**Supplementary material for Interindividual and intraindividual differences in orangutans drawings**

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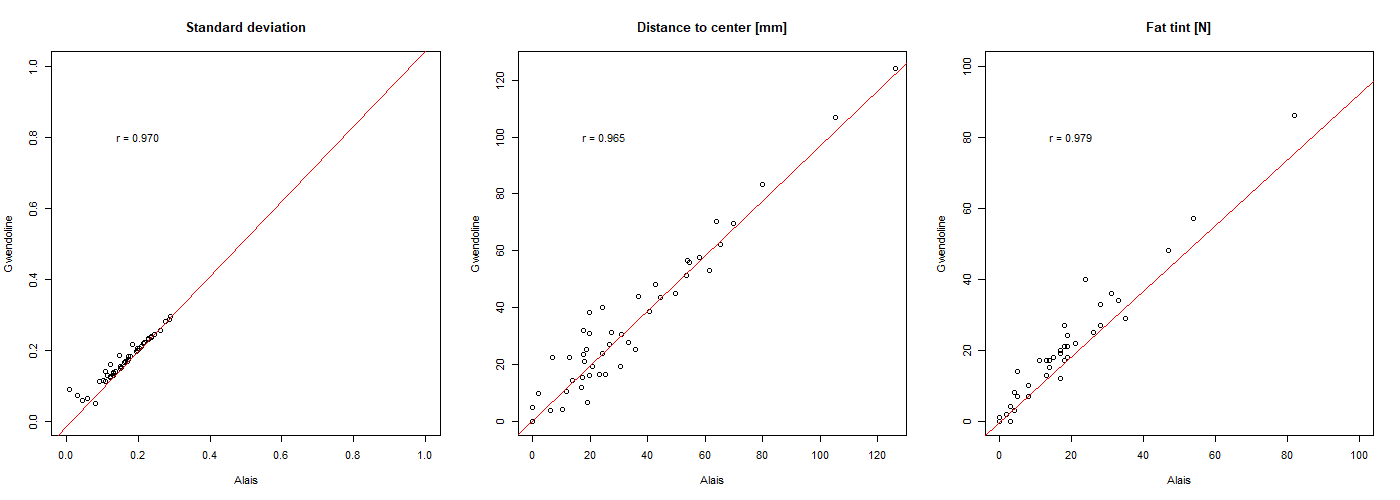
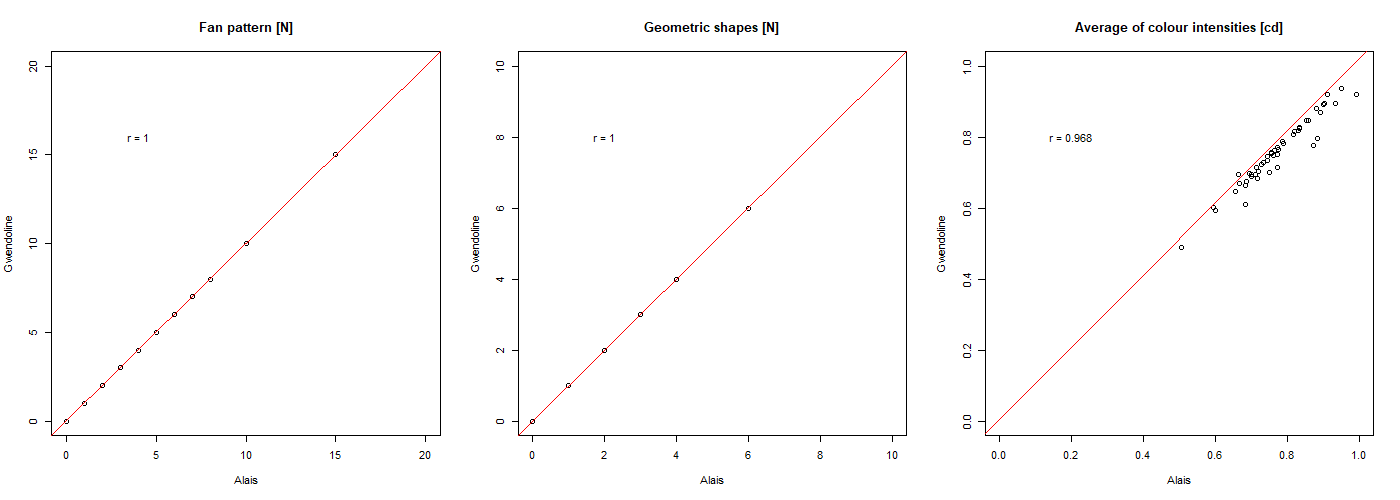
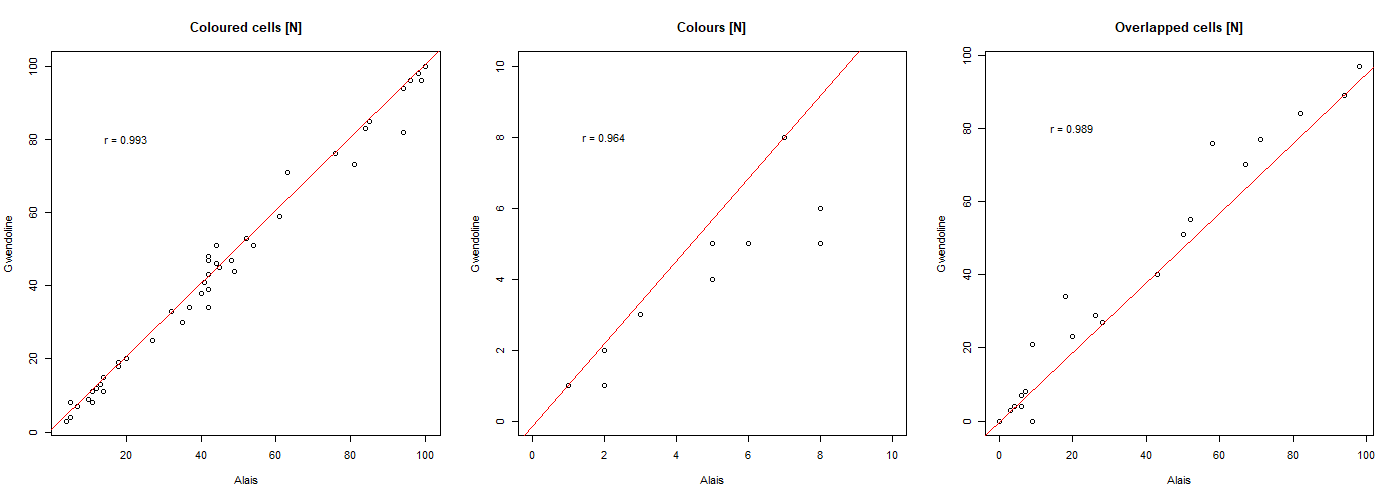


