Ingroup Bias and Its Implications for Using Visual Images in Computerized Surveys*

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Background – 1

- Visual images in survey instruments
  - Easier
  - Effective
  - Couper et al. (2007):

    a picture of a woman jogging vs.

    a woman in a hospital bed

    → Respondents use images to infer question meaning.

- Subjective concepts (e.g., health)
  - Visual images may standardize or clarify the meaning.

Background – 2

For cross-cultural research,

- Ingroup bias: a pattern that people favor members of own group (ingroup) over members of other groups (outgroups) or bias against ingroup

  → Visual images may inadvertently complicate measurement comparability

Data

- Experiments in two different web surveys
- Experiment 1
  - Convenient sample of Spanish-speaking Hispanics in U.S.
  - Question about health status with visual images
  - 3 scenarios varying race/ethnicity (Hispanic vs. White)
  - Completed
- Experiment 2
  - Respondent-driven sample of non-US-born Koreans in U.S.
  - Question about life style healthiness with visual images
  - 3 scenarios, each varying race, gender, and age
  - Data collection under progress

Data – Experiment 1: Scenario 1

- Please tell us whether you would rate the person's health excellent, very good, good, fair or poor.

Data – Experiment 1: Scenario 2

- Please tell us whether you would rate the person's health excellent, very good, good, fair or poor.

Data – Experiment 1: Scenario 3

- Please tell us whether you would rate the person's health excellent, very good, good, fair or poor.

Results – Experiment 1: Race/Eth

	(%)	(%)	(%)	(%)	(%)	(%)
n	*645*	*633*	*643*	*633*	*642*	*631*
Poor	82.3	70.0	37.8	51.2	0.3	0.2
Fair	14.8	24.6	49.1	39.3	2.6	1.1
Good	1.6	3.5	10.1	7.1	20.6	16.5
V Good	0.8	0.9	2.0	1.7	36.0	36.5
Excellent	0.6	0.9	0.9	0.6	40.5	45.8

$\chi^2 = 27.3$
($p<0.001$)

$\chi^2 = 23.5$
($p<0.001$)

$\chi^2 = 9.3$
($p=0.055$)

Results – Experiment 1: Race/Eth

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$\chi^2 = 27.3$ ($p<0.001$) $\chi^2 = 23.5$ ($p<0.001$) $\chi^2 = 9.3$ ($p=0.055$)

Data – Experiment 2: Scenario 1

- How healthy is the life style of the person in this picture? Very healthy, somewhat healthy, neither, somewhat unhealthy or very unhealthy?
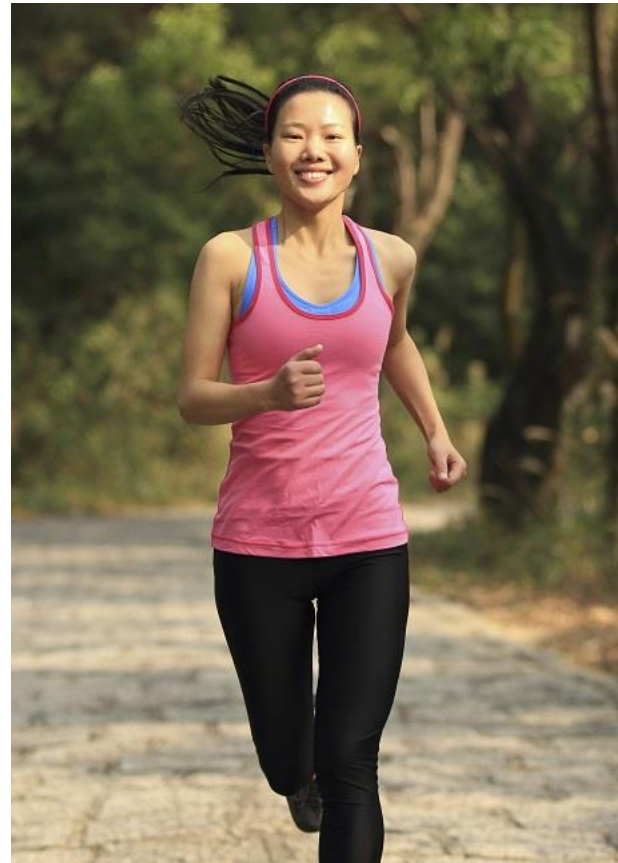
Data – Experiment 2: Scenario 2

- How healthy is the life style of the person in this picture? Very healthy, somewhat healthy, neither, somewhat unhealthy or very unhealthy?

Data – Experiment 2: Scenario 3

- How healthy is the life style of the person in this picture? Very healthy, somewhat healthy, neither, somewhat unhealthy or very unhealthy?

Results – Experiment 2: Race

	(%)	(%)
n	*105*	*97*
Very healthy	-	-
Somewhat healthy	5.7	1.0
Neither	10.5	13.4
Unhealthy	67.6	53.6
Very unhealthy	16.2	32.0

χ^2 = 10.5
(p=0.015)

Results – Experiment 2: Sex

	(%)	(%)
n	*104*	*95*
Very healthy	-	-
Somewhat healthy	-	-
Neither	6.7	2.1
Unhealthy	26.0	22.1
Very unhealthy	67.3	75.8

χ^2 = 3.2
(p=0.207)

Results – Experiment 2: by R Sex

	Male R	Female R	Male R	Female R
n	45	62	33	59
Very healthy	-	-	-	-
Somewhat healthy	-	-	-	-
Neither	8.9	3.0	5.1	1.6
Unhealthy	26.7	33.3	25.4	16.1
Very unhealthy	64.4	63.6	69.5	82.3

Results – Experiment 2: Age
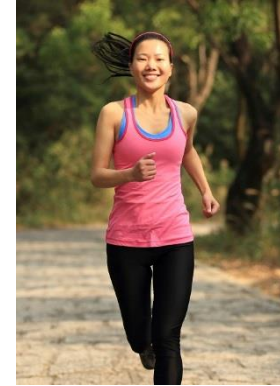
	(%)	(%)
n	*101*	*103*
Very healthy	57.4	66.0
Somewhat healthy	40.6	32.0
Neither	2.0	1.9
Somewhat unhealthy	-	-
Very unhealthy	-	-

$\chi^2 = 1.6$
($p=0.441$)

Results – Experiment 2: by R Age
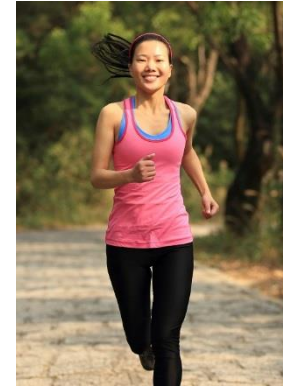
	<40 yrs R	40+ yrs R	<40 yrs R	40+ yrs R
n	*46*	*52*	*36*	*65*
Very healthy	54.3	61.5	66.7	66.2
Somewhat healthy	41.3	38.5	33.3	30.8
Neither	4.3	-	-	3.1
Unhealthy	-	-	-	-
Very unhealthy	-	-	-	-

What did we learn?

- Very preliminary but

- Respondents use images

- For Hispanics,
  - Race/ethnicity mattered
  - However, pictures were "noisy"

- For Koreans,
  - Race/ethnicity mattered: direction of ingroup bias
  - Gender may matter: against ingroup bias
  - Age unclear
  - Data collection to be completed