Supplementary Material for

**The Many Faces of Creativity**

**Exploring Synaesthesia through a Metaphorical Lens**

by

Sarah Turner

*Coventry University*

Jeannette Littlemore

*University of Birmingham*

Part of

**Elements in Cognitive Linguistics**

edited by

Sarah Duffy

*Northumbria University*

Nick Riches

*Newcastle University*

ISBNs: 9781108971362 (PB), 9781108974813 (OC)

Information on this title: www.cambridge.org/9781108971362

DOI: 10.1017/9781108974813

**Section 2**

|  |
| --- |
| **Questionnaire****Part 1**In the first part of this study, you will be asked to write about *things you like* and *things you do* ***not*** *like* to see, hear, taste, smell, and feel.There is no minimum or maximum word limit for any of the questions, but please write as much as you feel comfortable with. Please feel free to resize the text boxes if necessary.1. Please tell us about something you like to see/look at (e.g. a view, scenery, colour, pattern...)What is it like? Why do you like it?
2. Please tell us about something you do not like to see/look at (e.g. a view, scenery, colour, pattern...)What is it like? Why do you not like it?
3. Please tell us about something you like to hear (e.g. a sound, music...)What is it like? Why do you like it?
4. Please tell us about something you do not like to hear (e.g. a sound, music...)What is it like? Why do you not like it?
5. Please tell us about something you like to taste.What is it like? Why do you like it?
6. Please tell us about something you do not like to taste.What is it like? Why do you not like it?
7. Please tell us about something you like to smell.What is it like? Why do you like it?
8. Please tell us about something you do not like to smell.What is it like? Why do you not like it?
9. Please tell us about something you like to feel (e.g. a texture or physical sensation).What is it like? Why do you like it?
10. Please tell us about something you do not like to feel (e.g. a texture or physical sensation).What is it like? Why do you not like it?

**Part 2**In the next section, you will be shown six words. In the box below each word, please write the first thing that comes to mind when you see the word. This could be a sensation, feeling, image, sound, etc.1. Happiness
2. Sadness
3. Fear
4. Anger
5. Surprise
6. Disgust

**Part 3**In this final set of questions, you will be asked about yourself and your synaesthesia.1. What is your gender?
2. What age group do you belong to? 18-30 31-50 51+
3. What type(s) of synaesthesia do you have? Please tick all that apply.
4. Letters/words with colours
5. Sounds with colours
6. Numerical sequences with points in space
7. Ordered sequences (e.g. days of the week or months of the year) with personalities or genders
8. Words with tastes
9. Other (please specify)
10. How do you experience your synaesthesia?
11. I experience Associator synaesthesia (i.e. where you see the association in your mind’s eye)
12. I experience Projected synaesthesia (where the association is projected into space or onto a page and actually ‘seen’)
13. I don’t know
14. Can you explain your experiences with synaesthesia in more detail?
 |

Figure A1 The questionnaire that was administered to participants

|  |  |  |
| --- | --- | --- |
| Group | Gender | Age group |
| Synaesthetes | Female: 16 | 18-30: 1131-50: 351+: 2 |
| Male: 4 | 18-30: 331-50: 151+: 0 |
| Non-synaesthetes | Female: 14 | 18-30: 431-50: 851+: 2 |
| Male: 6 | 18-30: 131-50: 151+: 4 |

Table A1 Demographic breakdown of the participants in the study

|  |  |
| --- | --- |
| **Type of association** | **Number** |
| Letters and words with colours | 14 |
| Sounds with colours | 14 |
| Numerical sequences with points in space | 8 |
| Ordered sequences with personalities or genders | 8 |
| Words with tastes | 3 |
| Other1 | 31 |

1 Examples of the types of association included in the category ‘other’ were associations between pain and colour, taste and musical notes, words with textures and the association of words to shapes or movements.

