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# A new look at the "Asian disease" problem: A choice between the best possible outcomes or between the worst possible outcomes?

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The "A a d ea e" b e (T e & Kah e a , 1981) de a ed beha c ad c he a ce a f EU he . H e, he ch ce beha a ee b he e a e- -d e e a e de a a ch ce be ee he be b e c e a ch ce be ee he be c e . I a he a g ed ha a a h ch f a e ce ch ce h gh he ce ed d e ce be ee b e c e . A " dge e " a a de g ed e a e he he edge f " he a e d e ce be ee each b e c e a d he ce a c e" e ed c f efe e ce he ch ce a e ea ed he A a d ea e b e . Pa c a e e ed a a h a d ea e b e (he g a bab c e f he A a d ea e b e ) a d a SARS b e (he f e f he A a d ea e b e ). I a h ha he e ca de ce e a he A a d ea e b e c d be a fac acc ed f b he ge e a ed ea d a ce a eg ea ed b he dge e e .

C e de ce h d be add e ed X a fe X e PhD, De a e f P ch g , Pe g U e , Be g 100871, Ch a. E a : a fe@ .ed .c

The a h ha N ge Ha e a d f a efe ee f h a f he he f c e he a e , a d Ng Ch H g, Ta L g Ch , a d Ta Me Ch a Na a g Tech g ca U e , a d Wa g X a a The I e f P ch g , Ch e e Acade f Sc e ce , f he he c ec g he da a.

The a h a ed he e ea ch h e each g a Na a g Tech g ca U e , a d c ee ed h e g a a g ch a a he De a e f P ch g , Pe g U e .

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The A a d ea e b e d ced b T e a d Kah e a (1981) de a ed beha c ad c he a ce a f EU he . I he A a d ea e b e (T e & Kah e a 1981), e g f b ec ch e be ee g a e de g ed c ba a d ea e ha e ec ed 600 e e. If e g a e ad ed, 200 e e be a ed, a d f he he g a e ad ed, he e e- h d bab ha 600 e e be a ed a d a - h d bab ha e e be a ed. A he g f b ec ch e be ee he g a e de c bed e f e . If e g a e ad ed, 400 e e de, a d f he he g a e ad ed, he e e- h d bab ha b d de a d - h d bab ha 600 e e de. Whe a e a e c e ee h a ed e e f e a ed, b ec efe ed he ce a . Whe c e ee h a ed ega e e f e , he a efe ed.

O e he a decade , he b e ha gge ed e de , c d g h e a ed e g , e a e he e g fa ge ec . F e a e, McNe , Pa e , S , a d T e (1982) f d ha a e eb a h ca a e ce be h fa ge ec . H o e , o e e h f fa g e ec d he , a d he e a e ce a a ea h a d c d de h ch he fa g e ec a ea ( ee, e.g., B h & L d, 1992; Ch e e , Hec e g, Mac e , Be e , & E e , 1995; E & A ch ba d, 1989; Fag e & M e , 1990; F & Da a , 2004; Lo , Sch e de , & Gae h, 1998; L , Fa g, & Zha g, 2000; R h a & Sa e , 1997). Ba ed da a f 136 e ca a e ha e ed fa ge e e h ea 30,000 a c a , a ea- a a f he e ce f fa g dec (K hbe ge , 1998) h ha he e a fa g e ec be ee c d f a de a e e, a d ha f d d e e ce e be ee e ea ch de g . I c c ded ha fa g a e ab e he e , b ha c e a e ce a a , h ch c e a c de ab e a f , ha e be d g hed f efe e ce a a , a d ha ced a fea e f e e e a e g ha e a c de ab e e ec e ec e fa g e e e .

