

## Online Resource 2

Wichers, L., Schreiber, L., Möller, S., & Spang, R. P. Gaze in the Machine: How Mechanical and AI-Based Eye Contact Correction Shape Communication Experience and Gaze Behaviour in Video Calls. *Quality and User Experience*.

Corresponding author: Robert P. Spang, Chair of Usability, Faculty of Media, Bauhaus-Universität Weimar, Weimar, Germany; robert.spang@uni-weimar.de

Conditions: F2F = face-to-face; BaseVC = standard video call; Tele = teleprompter; AI = AI-based gaze correction (NVIDIA Broadcast 2.0). All analyses:  $N = 32$  participants (F2F questionnaire:  $n = 30$ ).

**Table S1:** Omnibus likelihood-ratio tests of condition. Linear mixed-effects models (maximum likelihood, random intercept per participant) with condition as fixed effect were compared against the intercept-only model;  $N = 32$ .  $p_{FDR}$ : Benjamini–Hochberg correction over the 36 dependent variables.

| DV                                      | $\chi^2$ (LR) | df | $p$   | $p_{FDR}$ | $n_{obs}$ |
|-----------------------------------------|---------------|----|-------|-----------|-----------|
| <i>Social presence &amp; engagement</i> |               |    |       |           |           |
| Feeling of Closeness (IOS)              | 6.27          | 3  | .099  | .198      | 125       |
| Co-Presence                             | 107.33        | 3  | <.001 | <.001     | 125       |
| Co-Presence Self                        | 98.25         | 3  | <.001 | <.001     | 125       |
| Co-Presence Others                      | 109.72        | 3  | <.001 | <.001     | 125       |
| Engagement                              | 14.46         | 3  | .002  | .008      | 125       |
| Engagement Self                         | 8.00          | 3  | .046  | .110      | 125       |
| Engagement Others                       | 20.42         | 3  | <.001 | <.001     | 125       |
| Emotional Contagion                     | 2.02          | 3  | .568  | .620      | 126       |
| Emotional Contagion Self                | 2.03          | 3  | .566  | .620      | 126       |
| Emotional Contagion Others              | 2.23          | 3  | .526  | .620      | 126       |
| Comprehension                           | 2.65          | 3  | .449  | .620      | 126       |
| Comprehension Self                      | 3.08          | 3  | .379  | .593      | 126       |
| Comprehension Others                    | 1.94          | 3  | .586  | .620      | 126       |
| Interdependence                         | 2.05          | 3  | .563  | .620      | 126       |
| Interdependence Self                    | 2.08          | 3  | .555  | .620      | 126       |
| Interdependence Others                  | 2.08          | 3  | .556  | .620      | 126       |
| Focused Attention (UES)                 | 6.05          | 3  | .109  | .207      | 126       |
| Perceived Usability (UES)               | 13.24         | 3  | .004  | .012      | 126       |
| Perceived Social Closeness              | 15.46         | 3  | .001  | .006      | 126       |
| <i>Gaze-specific experience</i>         |               |    |       |           |           |
| Naturalness of Eye Contact              | 14.84         | 3  | .002  | .007      | 125       |
| Eye Contact Intensity                   | 1.60          | 3  | .659  | .678      | 125       |
| Eye Contact Intrusiveness               | 7.41          | 3  | .060  | .135      | 125       |
| Eye Contact Anxiety                     | 6.67          | 3  | .083  | .177      | 125       |
| Own Attention                           | 2.29          | 3  | .514  | .620      | 125       |
| Partner's Attentiveness                 | 2.52          | 3  | .471  | .620      | 125       |
| Direct Eye Contact                      | 4.39          | 3  | .222  | .381      | 125       |
| <i>Camera &amp; being observed</i>      |               |    |       |           |           |
| Webcam Awareness                        | 24.20         | 3  | <.001 | <.001     | 126       |
| Feeling Observed                        | 17.33         | 3  | <.001 | .003      | 125       |
| Discomfort due to Recording             | 11.66         | 3  | .009  | .024      | 126       |
| Camera Gaze Discomfort                  | 18.03         | 3  | <.001 | .003      | 126       |
| Intentional Camera Gaze                 | 4.49          | 3  | .213  | .381      | 126       |
| Camera Gaze Avoidance                   | 15.99         | 3  | .001  | .005      | 126       |
| <i>Affect &amp; person perception</i>   |               |    |       |           |           |
| Valence                                 | 2.71          | 3  | .439  | .620      | 125       |
| Arousal                                 | 11.35         | 3  | .010  | .026      | 125       |
| Friendliness                            | 4.10          | 3  | .251  | .410      | 125       |
| Competence                              | 1.39          | 3  | .708  | .708      | 125       |

**Table S2:** All pairwise contrasts: paired  $t$ -tests on pairwise complete data.  $p_{\text{Holm}}$ : Holm correction over the six contrasts within each dependent variable.  $d_z$  with exact 95% CI based on the noncentral  $t$  distribution. Positive values indicate higher ratings in the first-named condition.