Table A2 Types of synaesthesic association reported by our participants

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | SIGHT | SOUND | TASTE | SMELL | TOUCH | **Totals** |
|  | Positive | Negative | Total | Positive | Negative | Total | Positive | Negative | Total | Positive | Negative | Total | Positive | Negative | Total | **Positive** | **Negative** | **Total** |
| Synaesthetes | 2193 | 1647 | 3840 | 2410 | 1696 | 4106 | 1175 | 1195 | 2370 | 1371 | 1269 | 2640 | 1172 | 1023 | 2195 | **8321** | **6830** | **15151** |
| Non-synaesthetes | 1083 | 820 | 1903 | 859 | 828 | 1687 | 485 | 505 | 990 | 602 | 585 | 1187 | 577 | 626 | 1203 | **3606** | **3364** | **6970** |

Table A3 Number of words used to describe each of the senses in positive and negative terms

**Section 3**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| SYNAESTHETES | SIGHT | SMELL | SOUND | TASTE | TOUCH | **Totals** |
| Response sense | Positive | Negative | Total |  Positive | Negative | Total |  Positive | Negative | Total |  Positive | Negative | Total |  Positive | Negative | Total | **Positive** | **Negative** | **Total** |
| Sight | 5 | 5 | 10 | 10 | 6 | 16 | 21 | 9 | 30 | 8 | 4 | 12 | 5 | 2 | 7 | **49** | **26** | **75** |
| Smell | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | **1** | **2** | **3** |
| Sound | 0 | 2 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 1 | 3 | **3** | **5** | **8** |
| Taste | 1 | 0 | 1 | 3 | 5 | 8 | 1 | 0 | 1 | 9 | 0 | 9 | 1 | 0 | 1 | **15** | **5** | **20** |
| Touch | 12 | 11 | 23 | 5 | 4 | 9 | 14 | 10 | 24 | 14 | 16 | 30 | 10 | 8 | 18 | **55** | **49** | **104** |
| **Totals**  | **18** | **19** | **37** | **18** | **16** | **34** | **36** | **19** | **55** | **33** | **22** | **55** | **18** | **11** | **29** | **123** | **87** | **210** |

Table A4 Sense responses produced by synaesthetes for each sense prompt, split by valency of prompt

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| NON-SYNAESTHETES | SIGHT | SMELL | SOUND | TASTE | TOUCH | **Totals** |
| Response sense |  Positive | Negative | Total  |  Positive | Negative | Total  |  Positive | Negative | Total  |  Positive | Negative | Total  |  Positive | Negative | Total  | **Positive** | **Negative** | **Total** |
| Sight | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | **1** | **0** | **1** |
| Smell | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** | **0** |
| Sound | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** | **0** |
| Taste | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 7 | 13 | 20 | 0 | 0 | 0 | **8** | **13** | **21** |
| Touch | 1 | 2 | 3 | 4 | 2 | 6 | 1 | 3 | 4 | 4 | 8 | 12 | 7 | 7 | 14 | **17** | **22** | **39** |
| **Totals** | **1** | **2** | **3** | **5** | **2** | **7** | **2** | **3** | **5** | **11** | **21** | **32** | **7** | **7** | **14** | **26** | **35** | **61** |

Table A5 Sense responses produced by non-synaesthetes for each sense prompt, split by valency of prompt

