

WEB APPENDIX

WEB APPENDIX A

ITEM PURIFICATION: SHOPPING STYLE, EMPATHIZING AND SYSTEMIZING SCALES

Initial Item Generation

As reported in the ‘Method’ section of the main manuscript, a literature search identified an item bank of characteristics of male and female shoppers reported in prior research (see the item banks in this Web Appendix A below). The resulting items were subject to two stages of purification. The initial stage of scale purification was carried out with 185 UK masters students — Batch 1. Reliability was then tested on a second multi-cultural sample of 385 masters students mainly of non-UK origin at three UK universities, plus university staff — Batch 2.

Items Banks for Scales

Items bank for the Gender Shopping Style scale:

1. I take a pride in my ability as a shopper
2. Shopping – the whole process, not just buying) is a leisure activity
3. Before buying, I like to envisage using the products or service
4. I seek out and compare different products and shops before buying
5. The social aspect of shopping is important for me
6. For me, shopping isn’t just about buying things; doing it well is a way of expressing love for my family or other people who are important to me
7. When shopping, I probably visit more shops than necessary
8. I like to spend longer shopping than I really need to
9. I shop more often than I really need to
10. Shopping for technical products like computers is different: I would do that as quickly as possible
11. I try to complete my shopping in the shortest possible time *
12. Because I shop as quickly as possible, I probably often miss the best buy *
13. Shopping for technical products like computers is different: I take a pride in doing that well*

* Item reversed

The following item was deleted after the first stage (based on Cronbach alpha):

1. Before buying, I like to tally up the pros and cons.

That is, 14 initial items, plus seven more “reversed” items (not shown in the interests of brevity) included so as to alternate forward and reverse items.

Items bank for the Empathizing scale:

1. I can tell easily if someone else wants to enter a conversation
2. I really enjoy caring for others
3. I usually find it easy to know what to do in most social situations
4. It upsets me if I am late to a meeting with a friend
5. In a conversation, I focus on what my listener might be thinking, not just my own thoughts
6. I am usually good at predicting how someone will feel
7. If someone says one thing but means another, I can usually tell quite quickly
8. I find it easy to see why some things upset some people so much
9. It is easy for me to put myself in another person’s shoes
10. If someone in a group is feeling awkward or uncomfortable, I can spot it quickly
11. I feel bad if I realize that I’ve said something that offended someone
12. I find it easy to understand why some people sometimes get offended by remarks
13. It upsets me to see people cry
14. I prefer to talk about other people’s experiences rather than my own
15. I am good at understanding other people’s thoughts and feelings
16. When I watch a film I tend to get emotionally involved

The following items were deleted from the empathizing scale (based on Cronbach alpha):

At Batch 1 (initial sample, $n = 185$):

1. If someone asked me if I liked their haircut, I’d lie if I didn’t like it
2. I am unable to make decisions without being influenced by other people
3. I don’t consciously work out the rules of social situations

At Batch 2 (second sample, $n = 385$):

1. It upsets me if I am late for a meeting with a friend
2. I prefer to talk about other people’s experiences rather than my own
3. When I watch a good film I tend to get emotionally involved.

That is, 22 initial items.

Items Bank for the Systemizing Scale:

1. If there was a problem with my home electrical wiring, I’d be able to fix it myself
2. I like to read articles or web pages about new technology
3. I enjoy games that involve a lot of strategy
4. I am fascinated by how machines work
5. I usually find it easy to understand instruction manuals
6. I find maps easy to read and understand
7. When I learn about historical events, the exact dates are important to me
8. Reading a newspaper, if there are tables of information, my eyes are drawn to the numbers
9. When I learn a new language, I find the grammatical rules fascinating
10. When I’m in a new city, I find it easy to find my way around
11. I like watching documentaries on TV

12. I find it easy to understand how betting odds work
13. When I do DIY, I am meticulous about my work
14. I find it easy to understand information from the bank on investment and saving systems
15. I read the instruction manuals for new appliances thoroughly
16. I usually read legal documents very carefully

The following items were deleted from the systemizing scale (based on Cronbach alpha):

At Batch 1 (initial sample, $n = 185$):

1. I prefer reading non-fiction to fiction
2. If I cook, I think about exactly how different methods and ingredients contribute to the final product
3. If I had a collection of DVDs, CDs, stamps or coins, it would be very neatly organized
4. I usually notice whether something that I read is grammatically correct

At Batch 2 (second sample, $n = 385$):

1. When I learn a new language, I find the grammatical rules fascinating
2. I read the instruction manuals for new appliances very thoroughly

That is, 22 initial items.