| DV                                      | Contrast      | $t$    | df | $p_{\text{raw}}$ | $p_{\text{Holm}}$ | $d_z$ [95% CI]       |
|-----------------------------------------|---------------|--------|----|------------------|-------------------|----------------------|
| <i>Social presence &amp; engagement</i> |               |        |    |                  |                   |                      |
| Feeling of Closeness (IOS)              | AI – BaseVC   | 0.55   | 30 | .586             | 1.000             | 0.10 [–0.25, 0.45]   |
| Feeling of Closeness (IOS)              | AI – Tele     | 0.87   | 30 | .393             | 1.000             | 0.16 [–0.20, 0.51]   |
| Feeling of Closeness (IOS)              | AI – F2F      | –0.91  | 28 | .371             | 1.000             | –0.17 [–0.53, 0.20]  |
| Feeling of Closeness (IOS)              | Tele – BaseVC | 0.00   | 31 | 1.000            | 1.000             | 0.00 [–0.35, 0.35]   |
| Feeling of Closeness (IOS)              | Tele – F2F    | –2.19  | 29 | .036             | .219              | –0.40 [–0.77, –0.02] |
| Feeling of Closeness (IOS)              | BaseVC – F2F  | –1.76  | 29 | .090             | .449              | –0.32 [–0.69, 0.05]  |
| Co-Presence                             | AI – BaseVC   | 0.35   | 30 | .729             | 1.000             | 0.06 [–0.29, 0.41]   |
| Co-Presence                             | AI – Tele     | –0.55  | 30 | .584             | 1.000             | –0.10 [–0.45, 0.25]  |
| Co-Presence                             | AI – F2F      | –9.00  | 28 | <.001            | <.001             | –1.67 [–2.23, –1.10] |
| Co-Presence                             | Tele – BaseVC | 0.88   | 31 | .383             | 1.000             | 0.16 [–0.19, 0.50]   |
| Co-Presence                             | Tele – F2F    | –8.25  | 29 | <.001            | <.001             | –1.51 [–2.03, –0.97] |
| Co-Presence                             | BaseVC – F2F  | –9.71  | 29 | <.001            | <.001             | –1.77 [–2.34, –1.19] |
| Co-Presence Self                        | AI – BaseVC   | –0.02  | 30 | .983             | .983              | –0.00 [–0.36, 0.35]  |
| Co-Presence Self                        | AI – Tele     | –1.20  | 30 | .239             | .717              | –0.22 [–0.57, 0.14]  |
| Co-Presence Self                        | AI – F2F      | –8.67  | 28 | <.001            | <.001             | –1.61 [–2.16, –1.05] |
| Co-Presence Self                        | Tele – BaseVC | 1.10   | 31 | .280             | .717              | 0.19 [–0.16, 0.54]   |
| Co-Presence Self                        | Tele – F2F    | –7.72  | 29 | <.001            | <.001             | –1.41 [–1.91, –0.89] |
| Co-Presence Self                        | BaseVC – F2F  | –9.04  | 29 | <.001            | <.001             | –1.65 [–2.20, –1.09] |
| Co-Presence Others                      | AI – BaseVC   | 0.78   | 30 | .440             | 1.000             | 0.14 [–0.21, 0.49]   |
| Co-Presence Others                      | AI – Tele     | 0.20   | 30 | .846             | 1.000             | 0.04 [–0.32, 0.39]   |
| Co-Presence Others                      | AI – F2F      | –8.97  | 28 | <.001            | <.001             | –1.67 [–2.23, –1.09] |
| Co-Presence Others                      | Tele – BaseVC | 0.61   | 31 | .549             | 1.000             | 0.11 [–0.24, 0.45]   |
| Co-Presence Others                      | Tele – F2F    | –8.51  | 29 | <.001            | <.001             | –1.55 [–2.08, –1.01] |
| Co-Presence Others                      | BaseVC – F2F  | –10.03 | 29 | <.001            | <.001             | –1.83 [–2.42, –1.24] |
| Engagement                              | AI – BaseVC   | 1.04   | 30 | .307             | .920              | 0.19 [–0.17, 0.54]   |
| Engagement                              | AI – Tele     | 0.57   | 30 | .573             | .920              | 0.10 [–0.25, 0.45]   |
| Engagement                              | AI – F2F      | –2.59  | 28 | .015             | .074              | –0.48 [–0.86, –0.09] |
| Engagement                              | Tele – BaseVC | 0.89   | 31 | .381             | .920              | 0.16 [–0.19, 0.50]   |
| Engagement                              | Tele – F2F    | –2.20  | 29 | .036             | .142              | –0.40 [–0.77, –0.03] |
| Engagement                              | BaseVC – F2F  | –3.06  | 29 | .005             | .029              | –0.56 [–0.94, –0.17] |
| Engagement Self                         | AI – BaseVC   | 0.67   | 30 | .510             | 1.000             | 0.12 [–0.23, 0.47]   |
| Engagement Self                         | AI – Tele     | 0.17   | 30 | .863             | 1.000             | 0.03 [–0.32, 0.38]   |
| Engagement Self                         | AI – F2F      | –1.75  | 28 | .091             | .457              | –0.32 [–0.70, 0.05]  |
| Engagement Self                         | Tele – BaseVC | 1.08   | 31 | .287             | .861              | 0.19 [–0.16, 0.54]   |
| Engagement Self                         | Tele – F2F    | –1.49  | 29 | .146             | .586              | –0.27 [–0.63, 0.09]  |
| Engagement Self                         | BaseVC – F2F  | –2.25  | 29 | .032             | .194              | –0.41 [–0.78, –0.03] |
| Engagement Others                       | AI – BaseVC   | 1.19   | 30 | .245             | .735              | 0.21 [–0.14, 0.57]   |
| Engagement Others                       | AI – Tele     | 0.90   | 30 | .374             | .749              | 0.16 [–0.19, 0.51]   |
| Engagement Others                       | AI – F2F      | –3.37  | 28 | .002             | .011              | –0.63 [–1.02, –0.22] |
| Engagement Others                       | Tele – BaseVC | 0.56   | 31 | .582             | .749              | 0.10 [–0.25, 0.44]   |
| Engagement Others                       | Tele – F2F    | –2.91  | 29 | .007             | .027              | –0.53 [–0.91, –0.15] |
| Engagement Others                       | BaseVC – F2F  | –3.82  | 29 | <.001            | .004              | –0.70 [–1.09, –0.29] |
| Emotional Contagion                     | AI – BaseVC   | 1.08   | 31 | .289             | 1.000             | 0.19 [–0.16, 0.54]   |
| Emotional Contagion                     | AI – Tele     | –0.08  | 31 | .938             | 1.000             | –0.01 [–0.36, 0.33]  |
| Emotional Contagion                     | AI – F2F      | 0.54   | 29 | .593             | 1.000             | 0.10 [–0.26, 0.46]   |
| Emotional Contagion                     | Tele – BaseVC | 1.60   | 31 | .120             | .719              | 0.28 [–0.07, 0.63]   |
| Emotional Contagion                     | Tele – F2F    | 0.78   | 29 | .440             | 1.000             | 0.14 [–0.22, 0.50]   |
| Emotional Contagion                     | BaseVC – F2F  | –0.38  | 29 | .704             | 1.000             | –0.07 [–0.43, 0.29]  |
| Emotional Contagion Self                | AI – BaseVC   | 1.09   | 31 | .284             | 1.000             | 0.19 [–0.16, 0.54]   |
| Emotional Contagion Self                | AI – Tele     | 0.43   | 31 | .673             | 1.000             | 0.08 [–0.27, 0.42]   |
| Emotional Contagion Self                | AI – F2F      | 0.88   | 29 | .387             | 1.000             | 0.16 [–0.20, 0.52]   |
| Emotional Contagion Self                | Tele – BaseVC | 1.37   | 31 | .179             | 1.000             | 0.24 [–0.11, 0.59]   |
| Emotional Contagion Self                | Tele – F2F    | 0.79   | 29 | .433             | 1.000             | 0.15 [–0.22, 0.50]   |
| Emotional Contagion Self                | BaseVC – F2F  | –0.10  | 29 | .918             | 1.000             | –0.02 [–0.38, 0.34]  |
| Emotional Contagion Others              | AI – BaseVC   | 1.02   | 31 | .315             | 1.000             | 0.18 [–0.17, 0.53]   |
| Emotional Contagion Others              | AI – Tele     | –0.52  | 31 | .606             | 1.000             | –0.09 [–0.44, 0.26]  |
| Emotional Contagion Others              | AI – F2F      | 0.15   | 29 | .881             | 1.000             | 0.03 [–0.33, 0.39]   |
| Emotional Contagion Others              | Tele – BaseVC | 1.60   | 31 | .120             | .718              | 0.28 [–0.07, 0.63]   |
| Emotional Contagion Others              | Tele – F2F    | 0.70   | 29 | .490             | 1.000             | 0.13 [–0.23, 0.49]   |
| Emotional Contagion Others              | BaseVC – F2F  | –0.69  | 29 | .498             | 1.000             | –0.13 [–0.48, 0.24]  |
| Comprehension                           | AI – BaseVC   | 0.34   | 31 | .734             | 1.000             | 0.06 [–0.29, 0.41]   |
| Comprehension                           | AI – Tele     | 0.57   | 31 | .573             | 1.000             | 0.10 [–0.25, 0.45]   |
| Comprehension                           | AI – F2F      | –0.81  | 29 | .424             | 1.000             | –0.15 [–0.51, 0.21]  |
| Comprehension                           | Tele – BaseVC | –0.41  | 31 | .685             | 1.000             | –0.07 [–0.42, 0.28]  |
| Comprehension                           | Tele – F2F    | –1.29  | 29 | .206             | 1.000             | –0.24 [–0.60, 0.13]  |
| Comprehension                           | BaseVC – F2F  | –1.10  | 29 | .281             | 1.000             | –0.20 [–0.56, 0.16]  |
| Comprehension Self                      | AI – BaseVC   | 0.52   | 31 | .604             | 1.000             | 0.09 [–0.26, 0.44]   |
| Comprehension Self                      | AI – Tele     | 0.82   | 31 | .419             | 1.000             | 0.14 [–0.20, 0.49]   |
| Comprehension Self                      | AI – F2F      | –0.75  | 29 | .459             | 1.000             | –0.14 [–0.50, 0.22]  |
| Comprehension Self                      | Tele – BaseVC | –0.62  | 31 | .537             | 1.000             | –0.11 [–0.46, 0.24]  |
| Comprehension Self                      | Tele – F2F    | –1.32  | 29 | .196             | 1.000             | –0.24 [–0.60, 0.12]  |
| Comprehension Self                      | BaseVC – F2F  | –1.09  | 29 | .285             | 1.000             | –0.20 [–0.56, 0.16]  |
| Comprehension Others                    | AI – BaseVC   | 0.17   | 31 | .866             | 1.000             | 0.03 [–0.32, 0.38]   |
| Comprehension Others                    | AI – Tele     | 0.33   | 31 | .746             | 1.000             | 0.06 [–0.29, 0.40]   |
| Comprehension Others                    | AI – F2F      | –0.83  | 29 | .415             | 1.000             | –0.15 [–0.51, 0.21]  |
| Comprehension Others                    | Tele – BaseVC | –0.22  | 31 | .828             | 1.000             | –0.04 [–0.39, 0.31]  |
| Comprehension Others                    | Tele – F2F    | –1.19  | 29 | .244             | 1.000             | –0.22 [–0.58, 0.15]  |
| Comprehension Others                    | BaseVC – F2F  | –1.02  | 29 | .314             | 1.000             | –0.19 [–0.55, 0.18]  |
| Interdependence                         | AI – BaseVC   | 0.09   | 31 | .927             | 1.000             | 0.02 [–0.33, 0.36]   |
| Interdependence                         | AI – Tele     | –0.85  | 31 | .400             | 1.000             | –0.15 [–0.50, 0.20]  |
| Interdependence                         | AI – F2F      | –0.89  | 29 | .381             | 1.000             | –0.16 [–0.52, 0.20]  |
| Interdependence                         | Tele – BaseVC | 1.11   | 31 | .278             | 1.000             | 0.20 [–0.16, 0.54]   |
| Interdependence                         | Tele – F2F    | –0.55  | 29 | .587             | 1.000             | –0.10 [–0.46, 0.26]  |