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| SYNAESTHETES | SIGHT | SMELL | SOUND | TASTE | TOUCH | **Totals** |
|   |  Positive | Negative | Total  |  Positive | Negative | Total  |  Positive | Negative | Total  |  Positive | Negative | Total  |  Positive | Negative | Total  | **Positive** | **Negative** | **Total** |
| Emotional effects | 16 | 23 | 39 | 17 | 6 | 23 | 21 | 17 | 38 | 4 | 3 | 7 | 20 | 12 | 32 | **78** | **61** | **139** |
| Cognitive effects | 5 | 3 | 8 | 1 | 0 | 1 | 8 | 9 | 17 | 1 | 0 | 1 | 1 | 0 | 1 | **16** | **12** | **28** |
| Physical effects | 3 | 19 | 22 | 3 | 12 | 15 | 10 | 20 | 30 | 3 | 5 | 8 | 13 | 19 | 32 | **32** | **75** | **107** |
| Personification | 6 | 2 | 8 | 1 | 1 | 2 | 2 | 3 | 5 | 4 | 3 | 7 | 3 | 4 | 7 | **16** | **13** | **29** |
| Empathy | 1 | 5 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1** | **5** | **6** |
| Value judgements | 0 | 0 | 0 | 1 | 5 | 6 | 1 | 1 | 2 | 1 | 3 | 4 | 0 | 1 | 1 | **3** | **10** | **13** |
| ‘Hyperbole' | 0 | 3 | 3 | 0 | 2 | 2 | 0 | 3 | 3 | 1 | 1 | 2 | 0 | 1 | 1 | **1** | **10** | **11** |
| Literal explanations and associations | 6 | 7 | 13 | 16 | 5 | 21 | 5 | 0 | 5 | 6 | 5 | 11 | 2 | 2 | 4 | **35** | **19** | **54** |
| Metaphor | 19 | 9 | 28 | 14 | 10 | 24 | 27 | 18 | 45 | 10 | 8 | 18 | 4 | 3 | 7 | **74** | **48** | **122** |
| **Total** | **40** | **48** | **88** | **36** | **35** | **71** | **53** | **54** | **107** | **26** | **25** | **51** | **23** | **30** | **53** | **178** | **192** | **370** |

Table A6 Response types produced by synaesthetes for each sense prompt, split by valency of prompt

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| NON-SYNAESTHETES | SIGHT | SMELL | SOUND | TASTE | TOUCH | **Totals** |
|   |  Positive | Negative | Total  |  Positive | Negative | Total  |  Positive | Negative | Total  |  Positive | Negative | Total  |  Positive | Negative | Total  | **Positive** | **Negative** | **Total** |
| Emotional effects | 14 | 12 | 26 | 6 | 3 | 9 | 15 | 14 | 29 | 6 | 3 | 9 | 11 | 6 | 17 | **52** | **38** | **90** |
| Cognitive effects | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | **2** | **4** | **6** |
| Physical effects | 2 | 6 | 8 | 2 | 6 | 8 | 2 | 13 | 15 | 6 | 5 | 11 | 5 | 10 | 15 | **17** | **40** | **57** |
| Personification | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 2 | 3 | 2 | 1 | 3 | 0 | 1 | 1 | **4** | **5** | **9** |
| Empathy | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **1** | **1** |
| Value judgements | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 3 | 1 | 2 | 3 | 0 | 0 | 0 | **2** | **5** | **7** |
| ‘Hyperbole' | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** | **0** |
| Literal explanations and associations | 11 | 12 | 23 | 12 | 10 | 22 | 12 | 12 | 24 | 12 | 13 | 25 | 12 | 10 | 22 | **59** | **57** | **116** |
| Metaphor | 1 | 1 | 2 | 2 | 2 | 4 | 5 | 0 | 5 | 1 | 3 | 4 | 0 | 0 | 0 | **9** | **6** | **15** |
| **Total**  | **16** | **20** | **36** | **17** | **20** | **37** | **21** | **31** | **52** | **22** | **24** | **46** | **17** | **23** | **40** | **93** | **118** | **211** |

Table A7 Response types produced by synaesthetes for each sense prompt, split by valency of prompt