Figure S1. Inter-observer correlations for quantitative variables in the classical analysis.

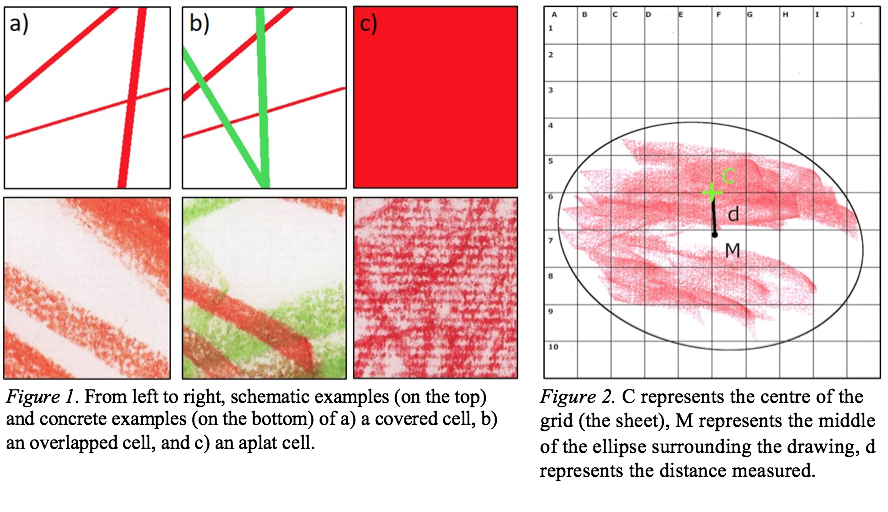


Figure S2: On the left, schematic (top) and actual (bottom) examples of a) a covered cell, b) an overlapped cell and c) solid colour rate. On the right, calculation of the distance to the centre. C is the centre of the paper sheet, M is the centre of the drawing ellipse, and d is the diameter.

