average parameters are based on data averaged over participants (not the average of individual parameters)

Table S4B

Parameter estimates from the two-process model fit for neutral trials

	Parameters						R^2
	λ_i	λ_e	β	δ_i	δ_e	γ	
Average	0.2	0.037	4.89	0.289	0.46	-0.006	0.985
Participants							
1	0.133	0.024	6.87	0.277	0.482	0.009	0.956
2	0.35	0.16	12.59	0.458	0.553	0.032	0.964
3	0.085	0.01	8.14	0.285	0.405	-0.0012	0.988
4	0.037	0.01	8.89	0.1	0.487	-0.0085	0.986
5	0.588	0.041	17.68	0.482	0.572	0.0094	0.977
6	0.085	0.01	9.72	0.485	0.698	0.0284	0.978
7	0.29	0.01	5.63	0.402	0.476	0.0004	0.979
8	0.28	0.12	8.43	0.405	0.819	-0.0436	0.947
9	0.35	0.01	6.88	0.32	0.407	0.0152	0.963
10	0.29	0.01	5.63	0.402	0.476	-0.013	0.979
11	0.1	0.01	10.07	0.286	0.393	-0.0165	0.994
12	0.19	0.01	9.53	0.304	0.405	0.003	0.994
13	0.32	0.01	7.68	0.32	0.444	-0.0211	0.974
14	0.22	0.01	3.68	0.304	0.464	-0.0035	0.959
15	0.2	0.058	4.51	0.303	0.525	-0.0185	0.957
16	0.01	0.01	11.62	0.375	0.3	0.0172	0.988

Note. Average parameters are based on data averaged over participants (not the average of individual parameters).