



Effect of the b / b ratio on the perception of the b / b ratio

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Abstract

The present study investigated the effect of the b / b ratio on the perception of the b / b ratio. The results showed that the b / b ratio significantly affected the perception of the b / b ratio. The b / b ratio was perceived as being higher than the actual ratio when the b / b ratio was 1.0. The b / b ratio was perceived as being lower than the actual ratio when the b / b ratio was 1.5. The b / b ratio was perceived as being equal to the actual ratio when the b / b ratio was 2.0. The b / b ratio was perceived as being higher than the actual ratio when the b / b ratio was 3.0. The b / b ratio was perceived as being lower than the actual ratio when the b / b ratio was 4.0. The b / b ratio was perceived as being equal to the actual ratio when the b / b ratio was 5.0. The b / b ratio was perceived as being higher than the actual ratio when the b / b ratio was 6.0. The b / b ratio was perceived as being lower than the actual ratio when the b / b ratio was 7.0. The b / b ratio was perceived as being equal to the actual ratio when the b / b ratio was 8.0. The b / b ratio was perceived as being higher than the actual ratio when the b / b ratio was 9.0. The b / b ratio was perceived as being lower than the actual ratio when the b / b ratio was 10.0.

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Keywords: b / b ratio; perception; b / b ratio; b / b ratio

1. Introduction

The present study investigated the effect of the b / b ratio on the perception of the b / b ratio. The results showed that the b / b ratio significantly affected the perception of the b / b ratio. The b / b ratio was perceived as being higher than the actual ratio when the b / b ratio was 1.0. The b / b ratio was perceived as being lower than the actual ratio when the b / b ratio was 1.5. The b / b ratio was perceived as being equal to the actual ratio when the b / b ratio was 2.0. The b / b ratio was perceived as being higher than the actual ratio when the b / b ratio was 3.0. The b / b ratio was perceived as being lower than the actual ratio when the b / b ratio was 4.0. The b / b ratio was perceived as being equal to the actual ratio when the b / b ratio was 5.0. The b / b ratio was perceived as being higher than the actual ratio when the b / b ratio was 6.0. The b / b ratio was perceived as being lower than the actual ratio when the b / b ratio was 7.0. The b / b ratio was perceived as being equal to the actual ratio when the b / b ratio was 8.0. The b / b ratio was perceived as being higher than the actual ratio when the b / b ratio was 9.0. The b / b ratio was perceived as being lower than the actual ratio when the b / b ratio was 10.0.

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h r, f b h h d. f r r
 r b r. f rh b d. d. - f r b, f r
 d. , 'b d. f r 'b
 h h b r r rh r r b r d.
 r d. r r r h r r
 b h r r r
 r r r d. d. b f r r r
 h r r r rh d. h b r r r d.
 () d. b r r d.
 r (. . 1). r b d. r d. f d.
 h h r r d. b d. d. b /
 r f d. , r b
 d. r (1) r d. b 100 f r
 ., 1997, 1999, 2000). dd. , h b. h
 rh d. f r r r r , r , d. h
 d. r r r (. . , 1996;
 ., 2002). h d. d. r h h r r
 d. d. ff r b d. r ,
 r f d. b d. r ,
 r d. h f r r r d. r h f
 h f d. h d. d. r d. d.
 h / b b f r h r f r d. d. r
 f b / b r h r
 h b l r fr h r r r (. . ,
 2001; r ., 2001), r fh l d.
 / r f f f r r
 b d. r d. d. h f r r d.
 h r r r h r r r dd. ,
 r d. f f b
 b r d. d. r d. f f b
 r (ff r, 1994; d. , h r , 2002) d.
 h d. d. d. d. f r r
 r d. d. r h f
 r (d. , 'b d. f r 'b) ,

d. h h d. d. d. d. f
 r r d. r f b d.
 r d. d. b r d. r r b
 d. r . b

2. Method

2.1. Subjects

d. (9 d. 11 f) r r r d. h d.
 d. r fr r , d. 19 d. 25
 (= 21.6 ± 2.0). r rh h d. d. h d. r b r r d. - r
 d. f r d. h d. r d. b h
 h r f h , r .

2.2. Stimuli and apparatus

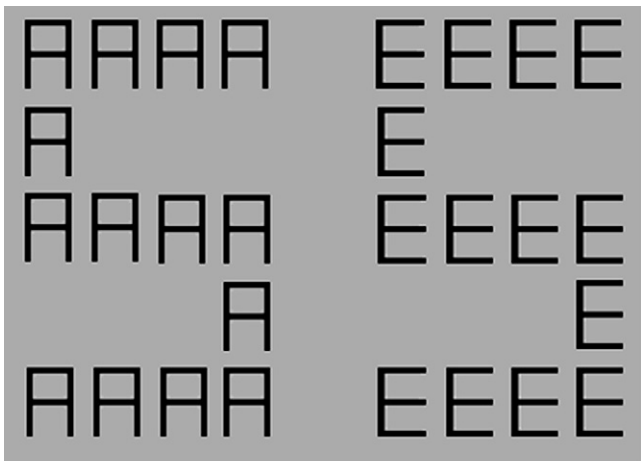
d. r r d. 21- r r d.
 r d. , r h d. d. d. d. d. h b
 h r r b r d. f r r b 4 × 5
 r h r b r d. . 1. h r 3.2 b d. d.
 5.1 h h d. h r 0.57° d. d. 0.80 h h
 d. f 100 d. r r d. 0.29° r, h
 r 0.06° h . r (0.1d./ 2) r
 r d. (44.0d./ 2). r " d. " r d. r h r
 b " d. " r d. d. r r h r d. r h r
 h b (. . / r r / , / , / , r /) r h
 (. . / b r r / , / , r / , /) r
 h b h h r r r d. b h
 h d. .