**Table S2:** All pairwise contrasts: paired  $t$ -tests on pairwise complete data.  $p_{\text{Holm}}$ : Holm correction over the six contrasts within each dependent variable.  $d_z$  with exact 95% CI based on the noncentral  $t$  distribution. Positive values indicate higher ratings in the first-named condition.

| DV                                 | Contrast      | $t$   | df | $p_{\text{raw}}$ | $p_{\text{Holm}}$ | $d_z$ [95% CI]       |
|------------------------------------|---------------|-------|----|------------------|-------------------|----------------------|
| Interdependence                    | BaseVC – F2F  | –0.93 | 29 | .361             | 1.000             | –0.17 [–0.53, 0.19]  |
| Interdependence Self               | AI – BaseVC   | –0.41 | 31 | .682             | 1.000             | –0.07 [–0.42, 0.27]  |
| Interdependence Self               | AI – Tele     | –1.35 | 31 | .187             | 1.000             | –0.24 [–0.59, 0.11]  |
| Interdependence Self               | AI – F2F      | –0.94 | 29 | .353             | 1.000             | –0.17 [–0.53, 0.19]  |
| Interdependence Self               | Tele – BaseVC | 1.01  | 31 | .321             | 1.000             | 0.18 [–0.17, 0.53]   |
| Interdependence Self               | Tele – F2F    | –0.46 | 29 | .647             | 1.000             | –0.08 [–0.44, 0.27]  |
| Interdependence Self               | BaseVC – F2F  | –0.76 | 29 | .451             | 1.000             | –0.14 [–0.50, 0.22]  |
| Interdependence Others             | AI – BaseVC   | 0.51  | 31 | .615             | 1.000             | 0.09 [–0.26, 0.44]   |
| Interdependence Others             | AI – Tele     | –0.37 | 31 | .716             | 1.000             | –0.06 [–0.41, 0.28]  |
| Interdependence Others             | AI – F2F      | –0.79 | 29 | .436             | 1.000             | –0.14 [–0.50, 0.22]  |
| Interdependence Others             | Tele – BaseVC | 1.09  | 31 | .284             | 1.000             | 0.19 [–0.16, 0.54]   |
| Interdependence Others             | Tele – F2F    | –0.62 | 29 | .542             | 1.000             | –0.11 [–0.47, 0.25]  |
| Interdependence Others             | BaseVC – F2F  | –1.06 | 29 | .300             | 1.000             | –0.19 [–0.55, 0.17]  |
| Focused Attention (UES)            | AI – BaseVC   | –0.85 | 31 | .403             | 1.000             | –0.15 [–0.50, 0.20]  |
| Focused Attention (UES)            | AI – Tele     | –1.64 | 31 | .111             | .555              | –0.29 [–0.64, 0.07]  |
| Focused Attention (UES)            | AI – F2F      | –2.01 | 29 | .054             | .321              | –0.37 [–0.73, 0.01]  |
| Focused Attention (UES)            | Tele – BaseVC | 0.82  | 31 | .416             | 1.000             | 0.15 [–0.20, 0.49]   |
| Focused Attention (UES)            | Tele – F2F    | –0.98 | 29 | .336             | 1.000             | –0.18 [–0.54, 0.18]  |
| Focused Attention (UES)            | BaseVC – F2F  | –1.33 | 29 | .195             | .780              | –0.24 [–0.60, 0.12]  |
| Perceived Usability (UES)          | AI – BaseVC   | –0.21 | 31 | .831             | 1.000             | –0.04 [–0.38, 0.31]  |
| Perceived Usability (UES)          | AI – Tele     | –0.08 | 31 | .940             | 1.000             | –0.01 [–0.36, 0.33]  |
| Perceived Usability (UES)          | AI – F2F      | –2.95 | 29 | .006             | .031              | –0.54 [–0.92, –0.15] |
| Perceived Usability (UES)          | Tele – BaseVC | –0.19 | 31 | .848             | 1.000             | –0.03 [–0.38, 0.31]  |
| Perceived Usability (UES)          | Tele – F2F    | –2.63 | 29 | .014             | .054              | –0.48 [–0.85, –0.10] |
| Perceived Usability (UES)          | BaseVC – F2F  | –3.36 | 29 | .002             | .013              | –0.61 [–1.00, –0.22] |
| Perceived Social Closeness         | AI – BaseVC   | 1.04  | 31 | .304             | .686              | 0.18 [–0.17, 0.53]   |
| Perceived Social Closeness         | AI – Tele     | 0.00  | 31 | 1.000            | 1.000             | 0.00 [–0.35, 0.35]   |
| Perceived Social Closeness         | AI – F2F      | –2.41 | 29 | .023             | .090              | –0.44 [–0.81, –0.06] |
| Perceived Social Closeness         | Tele – BaseVC | 1.23  | 31 | .229             | .686              | 0.22 [–0.14, 0.57]   |
| Perceived Social Closeness         | Tele – F2F    | –2.92 | 29 | .007             | .033              | –0.53 [–0.91, –0.15] |
| Perceived Social Closeness         | BaseVC – F2F  | –3.61 | 29 | .001             | .007              | –0.66 [–1.05, –0.26] |
| <i>Gaze-specific experience</i>    |               |       |    |                  |                   |                      |
| Naturalness of Eye Contact         | AI – BaseVC   | –2.98 | 30 | .006             | .034              | –0.54 [–0.91, –0.15] |
| Naturalness of Eye Contact         | AI – Tele     | –1.98 | 30 | .057             | .230              | –0.35 [–0.72, 0.01]  |
| Naturalness of Eye Contact         | AI – F2F      | –2.91 | 28 | .007             | .035              | –0.54 [–0.93, –0.15] |
| Naturalness of Eye Contact         | Tele – BaseVC | –1.37 | 31 | .179             | .358              | –0.24 [–0.59, 0.11]  |
| Naturalness of Eye Contact         | Tele – F2F    | –1.66 | 29 | .108             | .323              | –0.30 [–0.67, 0.07]  |
| Naturalness of Eye Contact         | BaseVC – F2F  | –0.86 | 29 | .399             | .399              | –0.16 [–0.51, 0.21]  |
| Eye Contact Intensity              | AI – BaseVC   | 1.13  | 30 | .265             | 1.000             | 0.20 [–0.15, 0.56]   |
| Eye Contact Intensity              | AI – Tele     | 0.85  | 30 | .402             | 1.000             | 0.15 [–0.20, 0.51]   |
| Eye Contact Intensity              | AI – F2F      | –0.13 | 28 | .899             | 1.000             | –0.02 [–0.39, 0.34]  |
| Eye Contact Intensity              | Tele – BaseVC | 0.05  | 31 | .960             | 1.000             | 0.01 [–0.34, 0.36]   |
| Eye Contact Intensity              | Tele – F2F    | –0.72 | 29 | .480             | 1.000             | –0.13 [–0.49, 0.23]  |
| Eye Contact Intensity              | BaseVC – F2F  | –0.95 | 29 | .350             | 1.000             | –0.17 [–0.53, 0.19]  |
| Eye Contact Intrusiveness          | AI – BaseVC   | 1.96  | 30 | .059             | .343              | 0.35 [–0.01, 0.71]   |
| Eye Contact Intrusiveness          | AI – Tele     | 0.63  | 30 | .533             | 1.000             | 0.11 [–0.24, 0.47]   |
| Eye Contact Intrusiveness          | AI – F2F      | 1.98  | 28 | .057             | .343              | 0.37 [–0.01, 0.74]   |
| Eye Contact Intrusiveness          | Tele – BaseVC | 1.52  | 31 | .139             | .473              | 0.27 [–0.09, 0.62]   |
| Eye Contact Intrusiveness          | Tele – F2F    | 1.61  | 29 | .118             | .473              | 0.29 [–0.07, 0.66]   |
| Eye Contact Intrusiveness          | BaseVC – F2F  | 0.39  | 29 | .699             | 1.000             | 0.07 [–0.29, 0.43]   |
| Eye Contact Anxiety                | AI – BaseVC   | 2.45  | 30 | .021             | .123              | 0.44 [0.07, 0.80]    |
| Eye Contact Anxiety                | AI – Tele     | 2.15  | 30 | .040             | .200              | 0.39 [0.02, 0.75]    |
| Eye Contact Anxiety                | AI – F2F      | 1.78  | 28 | .085             | .341              | 0.33 [–0.05, 0.70]   |
| Eye Contact Anxiety                | Tele – BaseVC | –0.63 | 31 | .531             | 1.000             | –0.11 [–0.46, 0.24]  |
| Eye Contact Anxiety                | Tele – F2F    | –0.11 | 29 | .911             | 1.000             | –0.02 [–0.38, 0.34]  |
| Eye Contact Anxiety                | BaseVC – F2F  | 0.32  | 29 | .749             | 1.000             | 0.06 [–0.30, 0.42]   |
| Own Attention                      | AI – BaseVC   | 1.17  | 30 | .251             | 1.000             | 0.21 [–0.15, 0.56]   |
| Own Attention                      | AI – Tele     | 0.07  | 30 | .942             | 1.000             | 0.01 [–0.34, 0.37]   |
| Own Attention                      | AI – F2F      | 1.03  | 28 | .310             | 1.000             | 0.19 [–0.18, 0.56]   |
| Own Attention                      | Tele – BaseVC | 1.27  | 31 | .215             | 1.000             | 0.22 [–0.13, 0.57]   |
| Own Attention                      | Tele – F2F    | 0.98  | 29 | .334             | 1.000             | 0.18 [–0.18, 0.54]   |
| Own Attention                      | BaseVC – F2F  | 0.22  | 29 | .824             | 1.000             | 0.04 [–0.32, 0.40]   |
| Partner's Attentiveness            | AI – BaseVC   | 1.55  | 30 | .131             | .788              | 0.28 [–0.08, 0.64]   |
| Partner's Attentiveness            | AI – Tele     | 0.89  | 30 | .380             | 1.000             | 0.16 [–0.20, 0.51]   |
| Partner's Attentiveness            | AI – F2F      | 0.29  | 28 | .774             | 1.000             | 0.05 [–0.31, 0.42]   |
| Partner's Attentiveness            | Tele – BaseVC | 0.13  | 31 | .894             | 1.000             | 0.02 [–0.32, 0.37]   |
| Partner's Attentiveness            | Tele – F2F    | –1.02 | 29 | .316             | 1.000             | –0.19 [–0.55, 0.18]  |
| Partner's Attentiveness            | BaseVC – F2F  | –1.07 | 29 | .294             | 1.000             | –0.20 [–0.55, 0.17]  |
| Direct Eye Contact                 | AI – BaseVC   | 0.69  | 30 | .495             | 1.000             | 0.12 [–0.23, 0.48]   |
| Direct Eye Contact                 | AI – Tele     | –0.56 | 30 | .582             | 1.000             | –0.10 [–0.45, 0.25]  |
| Direct Eye Contact                 | AI – F2F      | –1.08 | 28 | .291             | 1.000             | –0.20 [–0.57, 0.17]  |
| Direct Eye Contact                 | Tele – BaseVC | 1.81  | 31 | .080             | .483              | 0.32 [–0.04, 0.67]   |
| Direct Eye Contact                 | Tele – F2F    | –0.61 | 29 | .549             | 1.000             | –0.11 [–0.47, 0.25]  |
| Direct Eye Contact                 | BaseVC – F2F  | –1.74 | 29 | .093             | .483              | –0.32 [–0.68, 0.05]  |
| <i>Camera &amp; being observed</i> |               |       |    |                  |                   |                      |
| Webcam Awareness                   | AI – BaseVC   | 0.63  | 31 | .531             | 1.000             | 0.11 [–0.24, 0.46]   |
| Webcam Awareness                   | AI – Tele     | 0.78  | 31 | .440             | 1.000             | 0.14 [–0.21, 0.49]   |
| Webcam Awareness                   | AI – F2F      | 3.72  | 29 | <.001            | .005              | 0.68 [0.28, 1.07]    |
| Webcam Awareness                   | Tele – BaseVC | –0.30 | 31 | .768             | 1.000             | –0.05 [–0.40, 0.29]  |
| Webcam Awareness                   | Tele – F2F    | 3.39  | 29 | .002             | .009              | 0.62 [0.22, 1.01]    |
| Webcam Awareness                   | BaseVC – F2F  | 3.44  | 29 | .002             | .009              | 0.63 [0.23, 1.02]    |
| Feeling Observed                   | AI – BaseVC   | 2.52  | 31 | .017             | .085              | 0.45 [0.08, 0.81]    |
| Feeling Observed                   | AI – Tele     | 1.68  | 30 | .103             | .270              | 0.30 [–0.06, 0.66]   |

