

**Autistic Communication and Imagination Sub-Traits are Related to Audiovisual  
Temporal Integration in the Stream–Bounce Illusion**

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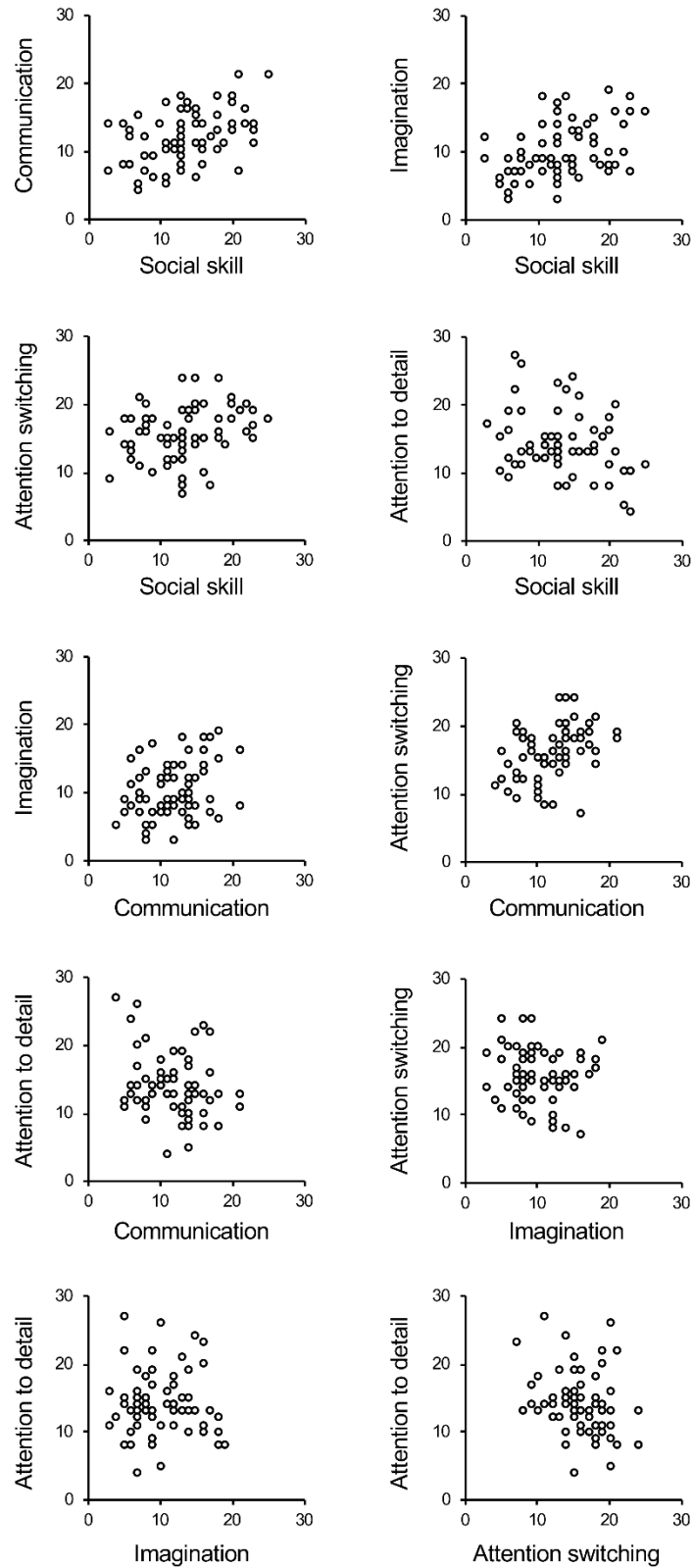
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**Supplementary material**