Scale Purification

In the first stage of scale purification with Batch 1, the three scales had good reliability with Cronbach alphas above .7. We then replicated alphas on the second sample of 385 respondents (that included a wider variety of countries of origin). The reliability of the shopping-style scale was assessed to ensure that the scale was reliable for segments such as students vs. non-students; females vs. males; and younger vs. older. Alpha values were consistently greater than .7. Nevertheless, a small number of items from the empathizing and systemizing scales had low item-to-total correlations (below 0.3) and were deleted (see the item banks in this Web Appendix A above). In Batch 2, alphas were again consistently greater than .7 (see Table A1). The details are in Table A1 below.

In the next stage of scale purification, an exploratory factor analysis (EFA) was carried out separately on Batch 1 and Batch 2. We dropped a number of items because they had

standardized component loadings less than 0.5 or low item-to-total correlations (compare the item banks above in this Web Appendix A to Table 1 in the main manuscript).

TABLE A1
Shopping-style Scale Cronbach Alpha for Various Calibration Samples (number of respondents in respective samples)

Batch 1	.86	(185)	Batch 2	.77	(385)
Students	.81	(355)	Non-students	.81	(203)
Females	.76	(281)	Males	.76	(282)
Age <25 (younger)	.83	(317)	Age 25+ (older)	.78	(246)

WEB APPENDIX B

TABLE B1
Population and Sample Characteristics

Country		Age				Gender	
		0-24	25-54	45-59	60+	Male	Female
UK	Country	29.8	26.2	20.5	23.5	49.8	50.2
	Sample	60.9	24	12.6	2.6	50.8	49.2
Spanish	Country	24.1	27.6	23.2	25.1	49.5	50.5
	Sample	45.8	43	8.2	3.0	47.7	52.3
China	Country	29.4	31.5	23	16.1	51.5	48.5
	Sample	68.7	25.9	4.8	0.7	48.3	51.7
Greece	Country	24.4	26.7	21.3	27.6	48.7	51.3
	Sample	35.3	55.3	5.9	3.5	36.5	63.5
USA	Country	31.8	26.4	20	21.8	49.2	50.8
	Sample	61.5	23.1	13.8	1.5	49.2	50.8
France	Country	30	24.4	19.7	25.9	49	51
	Sample	62.9	34.3	2.9	0	31.4	68.6
Thailand	Country	30.1	30	23.1	16.8	49.2	50.8
	Sample	55.9	44.1	0	0	50	50
Germany	Country	22.9	24.3	24.1	28.7	49.2	50.7
	Sample	56.3	37.5	3.1	3.1	62.5	37.5
Japan	Country	22.1	24.6	19.6	33.7	48.5	51.5
	Sample	69.7	30.3	0	0	51.5	48.5
Italy	Country	23	24.2	23.4	29.4	48.2	51.8
	Sample	61.3	25.8	12.9	0	51.6	48.4

Sources: Central Intelligence Agency (2017), <https://www.cia.gov/library/publications/resources/the-world-factbook/print/textversion.html>

United Nations (2015), <https://www.populationpyramid.net>

Note: Taiwan is omitted from the table as we lack the appropriate statistics.

WEB APPENDIX C

Other Measures

Gender equality

The World Economic Forum (2013) index is based upon the four dimensions of health & survival, economic participation & opportunity, educational attainment, and political empowerment:

1. Health and Survival
 - a. Sex ratio at birth (converted to female-over-male ratio)
 - b. Ratio: female healthy life expectancy over male value
2. Economic Participation and Opportunity:
 - a. Ratio: female labor force participation over male value
 - b. Wage equality between women and men for similar work (converted to female-over-male ratio)
 - c. Ratio: female estimated earned income over male value
 - d. Ratio: female legislators, senior officials and managers over male value
 - e. Ratio: female professional and technical workers over male value
3. Educational Attainment
 - a. Ratio: female literacy rate over male value
 - b. Ratio: female net primary enrolment rate over male value
 - c. Ratio: female net secondary enrolment rate over male value
 - d. Ratio: female gross tertiary enrolment ratio over male value
4. Political Empowerment
 - a. Ratio: females with seats in parliament over male value
 - b. Ratio: females at ministerial level over male value
 - c. Ratio: number of years of a female head of state (last 50 years) over male value.