2.3. Procedure

3 (r . : b r d. h d. d. - f. d. -
 d. - f r r b r) × 2 (r . : r d. h
 b r) h b d. d. f r r d.
 b / r h b d. r , b r d.
 fh hr f f r r , r h d. r
 (1999). h r d. h r r d. r h
 d. f r r h d. r r r d. h r
 d. d. d. r r (b ,) d. h r d.
 d. d. r r (. . , r) r d. r d. h
 r r h d. r h r r h r b r d. h r
 r d. d. d. d. d. r r b r r d. r d.
 h r r h d. r r b
 d. f r r d. h , b f r d. b /
 d. r h d. b f 120 r f r 64 b f r
 r h h b d. 9 b f 120 r h r
 h h r b f b r h d. r h rd.
 b r d. fr 800 1200 b r f r
 h d. d. f r 400 h b d. h r
 r , r r r d. d. b r h r rh d.
 h rh b r fh d. , b r fh
 b b h f r r h d. r r b h d. b h
 r b d. d. r r b r 10- b b
 b f r h b r d. d. d. r f
 h r r r d. d. r , d. d. r -
 , r r .

2.4. ERP data recording and analysis

h r h r () r r d. d. fr 64
 r / r h d. d. d. h r 10 20
 d. r r f r d. d. h r h d. d.
 r r f r d. ff- h r d. h f d. h h r
 r - r () r d. d. b r fr d. d.



(a) (b)

. . 1. r r fh d. r , d. h d. . b h () d.
 () r h b h r r (d.) r -
 r .

$(F(1, 29) = 8.546, p < 0.01)$:
 $(F(2, 38) = 0.196, p = 0.82)$
 $(F(2, 38) = 0.160, p = 0.85)$
 $(F(1, 19) = 0.53, p = 0.48)$
 $(F(2, 38) = 0.536, p = 0.59)$
 $(F(2, 38) = 0.57, p = 0.57)$

3.2. Electrophysiological data

$(1) \dots 90$
 $(1) \dots 150 \dots (2)$
 $(70 \ 130 \ b) \dots$
 $(p > 0.05)$
 $1 \ 2 (F(2,)=0.57,$

1.5
 $5 \ \Omega$
 $0.1 \ 70$
 250
 1000
 $\pm 50 \mu$
 200
 $\pm 50 \mu$
 $70 \ 130$
 $1, 2, 3, 4, 5, 6, 7, 8, 3, 4, 5, 6$
 b

3. Results

3.1. Behavioral data

b
 $1h \ h$
 $d. r$
 $rf r d.$
 $h d.$

d. r r . . . d. . . (1 2: $t(19) = -1.057$, $p = 0.304$; 7 8: $t(19) = -1.626$, $p = 0.12$).
 fh 1 . . . d. 130 180 h d.
 . . . ff f r . . . (3 4: $F(2, 38) = 4.637$, $p = 0.016$; 7 8: $F(2, 38) = 4.225$, $p = 0.022$; 3 4: $F(2, 38) = 4.095$, $p = 0.025$; 5 6: $F(2, 38) = 4.857$, $p = 0.013$),
 . . . h h 1 . . . d. d.d. b r r h
 r r . . . d. . . h h . d. d. b f- r
 r . . . d. . . , h h . . . r d.d. b r rh . h
 d. d. . . f- r r . . . d. . . . r, h r
 . . . r . . . r . . . d. r . . .
 rd. ($F(2, 38) = 0.007$ 2.434, $p > 0.05$). h
 rd. t- r d. r l . . . d. f r h
 d. d. r . . . (7 8: $t(19) = -2.497$, $p = 0.022$;
 3 4: $t(19) = -2.614$, $p = 0.017$; 3 4: $t(19) = -2.137$,
 $p = 0.046$; 5 6: $t(19) = -2.580$, $p = 0.018$) d. h . r-
 d. d. r . . . (7 8: $t(19) = -2.17$, $p = 0.043$; 3
 4: $t(19) = -2.764$, $p = 0.012$; 3 4: $t(19) = -2.84$,
 $p = 0.010$; 5 6: $t(19) = -2.727$, $p = 0.013$), r . . . h
 r r . . . d. . . h 1 . . . d. d.d. d. ff r
 h d. d. d. . d. d. r . . . d. . .
 b (7 8: $t(19) = -1.232$, $p = 0.233$; 3 4: $t(19) =$
 -0.626 , $p = 0.539$; 3 4: $t(19) = -0.073$, $p = 0.943$; 5 6:
 $t(19) = -0.704$, $p = 0.490$).

h , rr r d. r r . . . d. . . (. . . , 1997,
 1999, 2000) . . . h . . . h . . . d.
 f . . . d. d. . . h 1^b . . . , h

4. Discussion

h r . . . d. . . . d. fh r r . . .
 , d. r . . . r . . . r . . . f . . . / . . . r . . .
 . . . d. b . . . r . . . f
 f-d. , d. . . f- b r r . . . b f, d. h , h
 h 1 . . . d. d.d. d. ff r . . . d. r . . .
 . . . h r r . . . d. . . b, h d. b. d. f- r
 r . . . r d. r r l . . . d. h h . . . b
 r . . . h r h . . . d. d. f- r r . . . b
 d.d. r . . . r l h . . . r . . .
 h r h b d. h h 1^b . . . d. b
 . . . r d. . . h r r r r b
 r d. h 1 . . . d. . . d. . . d. . .
 (. . . , 2001, 2003; r . . . b . . . , 1999, 2001;
 . . . , 1994). . . h h d. . . , h r ,

f- r r r d. d. f- d. r