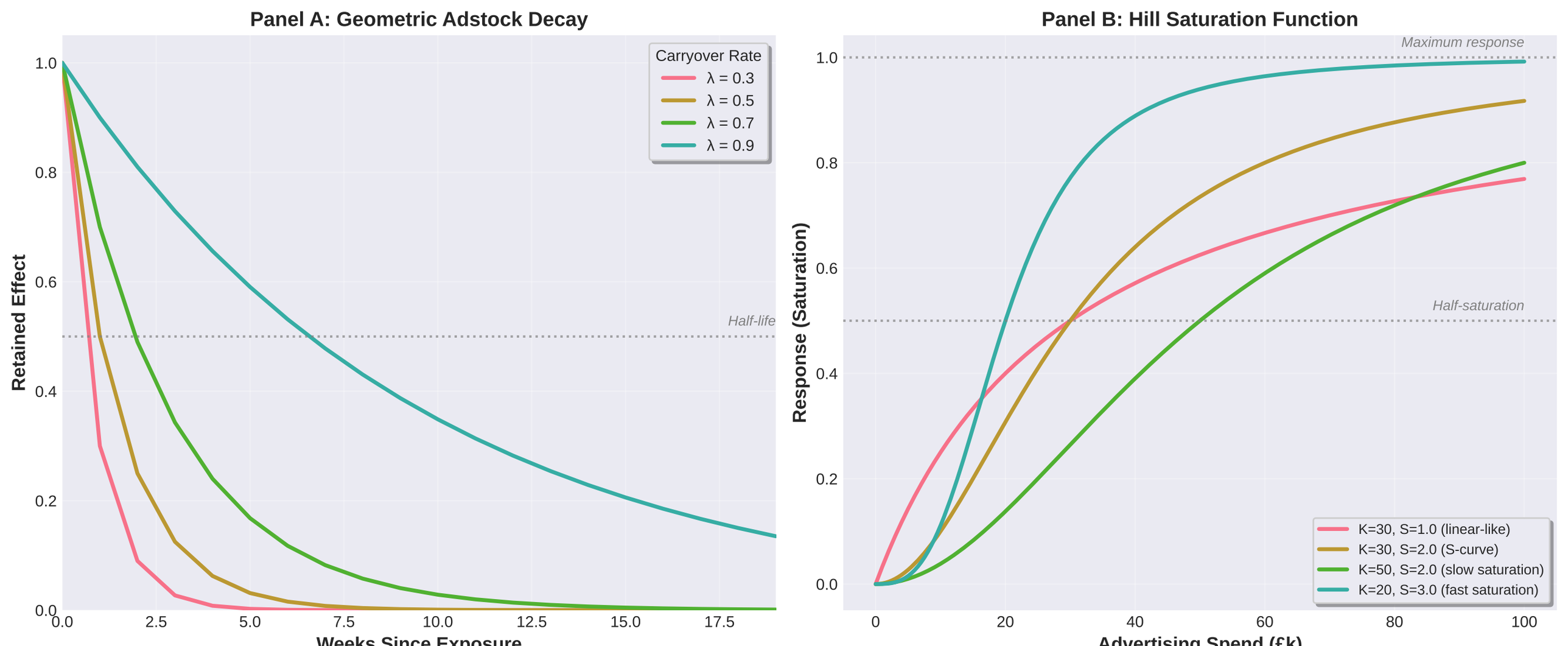
Panel A: Geometric Adstock Decay
Carryover Rate
λ = 0.3
λ = 0.5
λ = 0.7
λ = 0.9
Half-life
Retained Effect
1.0
0.8
0.6
0.4
0.2
0.0
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5
Weeks Since Exposure
Panel B: Hill Saturation Function
Maximum response
Half-saturation
Response (Saturation)
1.0
0.8
0.6
0.4
0.2
0.0
0
20
40
60
80
100
Advertising Spend (£k)
K=30, S=1.0 (linear-like)
K=30, S=2.0 (S-curve)
K=50, S=2.0 (slow saturation)
K=20, S=3.0 (fast saturation)