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| SYNAESTHETES | SIGHT | SMELL | SOUND | TASTE | TOUCH | **Totals** |
|   |  Positive | Negative | Total  |  Positive | Negative | Total  |  Positive | Negative | Total  |  Positive | Negative | Total  |  Positive | Negative | Total  | **Positive** | **Negative** | **Total** |
| Pattern and colour | 10 | 3 | 13 | 8 | 5 | 13 | 14 | 3 | 17 | 5 | 3 | 8 | 3 | 1 | 4 | **40** | **15** | **55** |
| Containment | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 3 | 4 | 0 | 2 | 2 | 0 | 0 | 0 | **2** | **6** | **8** |
| Direction and movement | 2 | 0 | 2 | 0 | 1 | 1 | 1 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | **3** | **3** | **6** |
| Heaviness and lightness | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | **1** | **1** | **2** |
| Height and depth | 1 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | **4** | **0** | **4** |
| Lightness and darkness | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | **3** | **3** | **6** |
| Cleanliness and dirtiness | 0 | 0 | 0 | 3 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **3** | **1** | **4** |
| Sharpness and bluntness | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 7 | 8 | 1 | 2 | 3 | 0 | 0 | 0 | **2** | **11** | **13** |
| Texture | 4 | 2 | 6 | 0 | 1 | 1 | 6 | 0 | 6 | 2 | 0 | 2 | 1 | 2 | 3 | **13** | **5** | **18** |
| Structure, shape and pattern | 0 | 1 | 1 | 2 | 0 | 2 | 2 | 1 | 3 | 0 | 2 | 2 | 0 | 0 | 0 | **4** | **4** | **8** |
| Warmth and coldness | 2 | 2 | 4 | 1 | 1 | 2 | 3 | 1 | 4 | 2 | 3 | 5 | 0 | 0 | 0 | **8** | **7** | **15** |
| Order and chaos | 1 | 1 | 2 | 0 | 1 | 1 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | **2** | **3** | **5** |
| **Total** | **20** | **9** | **29** | **15** | **13** | **28** | **35** | **21** | **56** | **11** | **13** | **24** | **4** | **3** | **7** | **85** | **59** | **144** |

Table A8 Metaphor themes produced by synaesthetes for each sense prompt, split by valency of prompt

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| NON-SYNAESTHETES | SIGHT | SMELL | SOUND | TASTE | TOUCH | **Totals** |
|   |  Positive | Negative | Total  |  Positive | Negative | Total  |  Positive | Negative | Total  |  Positive | Negative | Total  |  Positive | Negative | Total  | **Positive** | **Negative** | **Total** |
| Pattern and colour | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** | **0** |
| Containment | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** | **0** |
| Direction and movement | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | **3** | **1** | **4** |
| Heaviness and lightness | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **1** | **1** |
| Height and depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** | **0** |
| Lightness and darkness | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** | **0** |
| Cleanliness and dirtiness | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1** | **0** | **1** |
| Sharpness and bluntness | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | **0** | **4** | **4** |
| Texture | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** | **0** |
| Structure, shape and pattern | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | **1** | **0** | **1** |
| Warmth and coldness | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | **3** | **0** | **3** |
| Order and chaos | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1** | **0** | **1** |
| **Total** | **1** | **1** | **2** | **2** | **2** | **4** | **5** | **0** | **5** | **1** | **3** | **4** | **0** | **0** | **0** | **9** | **6** | **15** |

Table A9 Metaphor themes produced by synaesthetes for each sense prompt, split by valency of prompt