The ec e de a f he de g f he e e d he A a d ea e be a e ba ed be e e fa ch ce de ca ed he "e a e- - d e e a e" he (L , 2003, 2004a, 2004b). Th de ha he ec ha g e g h a dec a g ha o e bee e f a g e d f a he a ca e ec a , b a he e ge e a a f d a ce de ec . Wea d a ce a e ha f a e a e A a ea a g d a a e a e B a a b e, a d a e a e A de e be e ha a e a e B a ea e a b e, he a e a e A d a e a e a e B (cf. Lee, 1971; W e fe d &

Ed a d , 1986). Whe a d a a e a ı e e , a b g he be a e a ı e a a ab e a d he ef e f he a a e ed. The de a e ha , de e he ı e ı e c e g e f *weak* d a ce each a b a ch ce be ee A a d B e ge e a ca e , he a dec ba ed de ec g A d a g B f he e e a ea e $j$ ch ha $U_A(x_j)$ $U_B(x_j) > 0$ ha g b ec ı e ea ed a $U_A(x_j)$ $U_B(x_j) \leqslant 0$ a $U_A(x_j)$ $U_B(x_j) = 0$, de ec g B d a g A f he e e a ea e $j$ ch ha $U_B(x_j)$ $U_A(x_j) > 0$ ha g b ec ı e ea ed a $U_B(x_j)$ $U_A(x_j) \leqslant 0$ a $U_B(x_j)$ $U_A(x_j) = 0$, he e $x_j$ ($j = 1, \ldots, M$) he b ec ı e ı a e f each a e a ı e D e $j$ (f a a a c a a , ee L , 2001).

I ea ch g f e de ce f he he he c d g ı e g he f a g e ec ca be de e ed, he e e e ea ch bega b g a g a h ca e e e a f he ı e a d ega ı e f a e f he A a d ea e b e . I ead f d g h g he ı a e f a c e a d he e h d f a c e e a a e ( .e., e e e ch ce b g d e , e.g., M g e , 1977; Ra a d, 1982; T e , 1969), a a ($x$) a d a cha ce f g ($p$), a g ha ı a e he d e ca be ı a ed de e de ), he ed e e e a dec e each g a e b e c e ( he be a d he b e c e d e ), ı a g each b e c e e a a e , a d he de e e he a de g f each d e h ch he a-d e a c a f he g a e e ab 53 ]TJT[