The four dimensions are weighted equally and the components of each dimension are normalized by equalizing their standard deviations.

Income

Income bracket of your household:

Under £15,000

£15,000 – £24,000

£25,000 – £34,000

£35,000 – 44,000

£45,000 +

Refused

Type of occupation:

Waged

Unwaged

Student

Retired

Household socio-economic classification

Occupation of the main income earner in the home [free text response, coded by the authors:
 Semi-skilled & unskilled manual occupations or unemployed
 Skilled manual occupations
 Supervisory, clerical & junior managerial
 Administrative, professional occupations
 Higher & intermediate managerial, administrative, professional occupations].

Age:

Under 18

18 - 24

25 - 44

45 - 59

60 + .

Marital status

Single

Living together

Married

Divorced/separated.

New man / tomboy stereotypes

I would describe myself as a:

[Males]] New man (sensitive male who likes housework/childcare)

[Females] Tomboy (female who behaves in a boyish manner).

Sexual descriptions

Please tick as many as apply:

That's cheeky – mind your own business

Transvestite

Transsexual

Asexual (not interested in or wanting sex)

Androsexual (style of personal appearance minimizing sex and gender differences)

Metrosexual (heterosexual male paying attention to personal appearance, grooming and use of fragrance).

Finally, we also include a marker variable not predicted to be related to the latent variables:

Sexual orientation (heterosexuality/homosexuality)

I would describe my sexuality as:

Strongly homosexual

Mainly homosexual

Bisexual

Mainly heterosexual

Strongly heterosexual

Coded 1 (Strongly heterosexual) to 5 (Strongly homosexual)

Correlations of the marker variable with the latent variables (p value):

Shopping style: -.032 (.164)
Empathizing: -.016 (.466)
Systemizing: -.006 (.808).

Note: as these correlations are non-significant, there are no significant values to partial-out.

Source: The authors.

WEB APPENDIX D

TABLE D1
The Mean Values of the Three Constructs — Shopping Style, Empathizing, and Systemizing — for Men and Women Within Each Country (or Ethnic Group)

Shopping Styles					
Ethnic Group	Female (Mean)	Male (Mean)	T-Test	Significance	Effect Size (Cohen <i>d</i>)
Overall sample	3.35	2.70	21.7	$p < .001$	.712
Spanish	3.26	2.71	10.6	$p < .001$	.661
UK-Caucasian	3.35	2.49	10.8	$p < .001$	.945
UK-South Asian	3.64	2.69	10.8	$p < .001$	1.19
China	3.62	2.75	6.7	$p < .001$	1.12
Taiwan	3.33	3.01	2.3	$p < .05$	.473
Greece	3.35	2.72	4.0	$p < .001$	.879
USA	3.41	2.50	5.0	$p < .001$	1.26

Empathizing					
Ethnic Group	Female (Mean)	Male (Mean)	T-Test	Significance	Effect Size (Cohen <i>d</i>)
Overall sample	3.74	3.49	11.5	$p < .001$	.413
Spanish	3.79	3.57	5.8	$p < .001$	.374
UK-Caucasian	3.77	3.32	7.7	$p < .001$	.673
UK-South Asian	3.79	3.43	5.5	$p < .001$	.610
China	3.66	3.44	2.2	$p < .05$	.356
Taiwan	3.51	3.46	.4	$p > .1ns$	.081
Greece	3.81	3.51	2.5	$p < .05$	.578
USA	3.80	3.69	.8	$p > .1ns$	.193

Systemizing					
Ethnic Group	Female (Mean)	Male (Mean)	T-Test	Significance	Effect Size (Cohen <i>d</i>)
Overall sample	2.67	3.39	27.6	$p < .001$	.863
Spanish	2.69	3.38	16.1	$p < .001$	1.04
UK-Caucasian	2.42	3.38	13.1	$p < .001$	1.15
UK-South Asian	2.68	3.48	10.0	$p < .001$	1.11
China	2.76	3.44	5.8	$p < .001$	.960
Taiwan	2.69	3.49	6.4	$p < .001$	1.31
Greece	2.81	3.67	4.5	$p < .001$	1.05
USA	2.94	3.30	1.9	$p < .1$	.462