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  SYNAESTHETES | Emotional effects | Empathy | Hyperbole | Literal explanations and associations | Value judgements | Physical effects | Metaphor | Personification |
| Cognitive effects | ρ | .29\*\* | 0.13 | 0.07 | 0.09 | -0.09 | 0.12 | .24\*\* | 0.07 |
| Sig. | 0.00 | 0.08 | 0.34 | 0.22 | 0.22 | 0.09 | 0.00 | 0.33 |
| N | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Emotional effects | ρ |  | .17\* | 0.00 | 0.01 | -0.06 | .28\*\* | .19\*\* | 0.02 |
| Sig. |  | 0.02 | 1.00 | 0.86 | 0.37 | 0.00 | 0.01 | 0.77 |
| N |  | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Empathy | ρ |   |  | -0.04 | 0.03 | -0.04 | .26\*\* | -0.08 | 0.03 |
| Sig. |   |  | 0.59 | 0.63 | 0.55 | 0.00 | 0.26 | 0.67 |
| N |   |  | 200 | 200 | 200 | 200 | 200 | 200 |
| Hyperbole | ρ |   |   |  | -0.07 | -0.05 | 0.10 | 0.02 | .15\* |
| Sig. |   |   |  | 0.34 | 0.46 | 0.15 | 0.76 | 0.03 |
| N |   |   |  | 200 | 200 | 200 | 200 | 200 |
| Literal explanations and associations | ρ |   |   |   |  | -0.09 | -.16\* | -0.05 | -0.08 |
| Sig. |   |   |   |  | 0.23 | 0.02 | 0.51 | 0.28 |
| N |   |   |   |  | 200 | 200 | 200 | 200 |
| Value judgements | ρ |   |   |   |   |  | -0.03 | .17\* | -0.01 |
| Sig. |   |   |   |   |  | 0.72 | 0.02 | 0.94 |
| N |   |   |   |   |  | 200 | 200 | 200 |
| Physical effects | ρ |   |   |   |   |   |  | 0.02 | -0.05 |
| Sig. |   |   |   |   |   |  | 0.82 | 0.51 |
| N |   |   |   |   |   |  | 200 | 200 |
| Metaphor | ρ |   |   |   |   |   |   |  | .18\* |
| Sig. |   |   |   |   |   |   |  | 0.01 |
| N |   |   |   |   |   |   |  | 200 |

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\*. Correlation is significant at the 0.01 level (2-tailed).

ρ = Spearman’s correlation coefficient

Sig. = significance (2-tailed)

N = number of participants

Table A10 Correlations between the response types produced by the synaesthetes

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| NON-SYNAESTHETES | Emotional effects | Empathy | Literal explanations and associations | Value judgements | Physical effects | Metaphor | Personification |
| Cognitive effects | ρ | 0.04 | -0.01 | **-.14\*** | -0.03 | **.174**\* | -0.05 | **.25\*\*** |
| Sig. | 0.60 | 0.86 | 0.05 | 0.64 | 0.01 | 0.50 | 0.00 |
| N | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Emotional effects | ρ |   | 0.08 | **-.15\*** | -0.04 | 0.06 | 0.05 | 0.02 |
| Sig. |   | 0.24 | 0.04 | 0.60 | 0.39 | 0.48 | 0.74 |
| N |   | 200 | 200 | 200 | 200 | 200 | 200 |
| Empathy | ρ |   |   | 0.06 | -0.01 | 0.12 | -0.02 | -0.02 |
| Sig. |   |   | 0.39 | 0.85 | 0.10 | 0.78 | 0.83 |
| N |   |   | 200 | 200 | 200 | 200 | 200 |
| Literal explanations and associations | ρ |   |   |   | 0.06 | **-.15\*** | -0.12 | -0.05 |
| Sig. |   |   |   | 0.43 | 0.04 | 0.10 | 0.45 |
| N |   |   |   | 200 | 200 | 200 | 200 |
| Value judgements | ρ |   |   |   |   | 0.07 | -0.05 | -0.04 |
| Sig. |   |   |   |   | 0.33 | 0.46 | 0.56 |
| N |   |   |   |   | 200 | 200 | 200 |
| Physical effects | ρ |   |   |   |   |   | -0.12 | 0.10 |
| Sig. |   |   |   |   |   | 0.09 | 0.16 |
| N |   |   |   |   |   | 200 | 200 |
| Metaphor | ρ |   |   |   |   |   |   | 0.03 |
| Sig. |   |   |   |   |   |   | 0.63 |
| N |   |   |   |   |   |   | 200 |

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\*. Correlation is significant at the 0.01 level (2-tailed).

