Supplementary Material

Effortful Processing Reduces the Attraction Effect in Multi-alternative Decision Making: An Electrophysiological Study Using a Task-irrelevant Probe Technique

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Table 1 | The trinity choice sets used in the experiment.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Consumer product | Two attributes |  | Set 1 | |  |  |  | Set 2 | |  |  |
|  | or service |  | A | B | DA | DB |  | A | B | DA | DB |  |
|  | Athletic shoes | Quality of design (1–100) | 80 | 65 | 78 | 63 |  | 77 | 62 | 75 | 60 |  |
|  |  | Comfort in wearing (1–100) | 65 | 75 | 63 | 73 |  | 67 | 77 | 65 | 75 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | School bag | Weight (Kg) | 0.80 | 1.20 | 0.87 | 1.27 |  | 0.70 | 1.10 | 0.77 | 1.17 |  |
|  |  | Quality of design (1–100) | 65 | 80 | 63 | 78 |  | 63 | 78 | 61 | 76 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Traveler's bag | Quality of design (1–100) | 80 | 65 | 78 | 63 |  | 78 | 63 | 76 | 61 |  |
|  |  | Weight (Kg) | 1.20 | 0.80 | 1.27 | 0.87 |  | 1.10 | 0.70 | 1.17 | 0.77 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Coat | Quality of design (1–100) | 70 | 80 | 68 | 78 |  | 68 | 78 | 66 | 76 |  |
|  |  | Price (thousand Yen) | 7.0 | 10.0 | 7.5 | 10.5 |  | 6.4 | 9.4 | 6.9 | 9.9 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Exercise clothes | Price (thousand Yen) | 10.0 | 7.0 | 10.5 | 7.5 |  | 9.4 | 6.4 | 9.9 | 6.9 |  |
|  |  | Quality of design (1–100) | 80 | 70 | 78 | 68 |  | 78 | 68 | 76 | 66 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Wristwatch | Quality of design (1–100) | 80 | 70 | 78 | 68 |  | 82 | 72 | 80 | 70 |  |
|  |  | Price (thousand Yen) | 9.00 | 5.00 | 9.67 | 5.67 |  | 9.80 | 5.80 | 10.47 | 6.47 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | MP3 Player | Price (thousand Yen) | 12.00 | 8.00 | 12.67 | 8.67 |  | 10.70 | 6.70 | 11.37 | 7.37 |  |
|  |  | Sound quality (1–100) | 76 | 70 | 75 | 69 |  | 74 | 68 | 73 | 67 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Earphones | Sound quality (1–100) | 84 | 70 | 82 | 68 |  | 82 | 68 | 80 | 66 |  |
|  |  | Price (thousand Yen) | 4.00 | 3.00 | 4.17 | 3.17 |  | 3.80 | 2.80 | 3.97 | 2.97 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Electronic dictionary | Repletion of dictionaries (1-100) | 75 | 65 | 73 | 63 |  | 77 | 67 | 75 | 65 |  |
|  |  | Price (thousand Yen) | 20.0 | 15.0 | 20.8 | 15.8 |  | 21.0 | 16.0 | 21.8 | 16.8 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Digital camera | Image quality (1-100) | 70 | 76 | 69 | 75 |  | 72 | 78 | 71 | 77 |  |
|  |  | Repletion of functions (1-100) | 80 | 65 | 78 | 63 |  | 75 | 60 | 73 | 58 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Smartphone | Repletion of functions (1-100) | 60 | 70 | 58 | 68 |  | 59 | 69 | 57 | 67 |  |
|  |  | Quality of design (1–100) | 80 | 60 | 77 | 57 |  | 82 | 62 | 79 | 59 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Notebook computer | Repletion of functions (1-100) | 65 | 75 | 63 | 73 |  | 67 | 77 | 65 | 75 |  |
|  |  | Price (thousand Yen) | 60 | 90 | 65 | 95 |  | 66 | 96 | 71 | 101 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Tablet personal computer | Price (thousand Yen) | 15.0 | 20.0 | 15.8 | 20.8 |  | 16.0 | 21.0 | 16.8 | 21.8 |  |