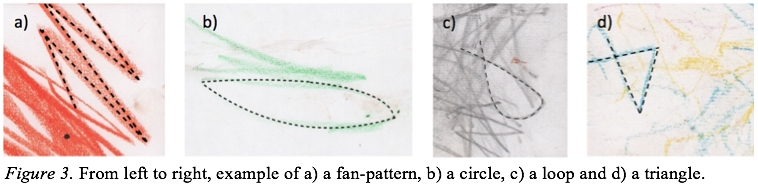
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Figure S3: examples of a) a fan pattern, b) a circle, c) a loop and d) a triangle.

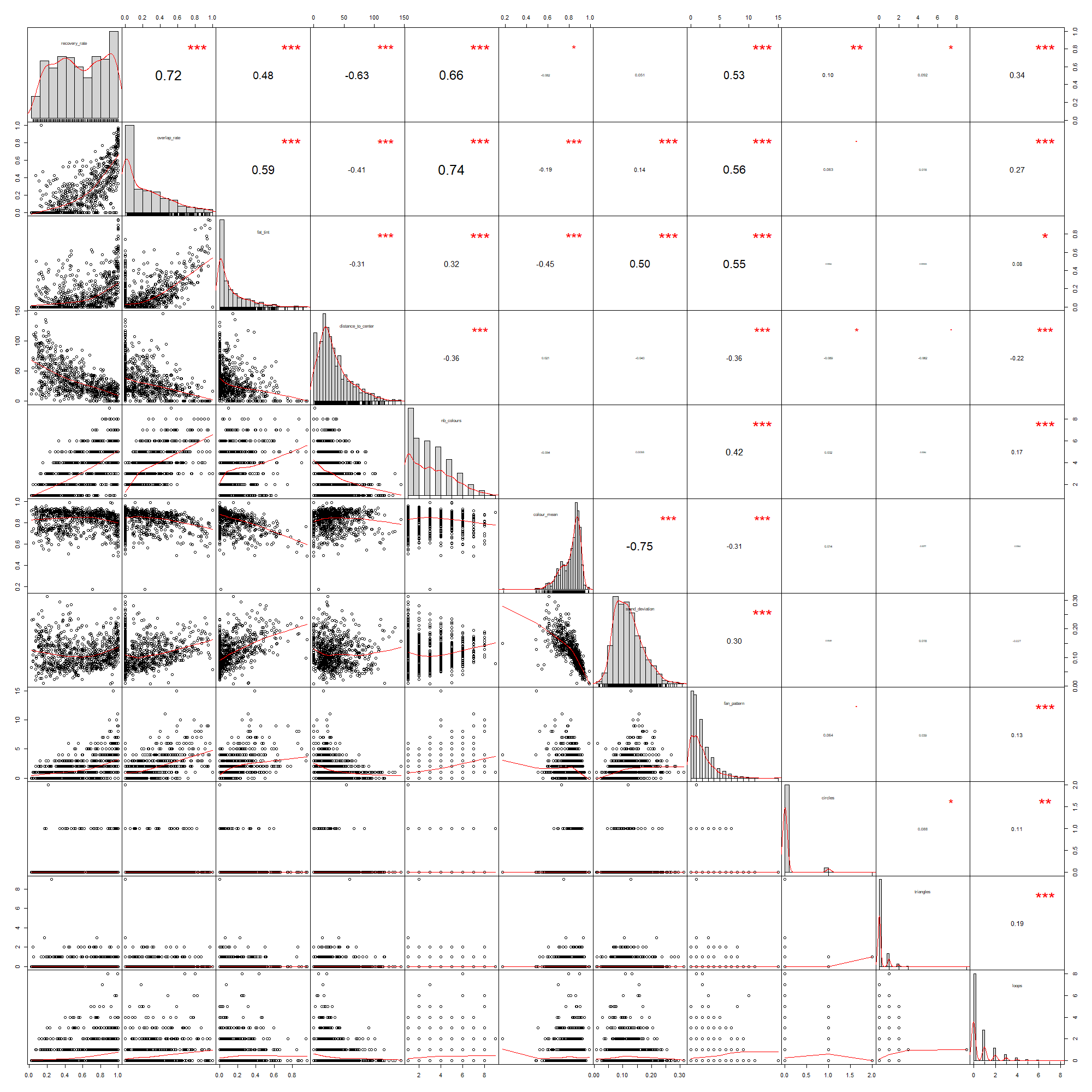


Figure S4. Correlation chart of our quantitative variables. \*:p<0.05, \*\*p<0.01,\*\*\*:p<0.001. The number indicates the correlation.