ρ = Spearman’s correlation coefficient

Sig. = significance (2-tailed)

N = number of participants

Table A11 Correlations between the response types produced by the non-synaesthetes

**Section 4**

|  |  |  |
| --- | --- | --- |
|  | Synaesthetes | Non-synaesthetes |
| Total number of words produced | 693 | 289 |
| Mean word count per response | 5.78 | 2.41 |
| Standard deviation | 7.26 | 3.10 |
| Highest word count | 38 | 22 |
| Lowest word count | 1 | 1 |

Table A12 Word counts in responses produced by synaesthetes and non-synaesthetes

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| SYNAESTHETES | Actions | Colour | Synonyms and related emotions | Exclamations and onomatopoeia | Nature and natural phenomena | People, body parts, facial expressions | Physical objects | Physical sensations | Qualities | Scenarios | Synaesthesic Association with Letters and Sounds |
| Abstract concepts | ρ | 0.04 | -0.01 | **.30\*\*** | -0.02 | **.20\*** | 0.04 | 0.14 | -0.06 | 0.10 | -0.07 | -0.08 |
| Sig.  | 0.70 | 0.92 | 0.00 | 0.80 | 0.03 | 0.64 | 0.13 | 0.50 | 0.27 | 0.47 | 0.37 |
| N | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| Actions | ρ |   | -0.12 | 0.07 | -0.03 | -0.15 | **.36\*\*** | -0.12 | 0.03 | -0.06 | **.58\*\*** | -0.11 |
| Sig.  |   | 0.20 | 0.45 | 0.74 | 0.10 | 0.00 | 0.19 | 0.71 | 0.54 | 0.00 | 0.23 |
| N |   | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| Colour | ρ |   |   | -0.13 | 0.08 | 0.03 | -0.05 | 0.10 | -0.11 | **-.21\*** | -0.14 | **-.33\*\*** |
| Sig.  |   |   | 0.17 | 0.37 | 0.76 | 0.61 | 0.29 | 0.22 | 0.02 | 0.14 | 0.00 |
| N |   |   | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| Synonyms and related emotions | ρ |   |   |   | -0.02 | 0.02 | -0.01 | -0.08 | 0.12 | 0.03 | -0.06 | -0.07 |
| Sig.  |   |   |   | 0.84 | 0.86 | 0.94 | 0.41 | 0.18 | 0.71 | 0.55 | 0.45 |
| N |   |   |   | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| Exclamations and onomatopoeia | ρ |   |   |   |   | -0.04 | -0.05 | -0.03 | -0.02 | -0.04 | -0.02 | -0.03 |
| Sig.  |   |   |   |   | 0.66 | 0.61 | 0.72 | 0.80 | 0.69 | 0.79 | 0.74 |
| N |   |   |   |   | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| Nature and natural phenomena | ρ |   |   |   |   |   | 0.00 | 0.12 | -0.11 | 0.03 | -0.12 | -0.15 |
| Sig.  |   |   |   |   |   | 0.99 | 0.18 | 0.23 | 0.78 | 0.19 | 0.10 |
| N |   |   |   |   |   | 120 | 120 | 120 | 120 | 120 | 120 |
| People, body parts, facial expressions | ρ |   |   |   |   |   |   | 0.02 | -0.02 | -0.07 | **.50\*\*** | -0.17 |
| Sig.  |   |   |   |   |   |   | 0.84 | 0.83 | 0.44 | 0.00 | 0.06 |
| N |   |   |   |   |   |   | 120 | 120 | 120 | 120 | 120 |
| Physical objects | ρ |   |   |   |   |   |   |   | -0.09 | 0.02 | -0.10 | -0.12 |
| Sig.  |   |   |   |   |   |   |   | 0.33 | 0.86 | 0.29 | 0.19 |
| N |   |   |   |   |   |   |   | 120 | 120 | 120 | 120 |
| Physical sensations | ρ |   |   |   |   |   |   |   |   | -0.10 | -0.07 | -0.08 |
| Sig.  |   |   |   |   |   |   |   |   | 0.27 | 0.47 | 0.37 |
| N |   |   |   |   |   |   |   |   | 120 | 120 | 120 |
| Qualities | ρ |   |   |   |   |   |   |   |   |   | -0.11 | -0.06 |
| Sig.  |   |   |   |   |   |   |   |   |   | 0.24 | 0.54 |
| N |   |   |   |   |   |   |   |   |   | 120 | 120 |
| Scenarios | ρ |   |   |   |   |   |   |   |   |   |   | -0.09 |
| Sig.  |   |   |   |   |   |   |   |   |   |   | 0.33 |
| N |   |   |   |   |   |   |   |   |   |   | 120 |

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\*. Correlation is significant at the 0.01 level (2-tailed).