|  |  | Repletion of functions (1-100) | 65 | 75 | 63 | 73 |  | 67 | 77 | 61 | 71 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Electronic keyboard | Number of distinctive functions | 13 | 7 | 12 | 6 |  | 14 | 8 | 13 | 7 |  |
|  |  | Sound quality (1–100) | 70 | 80 | 68 | 78 |  | 68 | 78 | 66 | 76 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Liquid crystal display | Screen size (inch) | 19 | 26 | 18 | 25 |  | 20 | 27 | 19 | 26 |  |
|  | television | Image quality (1-100) | 80 | 70 | 78 | 68 |  | 78 | 68 | 76 | 66 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Single sofa | Price (thousand Yen) | 14.00 | 10.00 | 14.67 | 10.67 |  | 13.20 | 9.20 | 13.87 | 9.87 |  |
|  |  | Comfort in seating (1–100) | 75 | 65 | 73 | 63 |  | 73 | 63 | 71 | 61 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Office chair | Comfort in seating (1–100) | 65 | 75 | 63 | 73 |  | 63 | 73 | 61 | 71 |  |
|  |  | Price (thousand Yen) | 10.00 | 14.00 | 10.67 | 14.67 |  | 9.20 | 13.20 | 9.87 | 13.87 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Bed | Quality of design (1–100) | 60 | 79 | 57 | 76 |  | 62 | 81 | 59 | 78 |  |
|  |  | Price (thousand Yen) | 17.0 | 24.0 | 18.2 | 25.2 |  | 17.7 | 24.7 | 18.9 | 25.9 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Bicycle | Price (thousand Yen) | 20.0 | 15.0 | 20.8 | 15.8 |  | 21.0 | 16.0 | 21.8 | 16.8 |  |
|  |  | Quality of design (1–100) | 70 | 60 | 68 | 58 |  | 72 | 62 | 70 | 60 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Gas scooter | Quality of design (1–100) | 75 | 60 | 73 | 58 |  | 77 | 62 | 75 | 60 |  |
|  |  | Gas mileage (km per liter) | 60 | 70 | 58 | 68 |  | 59 | 69 | 67 | 67 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Hair salon | Magazine’s rating of skill (1–100) | 80 | 70 | 78 | 68 |  | 78 | 68 | 76 | 66 |  |
|  |  | Time taken to reach there from | 37 | 19 | 40 | 22 |  | 33 | 15 | 36 | 18 |  |
|  |  | home (min) |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Fitness club | Repletion of equipment (1–100) | 80 | 65 | 78 | 63 |  | 78 | 63 | 76 | 61 |  |
|  |  | Time taken to reach the club from | 28 | 15 | 30 | 17 |  | 26 | 13 | 28 | 15 |  |
|  |  | home (min) |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Rental apartment | Monthly rent (thousand Yen) | 55.0 | 60.0 | 55.8 | 60.8 |  | 53.9 | 58.9 | 54.7 | 59.7 |  |
|  |  | Walking distance from the station | 19 | 10 | 21 | 12 |  | 21 | 12 | 23 | 14 |  |
|  |  | to the apartment (min) |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Restaurant | Magazine’s rating of skill (1–100) | 75 | 65 | 73 | 63 |  | 73 | 63 | 71 | 61 |  |
|  |  | Time taken to reach the restaurant | 19 | 10 | 20 | 11 |  | 17 | 8 | 18 | 9 |  |
|  |  | from school (min) |  |  |  |  |  |  |  |  |  |  |

Note: Choice sets 1 and 2 consisted of 24 consumer products or services, their two attributes, and three alternatives (the target, competitor, and decoy), which also had two attribute values. “A” was a target when “A,” “B,” and “DA” were presented as alternatives, whereas “B” was a target when “A,” “B,” and “DB” were presented as alternatives.