**Table S2:** All pairwise contrasts: paired  $t$ -tests on pairwise complete data.  $p_{\text{Holm}}$ : Holm correction over the six contrasts within each dependent variable.  $d_z$  with exact 95% CI based on the noncentral  $t$  distribution. Positive values indicate higher ratings in the first-named condition.

| DV                                    | Contrast      | $t$   | df | $p_{\text{raw}}$ | $p_{\text{Holm}}$ | $d_z$ [95% CI]       |
|---------------------------------------|---------------|-------|----|------------------|-------------------|----------------------|
| Feeling Observed                      | AI – F2F      | 3.31  | 29 | .002             | .015              | 0.60 [0.21, 0.99]    |
| Feeling Observed                      | Tele – BaseVC | 1.41  | 30 | .169             | .270              | 0.25 [–0.11, 0.61]   |
| Feeling Observed                      | Tele – F2F    | 2.44  | 28 | .021             | .086              | 0.45 [0.07, 0.83]    |
| Feeling Observed                      | BaseVC – F2F  | 1.75  | 29 | .090             | .270              | 0.32 [–0.05, 0.68]   |
| Discomfort due to Recording           | AI – BaseVC   | 1.28  | 31 | .211             | .633              | 0.23 [–0.13, 0.58]   |
| Discomfort due to Recording           | AI – Tele     | 0.27  | 31 | .786             | .828              | 0.05 [–0.30, 0.39]   |
| Discomfort due to Recording           | AI – F2F      | 2.54  | 29 | .017             | .101              | 0.46 [0.08, 0.84]    |
| Discomfort due to Recording           | Tele – BaseVC | 0.83  | 31 | .414             | .828              | 0.15 [–0.20, 0.49]   |
| Discomfort due to Recording           | Tele – F2F    | 1.99  | 29 | .056             | .226              | 0.36 [–0.01, 0.73]   |
| Discomfort due to Recording           | BaseVC – F2F  | 2.28  | 29 | .030             | .152              | 0.42 [0.04, 0.79]    |
| Camera Gaze Discomfort                | AI – BaseVC   | 1.09  | 31 | .282             | .847              | 0.19 [–0.16, 0.54]   |
| Camera Gaze Discomfort                | AI – Tele     | 0.40  | 31 | .690             | 1.000             | 0.07 [–0.28, 0.42]   |
| Camera Gaze Discomfort                | AI – F2F      | 3.10  | 29 | .004             | .022              | 0.57 [0.17, 0.95]    |
| Camera Gaze Discomfort                | Tele – BaseVC | 0.52  | 31 | .609             | 1.000             | 0.09 [–0.26, 0.44]   |
| Camera Gaze Discomfort                | Tele – F2F    | 3.19  | 29 | .003             | .020              | 0.58 [0.19, 0.97]    |
| Camera Gaze Discomfort                | BaseVC – F2F  | 2.76  | 29 | .010             | .040              | 0.50 [0.12, 0.88]    |
| Intentional Camera Gaze               | AI – BaseVC   | 1.31  | 31 | .201             | .973              | 0.23 [–0.12, 0.58]   |
| Intentional Camera Gaze               | AI – Tele     | 0.18  | 31 | .856             | 1.000             | 0.03 [–0.31, 0.38]   |
| Intentional Camera Gaze               | AI – F2F      | 1.49  | 29 | .146             | .877              | 0.27 [–0.09, 0.64]   |
| Intentional Camera Gaze               | Tele – BaseVC | 0.81  | 31 | .423             | 1.000             | 0.14 [–0.21, 0.49]   |
| Intentional Camera Gaze               | Tele – F2F    | 1.33  | 29 | .195             | .973              | 0.24 [–0.12, 0.60]   |
| Intentional Camera Gaze               | BaseVC – F2F  | 0.92  | 29 | .365             | 1.000             | 0.17 [–0.19, 0.53]   |
| Camera Gaze Avoidance                 | AI – BaseVC   | 0.84  | 31 | .407             | 1.000             | 0.15 [–0.20, 0.50]   |
| Camera Gaze Avoidance                 | AI – Tele     | 0.70  | 31 | .488             | 1.000             | 0.12 [–0.22, 0.47]   |
| Camera Gaze Avoidance                 | AI – F2F      | 3.07  | 29 | .005             | .028              | 0.56 [0.17, 0.94]    |
| Camera Gaze Avoidance                 | Tele – BaseVC | 0.17  | 31 | .869             | 1.000             | 0.03 [–0.32, 0.38]   |
| Camera Gaze Avoidance                 | Tele – F2F    | 2.80  | 29 | .009             | .045              | 0.51 [0.13, 0.89]    |
| Camera Gaze Avoidance                 | BaseVC – F2F  | 2.52  | 29 | .017             | .069              | 0.46 [0.08, 0.83]    |
| <i>Affect &amp; person perception</i> |               |       |    |                  |                   |                      |
| Valence                               | AI – BaseVC   | –0.72 | 30 | .478             | 1.000             | –0.13 [–0.48, 0.23]  |
| Valence                               | AI – Tele     | –1.23 | 30 | .228             | 1.000             | –0.22 [–0.58, 0.14]  |
| Valence                               | AI – F2F      | –1.09 | 28 | .286             | 1.000             | –0.20 [–0.57, 0.17]  |
| Valence                               | Tele – BaseVC | 1.11  | 31 | .278             | 1.000             | 0.20 [–0.16, 0.54]   |
| Valence                               | Tele – F2F    | –0.34 | 29 | .733             | 1.000             | –0.06 [–0.42, 0.30]  |
| Valence                               | BaseVC – F2F  | –0.93 | 29 | .359             | 1.000             | –0.17 [–0.53, 0.19]  |
| Arousal                               | AI – BaseVC   | –1.91 | 30 | .066             | .263              | –0.34 [–0.70, 0.02]  |
| Arousal                               | AI – Tele     | 0.41  | 30 | .685             | .685              | 0.07 [–0.28, 0.43]   |
| Arousal                               | AI – F2F      | 1.47  | 28 | .153             | .460              | 0.27 [–0.10, 0.64]   |
| Arousal                               | Tele – BaseVC | –2.24 | 31 | .032             | .162              | –0.40 [–0.75, –0.03] |
| Arousal                               | Tele – F2F    | 1.12  | 29 | .270             | .540              | 0.21 [–0.16, 0.57]   |
| Arousal                               | BaseVC – F2F  | 2.93  | 29 | .007             | .039              | 0.53 [0.15, 0.91]    |
| Friendliness                          | AI – BaseVC   | 0.65  | 30 | .521             | 1.000             | 0.12 [–0.24, 0.47]   |
| Friendliness                          | AI – Tele     | 1.23  | 30 | .228             | 1.000             | 0.22 [–0.14, 0.58]   |
| Friendliness                          | AI – F2F      | –0.46 | 28 | .650             | 1.000             | –0.09 [–0.45, 0.28]  |