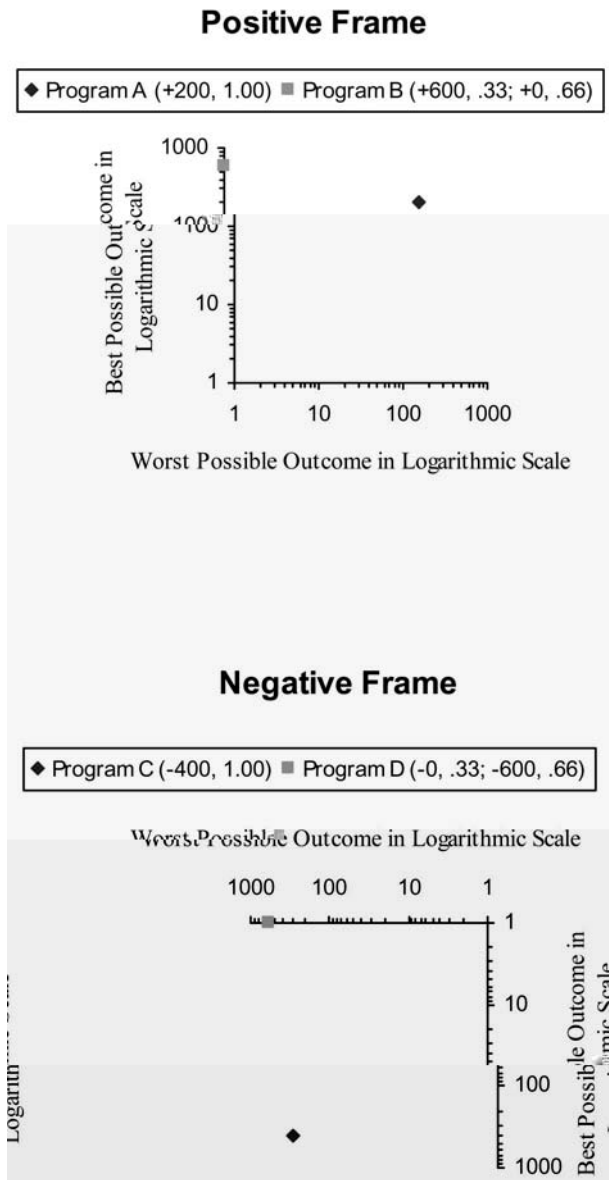


**Figure 1**. The e e e a f he A a d ea e b e b a g a ga h c f c

P g a e A (B) d a e P g a e B (A), ha g ea ed he a e d e a d e e ce ha P g a e B (A) be e ha P g a e A (B) a b ec e e a. A a a a f ch ce g e ead he ed c ha P g a e D (C) be ch e he (be ) b e c e be ee he g a e a e ea ed a e a.

S ch a dec ce h he de a ed e h d f a c e be g ab e a g a b ec e d a ed a e a e b ec e d a ed e ha a ha he f - ace he (Re a & B a e d, 1995) gge ed. The f - ace he e ha de a ed a ce f b e f a a e e ab ce a ea g, a d ha ea e e d e a e e e e a ha a e a he e e f ec (e.g., he bab e e e ed ca eg ca a e he *certain uncertain*) ha e a a - ee a e e. Acc d g Re a a d B a e d (1995), e g a f he be f he A a d ea e b e , a d e ac g he h ag e h a e, d d e a e he f a g e ec . I fac , f a g e ec e e de ec ed b he e e a ge ag de he he be e e ab e ha he he e e e . Th gge ha e ca f a a ece a f f a g e ec , b e ded a a he ha a f he e ec . I ead f ea ch g f a ch h ca f c f a e, h "f - ace" a f h g (Re a & B a e d, 1995) ha a ed a a e c e ha ea g efe e a e e g , a ed e ac de a .

The " e g " acc f he f a g e ec a ed e a b he d g f K hbe ge (1995) a d Ma de (2001). Th e d g g gge ha f a g e ec he d ea e b e a be d e g f a . K hbe ge (1995) e ha c e he A a d ea e b e a e ade a e ec ed; g ha 200 e e be a ed d e e e c ha ha e he he 400 e e. Whe K hbe ge a e c e e c (e.g., g he g f a f he ce a ec b a g ha 200 be a ed a d 400 d e) b g ha Ma de (2001) ca ed he *additive method*, "f a g" e ec a h.

Be ha a a , a ea ha he e a a f he " e" " a ge " f a g e ec he d ea e b e h d be he e ha ab e a he ch ce h ab e be , he e, a Re a a d B a e d (1995) gge ed, he c e a e e e ed a a he he *some* e a e a ed ( ) *no* e a e a ed ( ), h e he bab e e e ed ca eg ca a e he *certain uncertain*, c e d g . The ed ch ce h ab e bab e e e g a d h e e a , beca e ca d b he e f he bab - e gh g f c ha de ed b a ded c e

ce h ch a e ha he ch e b a dec a e he e ha a e he ea h f a (f e de a ed a g e , ee L , 1995, 1996).

I ec f Fg e 1 hed e gh he e ec f he e a c d g f . I ca be ee f Fg e 1 ha he c c f he b e , ed a ga h c ca e, e de he e a g f d e e ce he "be b e c e" d e ea e ha ha he " b e c e" d e f he e f a e, b ce e a f he ega e f a e. I he d , ega de f he fac ha he b e a e e-dec f each he , a d ha P g a e A a P g a e C a he ha D, he ch ce a a e e a e de g ed ha he d e e ce be ee he c e ( he *worst* b e c e) f P g a e B a d he ce a c e (200 e) f P g a e A g ca he e f a e, he ea he d e e ce be ee he c e ( he *best* b e c e) f P g a e D a d he ce a c e (400 de) f P g a e C g ca he ega e f a e ( ee a Tab e 1). If e a e deed g ded b he ea d a ce e a g ch ce , e b he dec c e he eached b ee g he be b e c e be e a he e f a e h e ee g he b e c e be e a he ega e f a e. The a f he a a ce a a e beca e he d e h ch a ea d a ce ea h de ec ed a d de e ed ched f he b e c e d e he e f a e he be b e c e d e he ega e f a e.