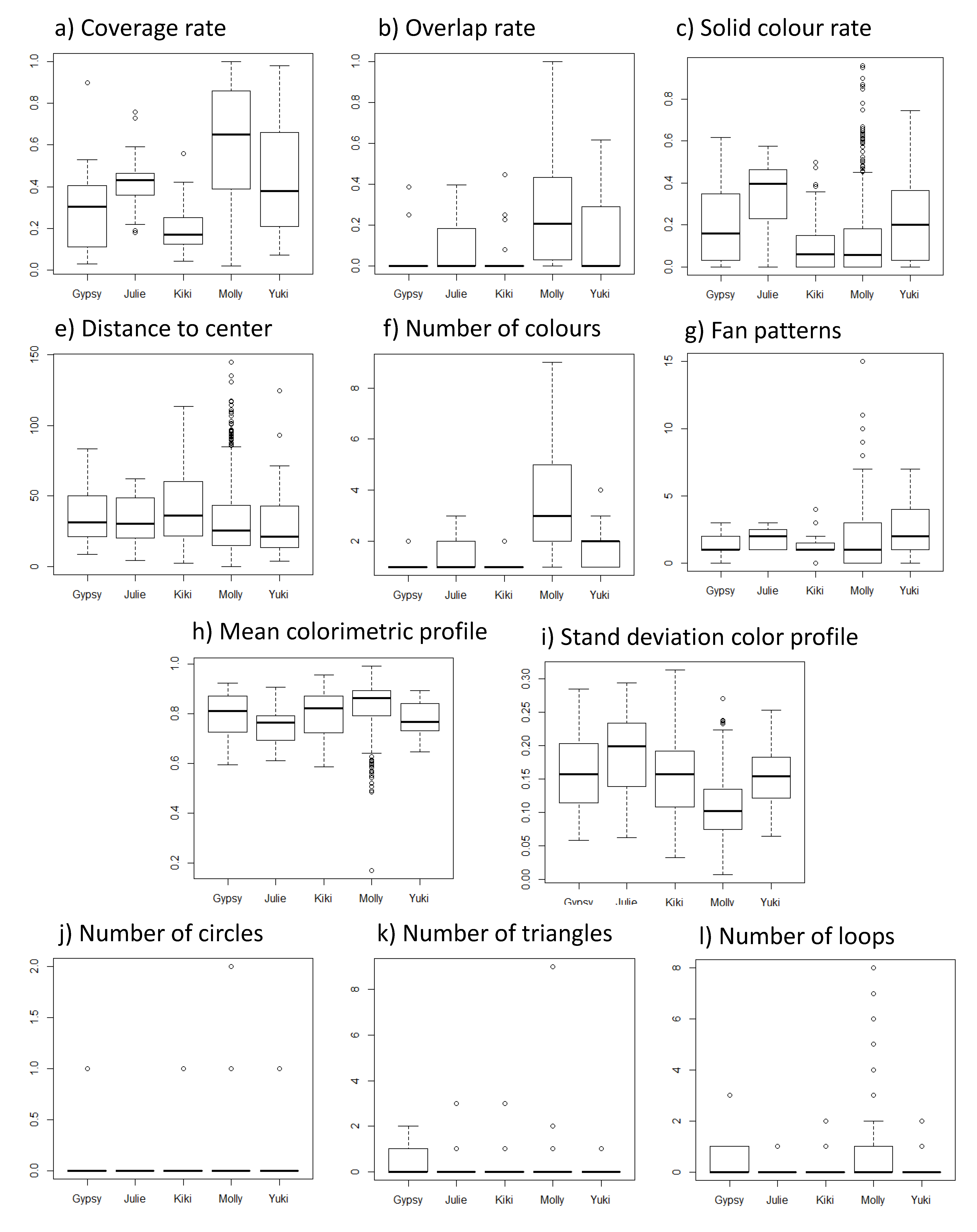


Figure S5: Boxplots of each drawing metric per individual