ρ = Spearman’s correlation coefficient

Sig. = significance (2-tailed)

N = number of participants

Table A13 Correlations between the word association response types produced by the synaesthetes

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| NON-SYNAESTHETES | Actions | Colour | Synonyms and related emotions | Exclamations and onomatopoeia | Nature and natural phenomena | People, body parts, facial expressions | Physical objects | Physical sensations | Qualities |
| Abstract concepts | ρ | 0.01 | -0.17 | 0.02 | -0.10 | -0.16 | 0.07 | -0.02 | -0.17 | -0.04 |
| Sig.  | 0.92 | 0.07 | 0.80 | 0.26 | 0.08 | 0.47 | 0.81 | 0.07 | 0.70 |
| N | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| Actions | ρ |   | -0.10 | 0.07 | -0.06 | 0.11 | 0.01 | -0.11 | 0.00 | -0.13 |
| Sig.  |   | 0.27 | 0.46 | 0.50 | 0.22 | 0.92 | 0.25 | 1.00 | 0.17 |
| N |   | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| Colour | ρ |   |   | **-.20\*** | -0.07 | -0.01 | -0.11 | -0.12 | -0.11 | -0.14 |
| Sig.  |   |   | 0.03 | 0.45 | 0.92 | 0.23 | 0.21 | 0.23 | 0.13 |
| N |   |   | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| Synonyms and related emotions | ρ |   |   |   | -0.01 | -0.11 | -0.12 | -0.02 | -0.12 | 0.03 |
| Sig.  |   |   |   | 0.88 | 0.24 | 0.20 | 0.86 | 0.19 | 0.76 |
| N |   |   |   | 120 | 120 | 120 | 120 | 120 | 120 |
| Exclamations and onomatopoeia | ρ |   |   |   |   | -0.07 | 0.07 | -0.07 | -0.07 | 0.04 |
| Sig.  |   |   |   |   | 0.47 | 0.46 | 0.43 | 0.45 | 0.63 |
| N |   |   |   |   | 120 | 120 | 120 | 120 | 120 |
| Nature and natural phenomena | ρ |   |   |   |   |   | -0.11 | -0.11 | -0.01 | -0.05 |
| Sig.  |   |   |   |   |   | 0.25 | 0.23 | 0.92 | 0.56 |
| N |   |   |   |   |   | 120 | 120 | 120 | 120 |
| People, body parts, facial expressions | ρ |   |   |   |   |   |   | -0.12 | -0.11 | -0.06 |
| Sig.  |   |   |   |   |   |   | 0.21 | 0.23 | 0.49 |
| N |   |   |   |   |   |   | 120 | 120 | 120 |
| Physical objects | ρ |   |   |   |   |   |   |   | -0.12 | -0.07 |
| Sig.  |   |   |   |   |   |   |   | 0.21 | 0.43 |
| N |   |   |   |   |   |   |   | 120 | 120 |
| Physical sensations | ρ |   |   |   |   |   |   |   |   | -0.14 |
| Sig.  |   |   |   |   |   |   |   |   | 0.13 |
| N |   |   |   |   |   |   |   |   | 120 |

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\*. Correlation is significant at the 0.01 level (2-tailed).

ρ = Spearman’s correlation coefficient

Sig. = significance (2-tailed)

N = number of participants

Table A14 Correlations between the word association response types produced by the non-synaesthetes