I a he ef e ea ed ha d e e ce b e c e a e he d g f ce beh d d e e ce efe e ce. Tha , he ga ( e) c d , he a e he d e e ce be ee he c e a d he ce a c e e ce ed be, he ea e f he ea d a e he e-ga , ha g ee he a e a g d he *worst* b e c e d e . I he ( ega e) c d , he c a , he a e d e e ce be ee he c e a d he ce a c e e ce ed, he ea e f he e- ea d a e he , ha g ee he a e a g d he *best* b e c e d e .

If he a ge d e e ce a ded e e ab e be d hed e he b ec e b ec e , a d h be ea ed a e a , a he a a d he - ee g a d -a e e beha c d be ge e a ed b a g he ea d a ce e. I ca be ee ha , he a e ade e e e he d e a d e e ce e ed b he d ea e be , b e ge e a e c e e a e he c a e f he f a g e ec e e f he e e e ea he a e a f h f g d g (L & Ada , 1995) a e a he a e ce a

TABLE 1
The intra-dimensional evaluations of the programmes offered in the Asian disease problem

| *Positive frame* | | | *Negative frame* | | |
|---|---|---|---|---|---|
| *Programme* | *Best outcome* | *Worst outcome* | *Programme* | *Best outcome* | *Worst outcome* |
| A | 200 [illegible]ved | 200 [illegible]ved | C | 400 [illegible]e | 400 [illegible]e |
| B | 600 [illegible]ved | 0 [illegible]ved | D | 0 [illegible]e | 600 [illegible]e |
| [illegible]ffe[illegible]ce (A-B) | − 400 [illegible]ved | + 200 [illegible]ved | [illegible]ffe[illegible]ce (C-D) | + 400 [illegible]e | − 200 [illegible]e |
| U[illegible]d[illegible]ffe[illegible]ce[illegible]g(A)- g(B) | − 0.477 ([illegible]e) | > 2.301 ([illegible]ge) | U[illegible]D[illegible]ffe[illegible]ce[illegible]g(C)- g(D) | > 2.602 ([illegible]ge) | − 0.176 ([illegible]e) |
| U[illegible]d[illegible]ffe[illegible]ce[illegible](A)- (B) | − 1.099 ([illegible]e) | > 5.298 ([illegible]ge) | U[illegible]D[illegible]ffe[illegible]ce[illegible](C)- (D) | > 5.991 ([illegible]ge) | − 0.405 ([illegible]e) |

(L , 1998). A f he e ca be d e h g a ea e gh g f c [e.g., $w(p) = p^{\gamma} / [p^{\gamma} + (1 p)^{\gamma}]^{1/\gamma}$] a e a a S- ha ed a e f c (Kah e a & T e , 1979; T e & Kah e a , 1992). Ta e L' (1998) e e e f e a e. The f a a d a a cha ged f 200 e a d 400 d e, he e a e ca e f 20 e a d 580 d e. Th cha ge a a e he d e e ce be ee he c e a d he ce a c e e d e e abe (.e., 20 e c e 0 e e he c a ed h he a f 600 e ). The c e d g bab f ga ed ced f he g a 1/3 1/30 e e ha e ec ed a e e a e ac he a e. A a e , he d e e ce be ee he c e a d he ce a c e a ea be *smaller* he he a e e f a ed, he ea he d e e ce be ee he c e a d he ce a c e a ea be *greater* he he a e ega e f a ed, he c a ed h he g a A a d ea e b e . The c e e ce f h ha he a c a beca e ee g (65%) he e f a e h e e a g ee g (72%) he ega e f a e. He ce he a de ca e e he f a g c d e e b e ed. I ch a ca e, f a g acc ed f 0.6% f he a a ce ch ce, c a he 25% f he a a ce f d he g a b e b T e a d Kah e a (1981).