| Friendliness                          | Tele – BaseVC | –0.76 | 31 | .455             | 1.000             | –0.13 [–0.48, 0.22]  |
| Friendliness                          | Tele – F2F    | –1.70 | 29 | .100             | .598              | –0.31 [–0.67, 0.06]  |
| Friendliness                          | BaseVC – F2F  | –1.12 | 29 | .274             | 1.000             | –0.20 [–0.56, 0.16]  |
| Competence                            | AI – BaseVC   | –0.15 | 30 | .882             | 1.000             | –0.03 [–0.38, 0.33]  |
| Competence                            | AI – Tele     | 0.20  | 30 | .842             | 1.000             | 0.04 [–0.32, 0.39]   |
| Competence                            | AI – F2F      | –0.54 | 28 | .597             | 1.000             | –0.10 [–0.46, 0.27]  |
| Competence                            | Tele – BaseVC | –0.88 | 31 | .384             | 1.000             | –0.16 [–0.50, 0.19]  |
| Competence                            | Tele – F2F    | –0.93 | 29 | .359             | 1.000             | –0.17 [–0.53, 0.19]  |
| Competence                            | BaseVC – F2F  | –0.63 | 29 | .531             | 1.000             | –0.12 [–0.47, 0.24]  |

**Table S3:** Means (SD) and *n* per condition. Scales: 0–100 sliders unless stated otherwise; Valence and Arousal 0–1 (Affect Grid; Arousal = 1 – vertical click position, so that higher values indicate higher arousal); IOS 0–6; camera-related items and Perceived Social Closeness 0–5.

| DV                                      | F2F         |    | BaseVC      |    | Tele        |    | AI          |    |
|-----------------------------------------|-------------|----|-------------|----|-------------|----|-------------|----|
| <i>Social presence &amp; engagement</i> |             |    |             |    |             |    |             |    |
| Feeling of Closeness (IOS)              | 3.27 (1.53) | 30 | 2.84 (1.51) | 32 | 2.84 (1.67) | 32 | 3.00 (1.53) | 31 |
| Co-Presence                             | 90.3 (8.0)  | 30 | 51.6 (19.9) | 32 | 53.4 (22.4) | 32 | 51.8 (21.2) | 31 |
| Co-Presence Self                        | 89.7 (9.0)  | 30 | 50.8 (19.9) | 32 | 53.2 (22.4) | 32 | 50.2 (22.4) | 31 |
| Co-Presence Others                      | 90.9 (8.6)  | 30 | 52.4 (20.3) | 32 | 53.6 (22.9) | 32 | 53.4 (20.7) | 31 |
| Engagement                              | 88.1 (6.6)  | 30 | 83.3 (11.9) | 32 | 84.1 (12.1) | 32 | 84.9 (9.7)  | 31 |
| Engagement Self                         | 86.5 (7.9)  | 30 | 82.1 (13.6) | 32 | 83.3 (13.5) | 32 | 83.6 (11.0) | 31 |
| Engagement Others                       | 89.7 (6.3)  | 30 | 84.5 (11.0) | 32 | 85.0 (11.1) | 32 | 86.2 (9.4)  | 31 |
| Emotional Contagion                     | 51.1 (13.8) | 30 | 50.1 (15.4) | 32 | 52.2 (15.8) | 32 | 52.1 (15.3) | 32 |
| Emotional Contagion Self                | 51.2 (14.1) | 30 | 50.9 (15.6) | 32 | 52.4 (15.8) | 32 | 53.0 (16.2) | 32 |
| Emotional Contagion Others              | 50.9 (13.7) | 30 | 49.4 (15.5) | 32 | 52.0 (16.4) | 32 | 51.2 (14.8) | 32 |
| Comprehension                           | 83.1 (11.4) | 30 | 81.4 (10.9) | 32 | 81.0 (12.6) | 32 | 81.8 (10.4) | 32 |
| Comprehension Self                      | 82.7 (11.4) | 30 | 80.8 (11.4) | 32 | 80.3 (12.9) | 32 | 81.4 (11.0) | 32 |
| Comprehension Others                    | 83.5 (11.6) | 30 | 82.0 (10.9) | 32 | 81.7 (12.6) | 32 | 82.2 (10.2) | 32 |
| Interdependence                         | 72.5 (20.9) | 30 | 69.3 (23.2) | 32 | 70.5 (22.2) | 32 | 69.4 (21.3) | 32 |
| Interdependence Self                    | 72.2 (21.4) | 30 | 69.3 (22.9) | 32 | 70.3 (22.4) | 32 | 68.7 (21.7) | 32 |
| Interdependence Others                  | 72.9 (20.7) | 30 | 69.3 (23.7) | 32 | 70.7 (22.2) | 32 | 70.2 (21.1) | 32 |
| Focused Attention (UES)                 | 74.3 (20.9) | 30 | 71.9 (21.1) | 32 | 73.0 (19.3) | 32 | 70.6 (18.7) | 32 |
| Perceived Usability (UES)               | 85.8 (14.7) | 30 | 78.6 (19.4) | 32 | 78.3 (21.4) | 32 | 78.1 (18.6) | 32 |
| Perceived Social Closeness              | 4.13 (1.38) | 30 | 3.41 (1.36) | 32 | 3.62 (1.18) | 32 | 3.62 (0.98) | 32 |
| <i>Gaze-specific experience</i>         |             |    |             |    |             |    |             |    |
| Naturalness of Eye Contact              | 79.6 (15.8) | 30 | 76.9 (14.9) | 32 | 74.2 (16.5) | 32 | 67.8 (22.0) | 31 |
| Eye Contact Intensity                   | 52.3 (28.2) | 30 | 47.9 (24.8) | 32 | 48.0 (27.0) | 32 | 50.7 (26.2) | 31 |
| Eye Contact Intrusiveness               | 15.9 (17.2) | 30 | 18.7 (17.1) | 32 | 23.9 (21.8) | 32 | 25.0 (22.3) | 31 |
| Eye Contact Anxiety                     | 16.7 (15.9) | 30 | 18.8 (18.7) | 32 | 17.3 (16.9) | 32 | 24.0 (21.2) | 31 |
| Own Attention                           | 77.6 (18.7) | 30 | 78.0 (13.6) | 32 | 80.7 (16.3) | 32 | 81.1 (10.3) | 31 |
| Partner's Attentiveness                 | 87.0 (7.9)  | 30 | 84.5 (10.3) | 32 | 84.7 (12.7) | 32 | 86.7 (8.5)  | 31 |
| Direct Eye Contact                      | 80.2 (13.1) | 30 | 73.1 (18.9) | 32 | 78.1 (15.0) | 32 | 76.0 (19.0) | 31 |
| <i>Camera &amp; being observed</i>      |             |    |             |    |             |    |             |    |
| Webcam Awareness                        | 0.63 (1.30) | 30 | 1.94 (1.61) | 32 | 1.88 (1.62) | 32 | 2.09 (1.53) | 32 |
| Feeling Observed                        | 0.47 (0.94) | 30 | 0.84 (1.05) | 32 | 1.03 (1.08) | 31 | 1.25 (1.32) | 32 |
| Discomfort due to Recording             | 0.40 (0.81) | 30 | 0.75 (0.95) | 32 | 0.84 (1.22) | 32 | 0.88 (1.07) | 32 |
| Camera Gaze Discomfort                  | 0.50 (0.90) | 30 | 1.12 (1.31) | 32 | 1.22 (1.26) | 32 | 1.28 (1.37) | 32 |
| Intentional Camera Gaze                 | 0.77 (1.33) | 30 | 1.09 (1.42) | 32 | 1.22 (1.43) | 32 | 1.25 (1.52) | 32 |
| Camera Gaze Avoidance                   | 0.83 (1.44) | 30 | 1.56 (1.79) | 32 | 1.59 (1.64) | 32 | 1.72 (1.65) | 32 |
| <i>Affect &amp; person perception</i>   |             |    |             |    |             |    |             |    |
| Valence                                 | 0.74 (0.19) | 30 | 0.69 (0.21) | 32 | 0.71 (0.23) | 32 | 0.68 (0.19) | 31 |
| Arousal                                 | 0.43 (0.23) | 30 | 0.56 (0.20) | 32 | 0.49 (0.22) | 32 | 0.50 (0.21) | 31 |
| Friendliness                            | 88.2 (8.2)  | 30 | 86.0 (10.8) | 32 | 85.3 (11.6) | 32 | 86.8 (10.2) | 31 |
| Competence                              | 88.3 (7.4)  | 30 | 86.9 (9.2)  | 32 | 86.5 (9.9)  | 32 | 86.8 (8.5)  | 31 |