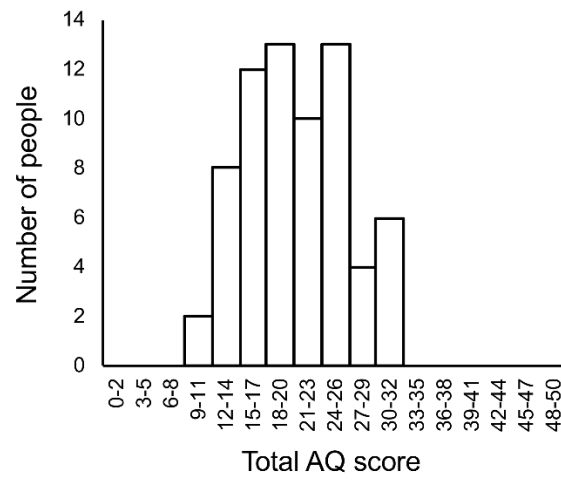
**Table S1.**

Correlations among AQ subscales.

|                     | Social skill |          | Communication |          | Imagination |          | Attention switching |          |
|---------------------|--------------|----------|---------------|----------|-------------|----------|---------------------|----------|
|                     | <i>r</i>     | <i>p</i> | <i>r</i>      | <i>p</i> | <i>r</i>    | <i>p</i> | <i>r</i>            | <i>p</i> |
| Communication       | 0.44         | <0.001   |               |          |             |          |                     |          |
| Imagination         | 0.44         | <0.001   | 0.26          | 0.030    |             |          |                     |          |
| Attention switching | 0.29         | 0.019    | 0.40          | <0.001   | -0.04       | 0.725    |                     |          |
| Attention to detail | -0.30        | 0.013    | -0.27         | 0.027    | -0.02       | 0.845    | -0.26               | 0.035    |



**Figure S1.** Scatter plots among AQ subscales.



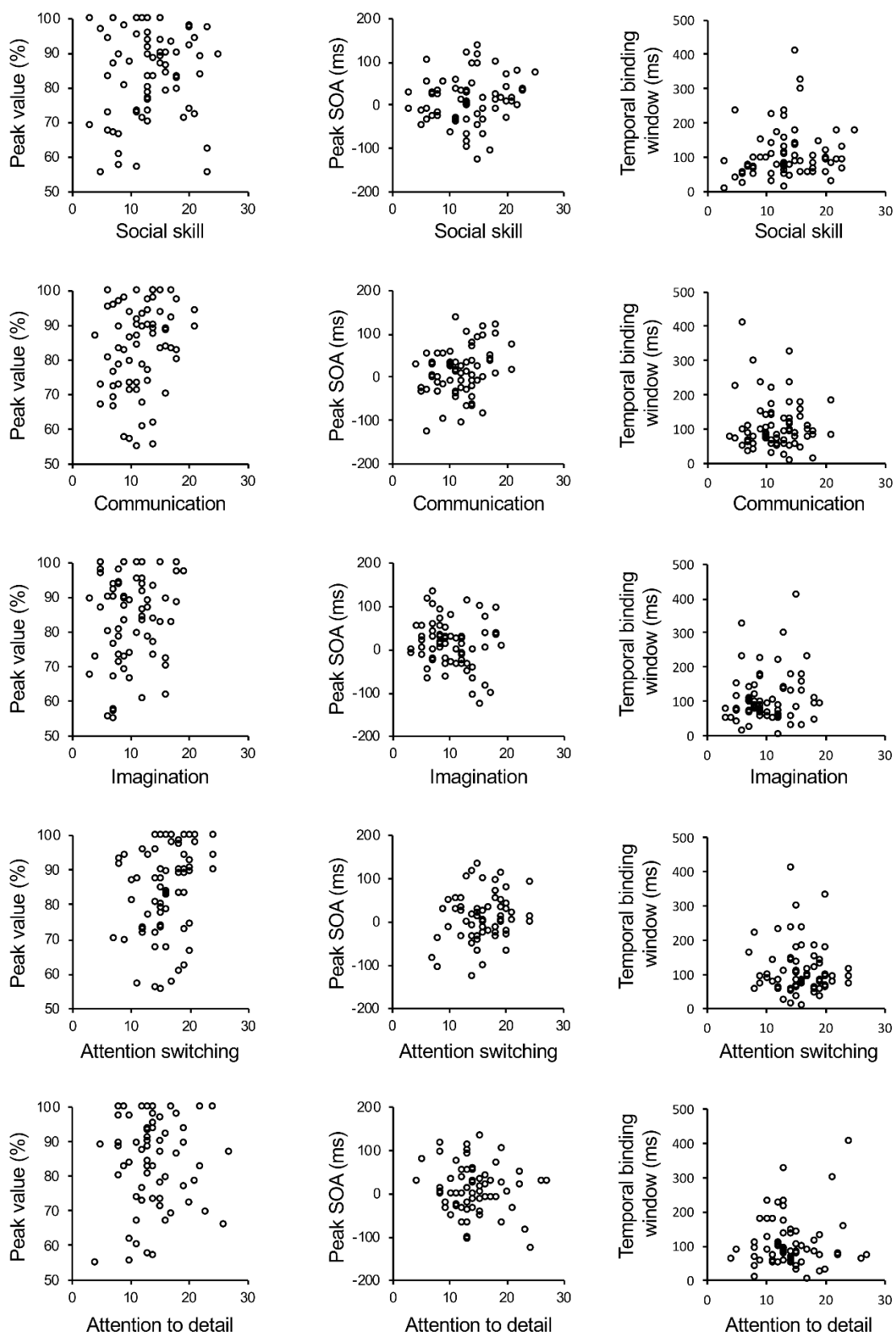
**Figure S2.** Histogram of total AQ scores ( $n = 68$ ). The scores were calculated using binary scoring.