G ded b ch h g, he f g e e e e de g ed e a e f he de a he he he edge f " he a e d e e ce be ee each b e c e a d he ce a c e" e ed c f efe e ce he A a d ea e b e . I a c a, a h he ed ha :

> *H1: The framing effect on individual risk preference will be mediated by individuals' judged value difference between the possible outcome and the certain outcome.*

## EXPERIMENT 1

### Method

*Participants.* A a f 141 de f Na a g Tech g ca U e a d Na a U e f S ga e, 30 de f Te a e P ech c, a d 130 de f he I e f Tech ca Ed ca (Ea Ta e ) S ga e a c a ed a e . N e had a f a edge f dec he .

*Materials and procedure.* B e ha c a ed ch ce a d dge e a h ega d he d ed A a d ea e be , hea h a d ea e be , e e ad e ed 301 de a c a a f :

**Anthrax Disease Problem**
I ag e ha S h Ea A a eg e a g f he b ea f a a a h a d ea e, h ch e ec ed 600 e e. T a e a e g a e c ba he d ea e ha e bee ed. A e ha he e ac ce c e a e f he c e e ce f he g a e a ea f :

*Positive Frame:*
If P g a e A ad ed, 200 e e be a ed.
If P g a e B ad ed, he e 1/3 bab ha 600 e e be a ed, a d 2/3 bab ha e e be a ed.

| P ea e d ca e | ch ce b c c g | he 7- | ca e be . |
|---|---|---|---|
| 1 2 | 3 4 | 5 6 | 7 |
| De e ch g P g a e A | | | De e ch g P g a e B |

**Judgement 1.** F he e ch ce, c de f ee a d e e ce be ee "*200 people will be a ed*" P g a e A a d "*1/3 probability that 600 people will be saved*" P g a e B.

"200 e e be a ed" "1/3 bab ha 600 e e be a ed"

| P ea e d ca e | ch ce b c c g | he 7- | ca e be . |
|---|---|---|---|
| 1 2 | 3 4 | 5 6 | 7 |
| I ee e d e e ce | | | I ee a h ge d e e ce |

**Judgement 2.** F he e ch ce, c de f ee a d e e ce be ee "*200 people will be saved*" P g a e A a d "*2/3 probability that no people will be saved*" P g a e B.

"200 e e be a ed" "2/3 bab ha e e be a ed"

| P ea e d ca e | ch ce b c c g | he 7- | ca e be . |
|---|---|---|---|
| 1 2 | 3 4 | 5 6 | 7 |
| I ee e d e e ce | | | I ee a h ge d e e ce |

*Negative Frame:*
If P g a e C ad ed, 400 e e d e.
If P g a e D ad ed, he e 1/3 bab ha b d d e, a d 2/3 bab ha 600 e e d e.

| P ea e d ca e | ch ce b c c g | he 7- | ca e be . |
|---|---|---|---|
| 1 2 | 3 4 | 5 6 | 7 |
| De e ch g P g a e C | | | De e ch g P g a e D |

**Judgement 1.** F he e ch ce, c de f ee a d e e ce be ee "*400 people will die*" P g a e C a d "*1/3 probability that nobody will die*" P g a e D.

"400 e e d e", "1/3 bab ha b d d e"

P ea e d ca e ch ce b c c g he 7- ca e be .
1 2 3 4 5 6 7
I ee e I ee a h ge
d e e ce d e e ce

**Judgement 2.** F he e ch ce, c de f ee a d e e ce be ee "*400 people will die*" P g a e C a d "*2/3 probability that 600 people will die*" P g a e D.

"400 e e d e", "2/3 bab ha 600 e e d e"

P ea e d ca e ch ce b c c g he 7- ca e be .
1 2 3 4 5 6 7
I ee e I ee a h ge
d e e ce d e e ce

The a h a d ea e be a e e ed a c a d e e , h ch c e ba a ced he de f he f a e e e ed.