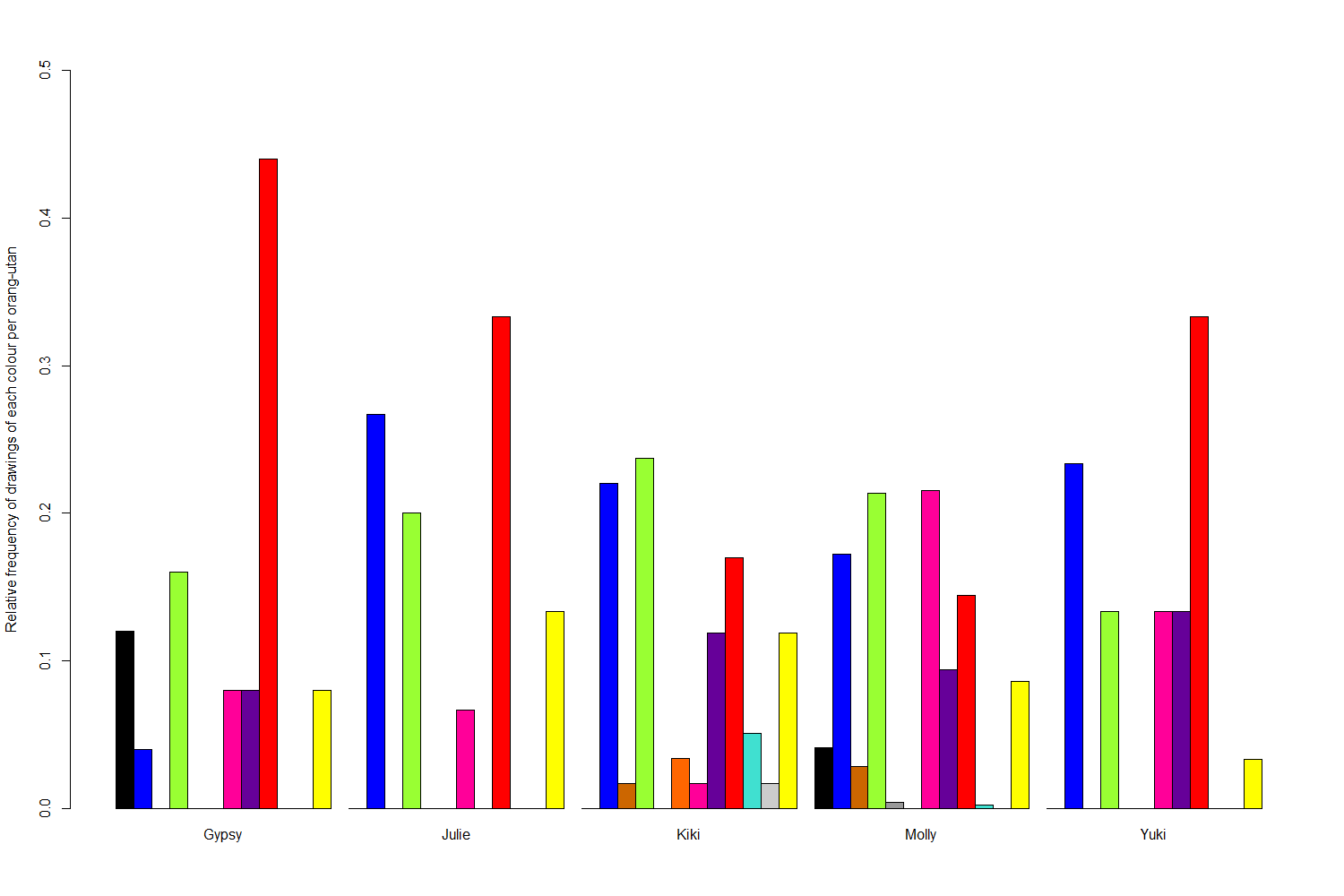


Figure S6. Frequency of drawings per main colour per individual.