**Table S2.**

Correlations between AQ subscale scores and index of the stream-bounce effect.

|                         | Social skill |          | Communication |          | Imagination |          | Attention switching |          | Attention to detail |          |
|-------------------------|--------------|----------|---------------|----------|-------------|----------|---------------------|----------|---------------------|----------|
|                         | <i>r</i>     | <i>p</i> | <i>r</i>      | <i>p</i> | <i>r</i>    | <i>p</i> | <i>r</i>            | <i>p</i> | <i>r</i>            | <i>p</i> |
| Peak                    | 0.11         | 0.337    | 0.22          | 0.059    | 0.17        | 0.155    | 0.23                | 0.052    | 0.08                | 0.522    |
| Peak SOA                | 0.17         | 0.163    | 0.27          | 0.019    | -0.18       | 0.132    | 0.17                | 0.144    | -0.15               | 0.196    |
| Temporal binding window | 0.03         | 0.824    | -0.12         | 0.298    | 0.11        | 0.364    | -0.04               | 0.733    | 0.03                | 0.792    |

SOA, stimulus onset asynchrony.



**Figure S3.** Scatter plots between AQ subscale scores and index of the stream-bounce effect. SOA, stimulus onset asynchrony.

**Table S3.**

Result of multiple regression analysis between AQ subscales and peak stimulus onset asynchrony (SOA).

| Model | ANOVA |       |                     | Coefficients         |       |      |      |
|-------|-------|-------|---------------------|----------------------|-------|------|------|
|       | F     | p     |                     | Standardized $\beta$ | $t$   | $p$  | VIF  |
| 1     | 2.36  | 0.051 | Social skill        | 0.11                 | 0.78  | 0.44 | 1.58 |
|       |       |       | Communication       | 0.29                 | 2.11  | 0.04 | 1.44 |
|       |       |       | Imagination         | -0.30                | -2.24 | 0.03 | 1.33 |
|       |       |       | Attention switching | 0.03                 | 0.19  | 0.85 | 1.30 |
|       |       |       | Attention to detail | -0.03                | -0.24 | 0.81 | 1.17 |
| 2     | 2.98  | 0.026 | Social skill        | 0.12                 | 0.83  | 0.41 | 1.53 |
|       |       |       | Communication       | 0.30                 | 2.31  | 0.02 | 1.29 |
|       |       |       | Imagination         | -0.31                | -2.35 | 0.02 | 1.27 |
|       |       |       | Attention to detail | -0.03                | -0.27 | 0.79 | 1.15 |
| 3     | 4.01  | 0.011 | Social skill        | 0.13                 | 0.94  | 0.35 | 1.43 |
|       |       |       | Communication       | 0.31                 | 2.41  | 0.02 | 1.25 |
|       |       |       | Imagination         | -0.31                | -2.43 | 0.02 | 1.24 |
| 4     | 5.59  | 0.006 | Communication       | 0.35                 | 2.98  | 0.00 | 1.07 |
|       |       |       | Imagination         | -0.27                | -2.25 | 0.03 | 1.07 |