## Results and discussion

T e a e he ed a g e ec f e a dged d e a d e e ce be ee f a e a d d a efe e ce, he h ee- e ed a a gge ed b Ba a d Ke (1986) a e f ed. I e 1, a e- a ANOVA a c d c ed. I e 2, eg e a a e ( e h f a e a IV, a d he e f dged d e a d e e ce a DV ; he he h dged d e a d e e ce a IV, a d he d a efe e ce a DV) e e e f ed. I e 3, a ANCOVA h h - bec c a a e ( e f dged d e a d e e ce) a c d c ed. The a a e e ea ed ha : (1) f a e, a h - bec ba , had a a g a a e ec (e a a ed = .01) a c a 'ch ce beha [$F(1, 300) = 3.29$, $p = .071$] h a c a be g e - a e e he e f a e ($M = 3.72$) ha he ega e f a e ($M = 3.96$); (2) f a e a a ed c f e f dged d e a d e e ce ( .e., he d e e ce be ee he *best* b e c e a d he d e e ce be ee he *worst* b e c e ) ($\beta = .28$ a d .41, e ec e , $p < .01$), a d he e f dged d e a d e e ce e e ed c f he efe e ce ($\beta = .26$ a d .09 e ec e , $p < .05$), he e he g ea e dged d e e ce be ee a ed b e c e a fac ched f he *worst* b e c e d e he e f a e [$M_{best} = 4.22 < M_{worst} = 4.99$, $t(300) = 6.67$, $p < .001$] he *best* b e c e d e he ega e f a e

[$M_{best}$ = 4.77 > $M_{worst}$ = 4.17, $t(300) = 4.98$, $p < .001$]; a d (3) he he dged d e a d e e ce a abe ee e ed a h - b ec c a ae, he e ec f f a e d g ca ce [$F(1, 298) = 0.36$, $p = .55$], he ea he e ec f he dged d e a d e e ce e a ed g ca [$F(1, 298) = 8.71$, $p < .01$ a d $F(1, 298) = 7.33$, $p < .01$ e ec e ]. A c e e a a f he $\beta$ e gh f he dged *best* b e c e d e a d e e ce ($\beta = .26$, $p < .01$) a d he dged *worst* b e c e d e a d e e ce ($\beta = .09$, $p < .05$) d ca e ha , a e ec ed, he e d e e dged d e a d e e ce ed c he d d a' efe e ce he e d ec . The e gge ha he e f dged d e a d e e ce e e f ed a be ee f a e a d d d a efe e ce. The e de c de ab e f he e e h he (H1) ha *the framing effect on individual risk preference will be mediated by individuals' judged value difference between the possible outcome and the certain outcome.*

## EXPERIMENT 2

The f a g e ec de ec ed E e e 1 a a g a g ca a d e a e a (e a a ed = .01) he c a ed h T e a d Kah e a' (1981) g a d g . Th b d e a he fac ha a h - b ec a he ha a be ee - b ec a a f f a e a ed E e e 1. T f he e e he he he ed a g e ec e ed b e gh e a a he e he f a g e ec a e a ge ag de, he e e e e e ed he f a g e ec b g a f e f he d ea e b e a d a be ee - b ec a a f f a e.

### Method

*Participants.* A a f 285 de g ad a e de f H a Na W e' C ege a d 61 g ad a e de f Pe g U e a d f he I e f P ch g , Ch e e Acade f Sc e ce a c a ed a e .

*Materials and procedure.*

Ab ha f f he a c a e ded he ⋎ e f a e (142 de g ad a e a d 30 g ad a e ) a d he he ha f he ega ⋎ e f a e (143 de g ad a e a d 31 g ad a e ). Pa c a ⎯ e e ged g⋎ e he b e a fe e ' h gh e d g. Pa c a ⎯ e e a c ed ha he e ⎯ e e gh ⎯ g a ⎯ e , a d ha he e e e e ⎯ e e e ed he a c a ' ⎯ h gh f a ⎯ e . Whe he c ⎯ e ed e a e ⎯ e e c ⎯ ec ed, he a c a ⎯ e e he deb efed.