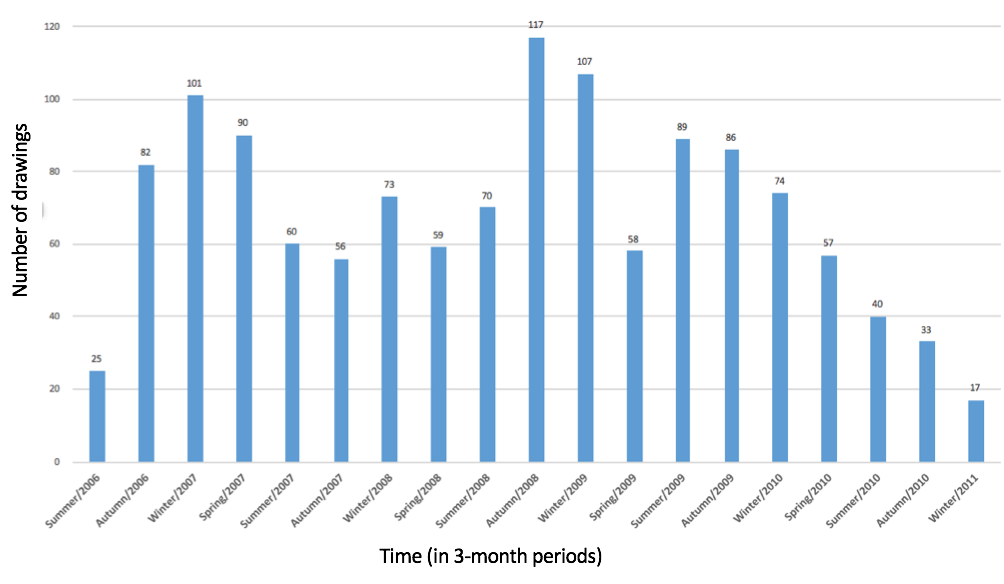


Figure S7: Number of drawings according to the seasons over the years. The exact number is specified above the bars.