**Table S4.**

Result of multiple regression analysis between AQ subscales and peak.

| Model | ANOVA    |          |                     | Coefficients         |          |          |      |
|-------|----------|----------|---------------------|----------------------|----------|----------|------|
|       | <i>F</i> | <i>P</i> |                     | Standardized $\beta$ | <i>t</i> | <i>p</i> | VIF  |
| 1     | 1.70     | 0.149    | Social skill        | -0.04                | -0.24    | 0.81     | 1.58 |
|       |          |          | Communication       | 0.18                 | 1.24     | 0.22     | 1.44 |
|       |          |          | Imagination         | 0.11                 | 0.83     | 0.41     | 1.33 |
|       |          |          | Attention switching | 0.24                 | 1.73     | 0.09     | 1.30 |
|       |          |          | Attention to detail | 0.14                 | 1.08     | 0.29     | 1.17 |
| 2     | 2.14     | 0.086    | Communication       | 0.17                 | 1.23     | 0.23     | 1.36 |
|       |          |          | Imagination         | 0.10                 | 0.81     | 0.42     | 1.11 |
|       |          |          | Attention switching | 0.23                 | 1.73     | 0.09     | 1.26 |
|       |          |          | Attention to detail | 0.15                 | 1.17     | 0.25     | 1.11 |
| 3     | 2.65     | 0.056    | Communication       | 0.20                 | 1.55     | 0.13     | 1.24 |
|       |          |          | Attention switching | 0.21                 | 1.63     | 0.11     | 1.23 |
|       |          |          | Attention to detail | 0.15                 | 1.19     | 0.24     | 1.11 |
| 4     | 3.25     | 0.045    | Communication       | 0.17                 | 1.35     | 0.18     | 1.19 |
|       |          |          | Attention switching | 0.19                 | 1.44     | 0.15     | 1.19 |
| 5     | 4.63     | 0.035    | Attention switching | 0.26                 | 2.15     | 0.04     | 1.00 |

**Table S5.**

Result of multiple regression analysis between AQ subscales and temporal binding window.

| Model | ANOVA    |          |                     | Coefficients         |          |          |      |
|-------|----------|----------|---------------------|----------------------|----------|----------|------|
|       | <i>F</i> | <i>P</i> |                     | Standardized $\beta$ | <i>t</i> | <i>p</i> | VIF  |
| 1     | 1.15     | 0.344    | Social skill        | 0.26                 | 1.71     | 0.09     | 1.58 |
|       |          |          | Communication       | -0.14                | -0.95    | 0.35     | 1.44 |
|       |          |          | Imagination         | 0.07                 | 0.50     | 0.62     | 1.33 |
|       |          |          | Attention switching | -0.06                | -0.45    | 0.66     | 1.30 |
|       |          |          | Attention to detail | 0.14                 | 1.05     | 0.30     | 1.17 |
| 2     | 1.41     | 0.243    | Social skill        | 0.25                 | 1.67     | 0.10     | 1.53 |
|       |          |          | Communication       | -0.16                | -1.17    | 0.25     | 1.29 |
|       |          |          | Imagination         | 0.08                 | 0.62     | 0.54     | 1.27 |
|       |          |          | Attention to detail | 0.15                 | 1.12     | 0.27     | 1.15 |
| 3     | 1.76     | 0.163    | Social skill        | 0.28                 | 2.08     | 0.04     | 1.30 |
|       |          |          | Communication       | -0.15                | -1.11    | 0.27     | 1.27 |
|       |          |          | Attention to detail | 0.16                 | 1.22     | 0.23     | 1.13 |
| 4     | 2.02     | 0.141    | Social skill        | 0.23                 | 1.78     | 0.08     | 1.10 |
|       |          |          | Attention to detail | 0.18                 | 1.42     | 0.16     | 1.10 |
| 5     | 2.00     | 0.162    | Social skill        | 0.17                 | 1.42     | 0.16     | 1.00 |