**Table S4:** Stability of significance decisions across analysis variants (● = significant, ○ = not significant; omnibus:  $p_{FDR} < .05$ ; contrasts:  $p_{Holm} < .05$ ). Primary: all observations, no outlier treatment. (a) Values beyond  $\pm 2 SD$  per condition removed (as in the conference version). (b) Logged values only (unchanged prefilled values set to missing). (c) Rank-transformed mixed models and Wilcoxon signed-rank tests. (d) Primary analysis without the two participants whose face-to-face questionnaire was not recorded. All omnibus tests are listed; contrasts are listed if significant in at least one variant.

| DV                          | Test          | Primary | (a) | (b) | (c) | (d) | (e) |
|-----------------------------|---------------|---------|-----|-----|-----|-----|-----|
| Arousal                     | omnibus       | ●       | ●   | ●   | ●   | ○   | ●   |
| Camera Gaze Avoidance       | omnibus       | ●       | ●   | ●   | ●   | ●   | ●   |
| Camera Gaze Discomfort      | omnibus       | ●       | ●   | ●   | ●   | ●   | ●   |
| Co-Presence                 | omnibus       | ●       | ●   | ●   | ●   | ●   | ●   |
| Co-Presence Others          | omnibus       | ●       | ●   | ●   | ●   | ●   | ●   |
| Co-Presence Self            | omnibus       | ●       | ●   | ●   | ●   | ●   | ●   |
| Competence                  | omnibus       | ○       | ○   | ○   | ○   | ○   | ○   |
| Comprehension               | omnibus       | ○       | ○   | ○   | ○   | ○   | ○   |
| Comprehension Others        | omnibus       | ○       | ○   | ○   | ○   | ○   | ○   |
| Comprehension Self          | omnibus       | ○       | ○   | ○   | ○   | ○   | ○   |
| Direct Eye Contact          | omnibus       | ○       | ○   | ○   | ○   | ○   | ○   |
| Discomfort due to Recording | omnibus       | ●       | ○   | ○   | ●   | ●   | ●   |
| Emotional Contagion         | omnibus       | ○       | ○   | ○   | ○   | ○   | ○   |
| Emotional Contagion Others  | omnibus       | ○       | ○   | ○   | ○   | ○   | ○   |
| Emotional Contagion Self    | omnibus       | ○       | ○   | ○   | ○   | ○   | ○   |
| Engagement                  | omnibus       | ●       | ○   | ○   | ●   | ○   | ●   |
| Engagement Others           | omnibus       | ●       | ●   | ●   | ●   | ●   | ●   |
| Engagement Self             | omnibus       | ○       | ○   | ○   | ○   | ○   | ○   |
| Eye Contact Anxiety         | omnibus       | ○       | ●   | ●   | ○   | ○   | ○   |
| Eye Contact Intensity       | omnibus       | ○       | ○   | ○   | ○   | ○   | ○   |
| Eye Contact Intrusiveness   | omnibus       | ○       | ○   | ●   | ○   | ○   | ○   |
| Feeling Observed            | omnibus       | ●       | ●   | ●   | ●   | ●   | ●   |
| Feeling of Closeness (IOS)  | omnibus       | ○       | ○   | ○   | ○   | ○   | ○   |
| Focused Attention (UES)     | omnibus       | ○       | ○   | ○   | ○   | ○   | ○   |
| Friendliness                | omnibus       | ○       | ○   | ○   | ○   | ○   | ○   |
| Intentional Camera Gaze     | omnibus       | ○       | ○   | ●   | ○   | ○   | ○   |
| Interdependence             | omnibus       | ○       | ○   | ○   | ○   | ○   | ○   |
| Interdependence Others      | omnibus       | ○       | ○   | ○   | ○   | ○   | ○   |
| Interdependence Self        | omnibus       | ○       | ○   | ○   | ○   | ○   | ○   |
| Naturalness of Eye Contact  | omnibus       | ●       | ●   | ●   | ●   | ●   | ●   |
| Own Attention               | omnibus       | ○       | ○   | ○   | ○   | ○   | ○   |
| Partner's Attentiveness     | omnibus       | ○       | ○   | ○   | ○   | ○   | ○   |
| Perceived Social Closeness  | omnibus       | ●       | ●   | ●   | ●   | ●   | ●   |
| Perceived Usability (UES)   | omnibus       | ●       | ●   | ●   | ●   | ●   | ●   |
| Valence                     | omnibus       | ○       | ○   | ○   | ○   | ○   | ○   |
| Webcam Awareness            | omnibus       | ●       | ●   | ●   | ●   | ●   | ●   |
| Arousal                     | BaseVC – F2F  | ●       | ●   | ●   | ●   | ●   | ●   |
| Camera Gaze Avoidance       | AI – F2F      | ●       | ●   | ●   | ●   | ●   | ●   |
| Camera Gaze Avoidance       | BaseVC – F2F  | ○       | ●   | ●   | ○   | ○   | ○   |
| Camera Gaze Avoidance       | Tele – F2F    | ●       | ●   | ●   | ●   | ○   | ●   |
| Camera Gaze Discomfort      | AI – F2F      | ●       | ●   | ●   | ●   | ●   | ●   |
| Camera Gaze Discomfort      | BaseVC – F2F  | ●       | ○   | ○   | ○   | ○   | ●   |
| Camera Gaze Discomfort      | Tele – F2F    | ●       | ○   | ○   | ●   | ●   | ●   |
| Co-Presence                 | AI – F2F      | ●       | ●   | ●   | ●   | ●   | ●   |
| Co-Presence                 | BaseVC – F2F  | ●       | ●   | ●   | ●   | ●   | ●   |
| Co-Presence                 | Tele – F2F    | ●       | ●   | ●   | ●   | ●   | ●   |
| Co-Presence Others          | AI – F2F      | ●       | ●   | ●   | ●   | ●   | ●   |
| Co-Presence Others          | BaseVC – F2F  | ●       | ●   | ●   | ●   | ●   | ●   |
| Co-Presence Others          | Tele – F2F    | ●       | ●   | ●   | ●   | ●   | ●   |
| Co-Presence Self            | AI – F2F      | ●       | ●   | ●   | ●   | ●   | ●   |
| Co-Presence Self            | BaseVC – F2F  | ●       | ●   | ●   | ●   | ●   | ●   |
| Co-Presence Self            | Tele – F2F    | ●       | ●   | ●   | ●   | ●   | ●   |
| Engagement                  | AI – F2F      | ○       | ○   | ○   | ●   | ○   | ○   |
| Engagement                  | BaseVC – F2F  | ●       | ○   | ○   | ●   | ○   | ●   |
| Engagement Others           | AI – F2F      | ●       | ●   | ○   | ●   | ●   | ●   |
| Engagement Others           | BaseVC – F2F  | ●       | ●   | ●   | ●   | ●   | ●   |
| Engagement Others           | Tele – F2F    | ●       | ○   | ○   | ●   | ●   | ●   |
| Eye Contact Anxiety         | AI – Tele     | ○       | ○   | ●   | ○   | ○   | ○   |
| Feeling Observed            | AI – BaseVC   | ○       | ○   | ●   | ○   | ○   | ○   |
| Feeling Observed            | AI – F2F      | ●       | ●   | ●   | ●   | ●   | ●   |
| Feeling Observed            | Tele – F2F    | ○       | ○   | ●   | ○   | ○   | ○   |
| Naturalness of Eye Contact  | AI – BaseVC   | ●       | ●   | ●   | ○   | ●   | ●   |
| Naturalness of Eye Contact  | AI – F2F      | ●       | ○   | ●   | ○   | ○   | ●   |
| Own Attention               | Tele – BaseVC | ○       | ●   | ○   | ○   | ○   | ○   |
| Perceived Social Closeness  | AI – F2F      | ○       | ●   | ●   | ○   | ○   | ○   |
| Perceived Social Closeness  | BaseVC – F2F  | ●       | ●   | ●   | ●   | ●   | ●   |
| Perceived Social Closeness  | Tele – F2F    | ●       | ●   | ●   | ○   | ●   | ●   |
| Perceived Usability (UES)   | AI – F2F      | ●       | ●   | ●   | ○   | ●   | ●   |
| Perceived Usability (UES)   | BaseVC – F2F  | ●       | ●   | ●   | ○   | ●   | ●   |
| Perceived Usability (UES)   | Tele – F2F    | ○       | ●   | ●   | ○   | ○   | ○   |
| Webcam Awareness            | AI – F2F      | ●       | ●   | ●   | ●   | ●   | ●   |
| Webcam Awareness            | BaseVC – F2F  | ●       | ●   | ●   | ○   | ●   | ●   |
| Webcam Awareness            | Tele – F2F    | ●       | ●   | ●   | ●   | ●   | ●   |