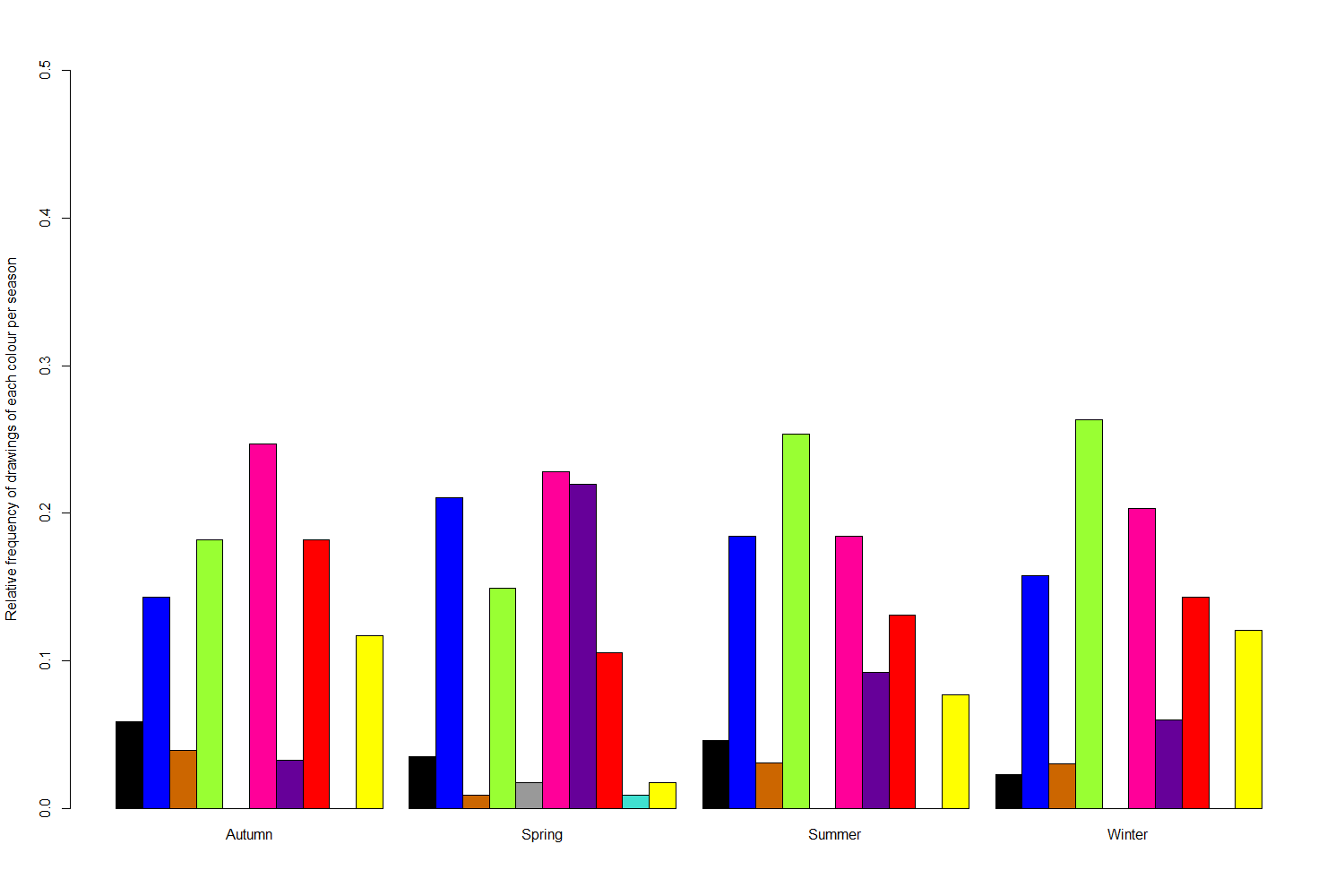


Figure S8. Frequency of Molly's drawings per main colour per season.

Table S1: pairwise comparisons tests (p-values) for each dimension between the five individuals

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Dim1 | Gypsy | Julie | Kiki | Molly |
| Julie | 0.1844 | - | - | - |
| Kiki | 0.3149 | 0.0152 | - | - |
| Molly | 0.016 | 0.9006 | 3.60E-09 | - |
| Yuki | 0.1525 | 0.9006 | 0.0025 | 0.8234 |
| Dim2 | Gypsy | Julie | Kiki | Molly |
| Julie | 0.081 | - | - | - |
| Kiki | 0.932 | 0.045 | - | - |
| Molly | 4.80E-11 | 8.30E-14 | < 2e-16 | - |
| Yuki | 0.907 | 0.045 | 0.907 | 5.00E-12 |
| Dim3 | Gypsy | Julie | Kiki | Molly |
| Julie | 0.643 | - | - | - |
| Kiki | 0.301 | 0.643 | - | - |
| Molly | 0.041 | 0.301 | 0.301 | - |
| Yuki | 0.301 | 0.601 | 0.643 | 0.643 |

