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The modulating influence of category size on the classification of exception patterns

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1, 2, (5, 10, 20), (1, 2, 4). H

A (., H, D, & , 1991; & A , 1984; & S , 2001; S & , (., L, 1994; & S , 1978; 1998), , 1988, 1991; & , 2000; & ., 2002)

C D H, D, A S, A. 85287, S A. @ D C S 7.4 (1975. C),

://, / D :10.1080/17470210701238883

A

2–5), [illegible]

(ς [illegible], 2002; ς [illegible] & [illegible], 2002).

A [illegible] (. [illegible], ς [illegible] & [illegible], 2002). H [illegible] (2002) [illegible] H [illegible]

1 [illegible] (45 [illegible]) [illegible] 1 [illegible] ς [illegible] (H [illegible], 1991), [illegible] 2, [illegible] B [illegible]

[illegible] 1 [illegible]

$$= \quad (- \quad) \qquad 2$$

[illegible] (2000). [illegible] A, B, C, [illegible] C, A, C, B, C, C

Figure 2. [illegible] β [illegible]

( ) ( ). - B

(B) ( ), - B ( ), - B H, 2

C 5, β = .50, C 20, β = .00, D

Materials and apparatus

[illegible] (e.g., H[illegible], 1978). [illegible] 50 × 50 [illegible]

A [illegible]

(1 β) [illegible] (β =
.00), [illegible] (β

[illegible]

[illegible] A [illegible] 5. A [illegible] (.[illegible] 5, 10, 20, [illegible] 20%, 10%, [illegible] 5%, [illegible]). A [illegible] A [illegible]; [illegible] 10, [illegible] 10% [illegible] 20%; [illegible] 20, [illegible] 5%, 10%, [illegible] 20%, [illegible] (20%). [illegible]

Method

Participants

A [illegible] 90 A [illegible] S [illegible]

10, 2 –, 2 –, 6 20 4 –, 4 –, 12

(1.0, 3.0, 5.0)

75 , 25 25 , 15 (5), 6 3

84 , 28 9 9

Results

C

One exception pattern per category: Learning

2 1 (58% 66%) 15 22%.

Transfer

6 (1.0, 3.0, 5.0) ( ) ( ) ( ) (B) 5, 10, 20 ( ).

Prototype-based classification: Old–new similarity transfer

A (1.0, 3.0, 5.0) (5, 10, 20). (2, 42) = 4.04, $\eta^2 = .161$, $< .05$, ( ), (1, 42) = 25.14, $\eta^2 = .374$, $< .01$, ; (2, 84) = 2.07, $\eta^2 = .047$, $> .10$. H D × (2, 84) = 6.58, $\eta^2 = .135$, $< .01$.

Table 2.

5(1)	.662	.222	14.53
10(1)	.576	.147	12.60
20(1)	.592	.213	12.60
10(2)	.618	.362	14.60
20(2)	.591	.233	14.13
20(4)	.601	.317	14.80

Prototype similarity

C [illegible] = .837; [illegible] = .753; [illegible] = .641), (2, 84) = 40.66, $\eta^2 = .492$, [illegible] < .001. [illegible] (2, 42) = 3.63, $\eta^2 = .147$, [illegible] < .05, [illegible] 20(2) [illegible] (.825), 10(2) [illegible] (.658), [illegible] 20(4) [illegible] (.748), [illegible] A [illegible] 20(2) = .956, 20(4) = .822, [illegible] 10(2) = .708, [illegible] (2, 42) = 2.82, $\eta^2 = .121$, [illegible] = .067.

Contrast among 1 vs. 2/4 errors/category conditions

[illegible] : 20(1) = .780; 20(2) = .757; 10(1) = .705; 20(4) = .694; 10(2) = .617; 5(1) = .612. A [illegible] (5, 84) = 4.20, $\eta^2 = .200$, [illegible] < .01. [illegible] 7 8% [illegible] = .05 [illegible] : 20(1) = 20(2) > 10(1) = 20(4) > 10(2) = 5(1).

A [illegible] (1.0) [illegible] (5.0) [illegible] C [illegible] 8 [illegible] : ( ) [illegible] ; ( ) [illegible]

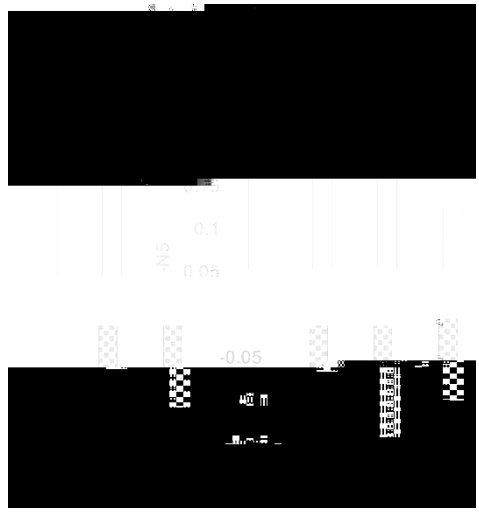

Figure 8. [illegible]

[illegible]

Model fits

[illegible] 3. [illegible] .01 .03 [illegible] β [illegible] 2 4 [illegible] β [illegible]

A [illegible] ([illegible] β), [illegible] β [illegible] 20 [illegible] (β = .479). 9 [illegible]

Discussion

(. ., H , 1984). 5 45 10% .705 .757 10 20, 20%, 10% 10 20, .617 .694. / H (. 936). H ( ), (2002). H [7] (2002). A [8]

[7] (.), λ (. ., & , 2004).

[8] (2004) (9-) 1- ( ), ( ) ( )

(. ., , 1991; & , 1998).

A

(2000),

10

(. .,).

A

29 A 2006
A 10 D. 2006
23 2007

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& (.),

(. 3).

-C , L: L

A

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H , D. (1984).

. H. B (.),

(. 18). : A

H , D., D , ., & , L. (1991).

444 458.

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