**Table S5:** Condition effect without and with serial position (1–4) as a linear or categorical covariate (likelihood-ratio tests, 3 df), and the linear effect of serial position (likelihood-ratio test, 1 df; slope in scale units per position).

| DV                          | $\chi^2$ cond. | <i>p</i> | $\chi^2$ cond. pos. | <i>p</i> | <i>p</i> <sub>FDR</sub> | $\chi^2$ cond. pos.(cat.) | <i>p</i> | slope pos. | <i>p</i> <sub>pos</sub> |
|-----------------------------|----------------|----------|---------------------|----------|-------------------------|---------------------------|----------|------------|-------------------------|
| Valence                     | 2.71           | .439     | 1.74                | .628     | .706                    | 2.33                      | .506     | 0.02       | .072                    |
| Arousal                     | 11.35          | .010     | 11.38               | .010     | .029                    | 8.75                      | .033     | 0.00       | .818                    |
| Feeling of Closeness (IOS)  | 6.27           | .099     | 5.99                | .112     | .237                    | 5.91                      | .116     | 0.28       | <.001                   |
| Naturalness of Eye Contact  | 14.84          | .002     | 12.32               | .006     | .021                    | 9.13                      | .028     | 2.93       | .003                    |
| Eye Contact Intensity       | 1.60           | .659     | 2.03                | .567     | .678                    | 2.18                      | .537     | 4.04       | .002                    |
| Eye Contact Intrusiveness   | 7.41           | .060     | 7.06                | .070     | .168                    | 4.42                      | .219     | −0.41      | .722                    |
| Eye Contact Anxiety         | 6.67           | .083     | 5.50                | .139     | .278                    | 5.08                      | .166     | −1.30      | .164                    |
| Own Attention               | 2.29           | .514     | 3.10                | .376     | .503                    | 2.46                      | .483     | 1.66       | .078                    |
| Partner's Attentiveness     | 2.52           | .471     | 2.62                | .454     | .564                    | 2.34                      | .506     | 0.61       | .253                    |
| Friendliness                | 4.10           | .251     | 4.00                | .262     | .472                    | 1.84                      | .606     | 0.57       | .183                    |
| Competence                  | 1.39           | .708     | 1.08                | .783     | .829                    | 0.43                      | .935     | 0.58       | .151                    |
| Direct Eye Contact          | 4.39           | .222     | 3.55                | .314     | .476                    | 4.38                      | .223     | 3.48       | .001                    |
| Co-Presence                 | 107.33         | <.001    | 105.33              | <.001    | <.001                   | 85.29                     | <.001    | 1.62       | .127                    |
| Co-Presence Self            | 98.25          | <.001    | 96.03               | <.001    | <.001                   | 77.32                     | <.001    | 1.60       | .164                    |
| Co-Presence Others          | 109.72         | <.001    | 107.91              | <.001    | <.001                   | 87.48                     | <.001    | 1.65       | .111                    |
| Engagement                  | 14.46          | .002     | 13.34               | .004     | .014                    | 7.67                      | .053     | 0.91       | .022                    |
| Engagement Self             | 8.00           | .046     | 6.89                | .075     | .170                    | 4.25                      | .236     | 1.21       | .014                    |
| Engagement Others           | 20.42          | <.001    | 19.43               | <.001    | .002                    | 10.74                     | .013     | 0.61       | .097                    |
| Emotional Contagion         | 2.02           | .568     | 3.79                | .285     | .476                    | 3.20                      | .362     | 2.04       | <.001                   |
| Emotional Contagion Self    | 2.03           | .566     | 4.38                | .223     | .422                    | 3.60                      | .308     | 2.06       | <.001                   |
| Emotional Contagion Others  | 2.23           | .526     | 3.09                | .377     | .503                    | 2.93                      | .403     | 2.01       | <.001                   |
| Comprehension               | 2.65           | .449     | 2.96                | .398     | .511                    | 3.47                      | .325     | 2.22       | <.001                   |
| Comprehension Self          | 3.08           | .379     | 3.53                | .317     | .476                    | 3.84                      | .280     | 2.23       | <.001                   |
| Comprehension Others        | 1.94           | .586     | 1.94                | .584     | .678                    | 2.55                      | .466     | 2.21       | <.001                   |
| Interdependence             | 2.05           | .563     | 0.95                | .814     | .838                    | 1.80                      | .615     | 2.11       | <.001                   |
| Interdependence Self        | 2.08           | .555     | 0.70                | .873     | .873                    | 1.32                      | .725     | 2.26       | <.001                   |
| Interdependence Others      | 2.08           | .556     | 1.38                | .711     | .775                    | 2.40                      | .493     | 1.96       | .002                    |
| Focused Attention (UES)     | 6.05           | .109     | 3.60                | .308     | .476                    | 4.03                      | .259     | 1.82       | .001                    |
| Perceived Usability (UES)   | 13.24          | .004     | 11.22               | .011     | .029                    | 8.19                      | .042     | 2.61       | <.001                   |
| Webcam Awareness            | 24.20          | <.001    | 21.73               | <.001    | <.001                   | 10.59                     | .014     | −0.26      | .007                    |
| Feeling Observed            | 17.33          | <.001    | 14.40               | .002     | .010                    | 11.09                     | .011     | −0.19      | .002                    |
| Discomfort due to Recording | 11.66          | .009     | 9.77                | .021     | .053                    | 10.54                     | .015     | −0.11      | .018                    |
| Camera Gaze Discomfort      | 18.03          | <.001    | 16.34               | <.001    | .006                    | 8.59                      | .035     | −0.08      | .177                    |
| Intentional Camera Gaze     | 4.49           | .213     | 3.33                | .343     | .494                    | 0.70                      | .874     | −0.17      | .030                    |
| Camera Gaze Avoidance       | 15.99          | .001     | 15.63               | .001     | .007                    | 10.07                     | .018     | 0.00       | .953                    |
| Perceived Social Closeness  | 15.46          | .001     | 14.55               | .002     | .010                    | 13.30                     | .004     | 0.06       | .343                    |