Table S2: pairwise comparisons tests (p-values) for each metric of Dimension 1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Coverage rate | Gypsy | Julie | Kiki | Molly |
| Julie | 0.13059 | - | - | - |
| Kiki | 0.17047 | **0.00479** | - | - |
| Molly | **1.50E-08** | **0.01076** | **< 2e-16** | - |
| Yuki | 0.07067 | 0.99024 | **0.00029** | **0.0004** |
| Overlap rate | Gypsy | Julie | Kiki | Molly |
| Julie | 0.482 | - | - | - |
| Kiki | 0.869 | 0.372 | - | - |
| Molly | **8.40E-06** | **0.018** | **5.60E-13** | - |
| Yuki | 0.112 | 0.549 | **0.032** | **0.018** |
| Number of colours | Gypsy | Julie | Kiki | Molly |
| Julie | 0.541 | - | - | - |
| Kiki | 0.931 | 0.541 | - | - |
| Molly | **1.30E-10** | **1.90E-05** | **< 2e-16** | - |
| Yuki | 0.146 | 0.541 | 0.093 | **2.10E-06** |
| Fan patterns | Gypsy | Julie | Kiki | Molly |
| Julie | 0.5247 | - | - | - |
| Kiki | 0.8489 | 0.346 | - | - |
| Molly | 0.329 | 0.9918 | **0.0406** | - |
| Yuki | **0.0406** | 0.3048 | **0.0044** | **0.0406** |
| Distance to centre | Gypsy | Julie | Kiki | Molly |
| Julie | 0.911 | - | - | - |
| Kiki | 0.714 | 0.668 | - | - |
| Molly | 0.714 | 0.912 | **0.035** | - |
| Yuki | 0.714 | 0.912 | 0.271 | 0.912 |
| Solid colour rate | Gypsy | Julie | Kiki | Molly |
| Julie | 0.0212 | - | - | - |
| Kiki | 0.0189 | **3.50E-06** | - | - |
| Molly | **0.0287** | **3.50E-06** | 0.319 | - |
| Yuki | 0.5568 | **0.0461** | **0.0015** | **0.0015** |

Table S3: pairwise comparisons tests (p-values) for each metric of Dimension 2

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Colour mean | Gypsy | Julie | Kiki | Molly |
| Julie | 0.2651 | - | - | - |
| Kiki | 0.8763 | 0.2651 | - | - |
| Molly | 0.1266 | 0.0057 | 0.0057 | - |
| Yuki | 0.5863 | 0.5263 | 0.5863 | 0.0059 |
| Standard deviation of mean colour | Gypsy | Julie | Kiki | Molly |
| Julie | 0.0335 | - | - | - |
| Kiki | 0.5064 | 0.0022 | - | - |
| Molly | 1.40E-07 | 1.20E-11 | 5.60E-11 | - |
| Yuki | 0.7355 | 0.0135 | 0.6962 | 9.40E-08 |

Table S4: pairwise comparisons tests (p-values) for each metric of Dimension 3

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Circles | Gypsy | Julie | Kiki | Molly |
| Julie | 0.88 | - | - | - |
| Kiki | 0.88 | 0.88 | - | - |
| Molly | 0.88 | 0.88 | 0.88 | - |
| Yuki | 0.89 | 0.88 | 0.88 | 0.88 |
| Triangles | Gypsy | Julie | Kiki | Molly |
| Julie | 1 | - | - | - |
| Kiki | 0.45 | 0.45 | - | - |
| Molly | 0.45 | 0.54 | 0.45 | - |
| Yuki | 0.45 | 0.45 | 0.89 | 0.65 |
| Loops | Gypsy | Julie | Kiki | Molly |
| Julie | 0.5006 | - | - | - |
| Kiki | 0.5006 | 0.835 | - | - |
| Molly | 0.5006 | 0.1012 | **0.0022** | - |
| Yuki | 0.5542 | 0.835 | 0.835 | 0.079 |

Table S5: Loadings of the metrics on the three PCA dimensions of our dataset for Molly. Bold values indicate the dimension in which each variable is retained.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Dim.1 | Dim.2 | Dim.3 |
| coverage rate | **0.83259466** | 0.35898791 | -0.03754139 |
| Overlap rate | **0.86645016** | 0.11386246 | -0.15141994 |
| Solid colour rate | **0.82093692** | -0.20890006 | -0.06820954 |
| distance to centre | **-0.59224515** | -0.4847952 | 0.0366672 |
| Number of colours | **0.70657478** | 0.21081542 | -0.29585089 |
| Colour mean | -0.5250608 | **0.71138628** | -0.22231713 |
| Standard deviation of mean colour | 0.59217275 | **-0.65153752** | 0.21292017 |
| fan pattern | **0.75009581** | -0.06012067 | -0.05905462 |
| circles | 0.09579288 | 0.18189447 | **0.50532385** |
| triangles | 0.07651598 | 0.16002544 | **0.70546716** |
| loops | 0.30038742 | 0.37499276 | **0.49370317** |