## Results and discussion

The ch ce a d dge e f a c a a g ed he ⎯ f a g c d ⎯ e e a a a ed g he h ee- e ed a a gge ed b Ba a d Ke (1986). The a a e e ea ed ha : (1) f a e, a be⎯ ee - b ec ba ⎯ h ab e be , had a g ca a e ec (e a a ed = .14) a c a ' ch ce beha [$F(1, 344) = 55.09$, $p < .001$] ⎯ h a c a be g e a e e he ⋎ e f a e ($M = 3.55$) ha he ega ⋎ e f a e ($M = 5.09$); (2) f a e⎯ a a ed c f ⎯ e f dged d e a d e e ce ( .e., he d e e ce be⎯ ee he *best* b e c e a d he d e e ce be⎯ ee he *worst* b e c e ) ($\beta = .35$ a d .15, e ec ⋎ e , $p < .01$), a d he ⎯ e f dged d e a d e e ce ⎯ e e ed c f he efe e ce ($\beta = .22$ a d .29 e ec ⋎ e , $p < .01$, d ca g ha he ed c he d⋎ d a ' efe e ce he e d ec ), ⎯ he e he g ea e dged d e e ce be⎯ ee a ed b e c e ⎯ a deed ⎯ ched f he *worst* b e c e d e he ⋎ e f a e [$M_{best} = 5.15 < M_{worst} = 5.55$, $t(171) = 1.96$, $p = .052$] he *best* b e c e d e he ega ⋎ e f a e [$M_{best} = 5.70 > M_{worst} = 4.15$, $t(173) = 9.81$, $p < .001$]; a d (3) ⎯ he he dged d e a d e e ce ⋎ a ab e ⎯ e e e ed a c ⋎ a a e , he e ec f f a e d ed ⎯ e (e a a ed = .075) a d $F$ ⋎ a e [$F(1, 342) = 27.71$, $p < .01$] a h gh ⎯ a f ⎯ e a ed, ⎯ he ea he e ec f he dged d e a d e e ce e a ed g ca [$F(1, 342) = 11.91$, $p < .01$ a d $F(1, 342) = 13.24$, $p < .01$ e ec ⋎ e ]. The e e ⎯ h ⎯ ha , a e ec ed, a a ge f a g e ec ⎯ a de ec ed he - e ca ⋎ e f he d ea e b e (e a a ed = .14) ha he e ca ⋎ e f he d ea e b e (e a a ed = .01) a d ha , a E e e 1, he ⎯ e f dged d e a d e e ce ⎯ e e a ed a be⎯ ee f a e a d d⋎ d a efe e ce. The e d g ⋎ de e ca e de ce ha he ⎯ - edge f " he⋎ a e d e e ce be⎯ ee he b e c e a d he ce a c e" ab e e ed c f efe e ce he ch ce a e e a ed he A a d ea e b e . E ec a , he de e g "g " he⋎ a e d e e ce b he e h d f a .

## CONCLUDING REMARKS

A e e a c d f a he f ch ce ha c a a , e a
he c e f , a a ce: e , a e f a f a ch ce b e

The ed a g e ec c b a e he e a e- -d e e a e e f ea g, h ch ee ch ce beha a a ch ce be ee he be ( he ) b e c e, ha g ea ed he ( he be ) b e c e a b ec e e a.

The e e d a e a f he c b he de a d g f h he e ce ed d e e ce be ee he b e c e e e e ce d d a ' efe e ce. Had e ad ed h he e ca f a e , e d ha e bee e c e he de g echa f he b e ed cha ge he e ec e f f a g h a a e e d ca b h he be b e a d he b e c e d e . F e a e, he f a g e ec ha B h a d L d (1992) e ed a a e ha T e a d Kah e a ' d he he ga b e a a e e e-e a ed b ca g d he e e e h f he g a e (f 600 60, h ch c de ed be a a e f S ed h c d ). Ch (2003) f d ha a c a e ded be ee g he he d ea e b e a de c bed a 6- - e ec ( .e., *relatively* ca g d he d e a d e e ce), a d a e e e a he he d ea e b e a de c bed a 600- e e age. I he e e c e ha a f he a a ce c e d e ece a de e d he e a c d g f . If a d f f a g d g ca cha ge he e ce ed a e d e e ce be ee he b e c e a d he ce a c e ac d e e f a e c d , ca he f a g e ec be d ced. O he e, he - a a ce c e be a ed ega d e f he he he b e d e e f a ed.

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