**Supplementary Materials**

**S4. Additional graphs**

Graphical user interface, chart

Description automatically generated with medium confidence

Graphical user interface, chart, application, scatter chart

Description automatically generated

**Graphical user interface

Description automatically generated with low confidence**

**Graphical user interface, chart

Description automatically generated**

**Figure 1:** Scatterplots illustrating Spearman’s correlation results. a) associations between infant-adult theta cross-PLVs, infant-adult theta PLVs and infant and adult theta power in the resting state condition. b) associations between infant-adult theta cross-PLVs, infant-adult theta PLVs and infant and adult theta power in the free play condition. c) associations between infant-adult alpha cross-PLVs, infant-adult alpha PLVs and infant and adult alpha power in the resting state condition. d) associations between infant-adult alpha cross-PLVs, infant-adult alpha PLVs and infant and adult alpha power in the free play condition.

**S5. Data used in the final analyses**

We will make data publicly available upon publication.