**Table S6:** Internal consistency, pooled over conditions and per condition. Emotional Contagion Self: items 1, 4, 6, 8; Others: items 2, 3, 5, 7. For two-item scales, the inter-item correlation is reported. ATI, Shyness and Sociability were assessed once ( $N = 30-31$ ).

| Scale                                        | $k$ | $\alpha$ pooled | $\omega$ pooled | $\alpha$ F2F | $\alpha$ BaseVC | $\alpha$ Tele | $\alpha$ AI |
|----------------------------------------------|-----|-----------------|-----------------|--------------|-----------------|---------------|-------------|
| Co Presence                                  | 8   | 0.93            | 0.93            | 0.81         | 0.87            | 0.91          | 0.89        |
| Engagement                                   | 6   | 0.88            | 0.90            | 0.74         | 0.90            | 0.92          | 0.84        |
| Emotional Contagion                          | 8   | 0.78            | 0.74            | 0.66         | 0.80            | 0.84          | 0.78        |
| Comprehension                                | 6   | 0.90            | 0.91            | 0.91         | 0.88            | 0.92          | 0.86        |
| Interdependence                              | 6   | 0.96            | 0.96            | 0.96         | 0.97            | 0.97          | 0.94        |
| Focused Attention                            | 3   | 0.84            | 0.84            | 0.84         | 0.91            | 0.82          | 0.75        |
| Perceived Usability                          | 3   | 0.85            | 0.86            | 0.78         | 0.84            | 0.90          | 0.81        |
| Co Presence Self                             | 4   | 0.82            | —               | —            | —               | —             | —           |
| Co Presence Others                           | 4   | 0.88            | —               | —            | —               | —             | —           |
| Engagement Self                              | 3   | 0.79            | —               | —            | —               | —             | —           |
| Engagement Others                            | 3   | 0.73            | —               | —            | —               | —             | —           |
| Emotional Contagion Self                     | 4   | 0.48            | —               | —            | —               | —             | —           |
| Emotional Contagion Others                   | 4   | 0.52            | —               | —            | —               | —             | —           |
| Comprehension Self                           | 3   | 0.77            | —               | —            | —               | —             | —           |
| Comprehension Others                         | 3   | 0.76            | —               | —            | —               | —             | —           |
| Interdependence Self                         | 3   | 0.90            | —               | —            | —               | —             | —           |
| Interdependence Others                       | 3   | 0.92            | —               | —            | —               | —             | —           |
| EC items1-4                                  | 4   | 0.77            | —               | —            | —               | —             | —           |
| EC items5-8                                  | 4   | 0.95            | —               | —            | —               | —             | —           |
| Naturalness of Eye Contact ( $r$ )           | 2   | 0.79            | —               | —            | —               | —             | —           |
| Gaze Intrusiveness composite dropped ( $r$ ) | 2   | 0.10            | —               | —            | —               | —             | —           |
| ATI                                          | 9   | 0.92            | 0.92            | —            | —               | —             | —           |
| Shyness                                      | 5   | 0.79            | 0.78            | —            | —               | —             | —           |
| Sociability                                  | 5   | 0.46            | 0.55            | —            | —               | —             | —           |

**Table S7:** Eye-tracking metrics per participant and condition (fixations on the video window). Omnibus: likelihood-ratio tests (2 df), Benjamini–Hochberg correction over the metrics; contrasts: paired  $t$ -tests with Holm correction over three contrasts.  $N = 29$  (AI: 28).

| Metric                                            | M (SD) BaseVC / Tele / AI                           | $\chi^2(2)$ , $p$ , $p_{FDR}$ | Contrast                                  | $t$ , $p_{Holm}$                                                            | $d_z$ [95% CI]                                                    |
|---------------------------------------------------|-----------------------------------------------------|-------------------------------|-------------------------------------------|-----------------------------------------------------------------------------|-------------------------------------------------------------------|
| Share of fixations on face                        | 0.518 (0.224) / 0.448 (0.257) / 0.526 (0.255)       | 13.36, .001, .005             | AI – BaseVC<br>AI – Tele<br>Tele – BaseVC | $t(27) = 0.33$ , .746<br>$t(27) = 3.12$ , .013<br>$t(28) = -2.63$ , .027    | 0.06 [–0.31, 0.43]<br>0.59 [0.18, 0.99]<br>–0.49 [–0.87, –0.10]   |
| Dwell-time share on face                          | 0.593 (0.25) / 0.535 (0.298) / 0.599 (0.28)         | 7.59, .022, .038              | AI – BaseVC<br>AI – Tele<br>Tele – BaseVC | $t(27) = 0.01$ , .989<br>$t(27) = 2.37$ , .076<br>$t(28) = -1.93$ , .127    | 0.00 [–0.37, 0.37]<br>0.45 [0.05, 0.83]<br>–0.36 [–0.73, 0.02]    |
| Mean fixation duration (ms)                       | 418 (138) / 458 (146) / 414 (133)                   | 9.15, .010, .023              | AI – BaseVC<br>AI – Tele<br>Tele – BaseVC | $t(27) = -0.45$ , .656<br>$t(27) = -2.99$ , .018<br>$t(28) = 2.13$ , .084   | –0.09 [–0.46, 0.29]<br>–0.56 [–0.96, –0.16]<br>0.40 [0.01, 0.77]  |
| Mean face-fixation duration (ms)                  | 493 (192) / 542 (215) / 486 (173)                   | 4.37, .113, .138              | AI – BaseVC<br>AI – Tele<br>Tele – BaseVC | $t(27) = -0.48$ , .633<br>$t(27) = -1.57$ , .381<br>$t(28) = 1.54$ , .381   | –0.09 [–0.46, 0.28]<br>–0.30 [–0.67, 0.08]<br>0.29 [–0.09, 0.66]  |
| Fixations per minute                              | 89.6 (23.9) / 82.1 (23.1) / 89.1 (23.7)             | 7.42, .024, .038              | AI – BaseVC<br>AI – Tele<br>Tele – BaseVC | $t(27) = -0.43$ , .668<br>$t(27) = 1.92$ , .132<br>$t(28) = -2.32$ , .083   | –0.08 [–0.45, 0.29]<br>0.36 [–0.02, 0.74]<br>–0.43 [–0.81, –0.05] |
| Face fixations per minute                         | 46.1 (24.6) / 37 (24.3) / 46.5 (26.4)               | 12.15, .002, .006             | AI – BaseVC<br>AI – Tele<br>Tele – BaseVC | $t(27) = -0.04$ , .971<br>$t(27) = 2.99$ , .018<br>$t(28) = -2.65$ , .026   | –0.01 [–0.38, 0.36]<br>0.56 [0.16, 0.96]<br>–0.49 [–0.87, –0.10]  |
| Gaze-sample share on face                         | 0.504 (0.228) / 0.433 (0.257) / 0.516 (0.259)       | 15.60, <.001, .002            | AI – BaseVC<br>AI – Tele<br>Tele – BaseVC | $t(27) = 0.61$ , .550<br>$t(27) = 3.59$ , .004<br>$t(28) = -2.77$ , .020    | 0.11 [–0.26, 0.49]<br>0.68 [0.26, 1.08]<br>–0.51 [–0.90, –0.12]   |
| Face area / frame area                            | 0.0951 (0.0225) / 0.0643 (0.0265) / 0.0966 (0.0184) | 75.39, <.001, <.001           | AI – BaseVC<br>AI – Tele<br>Tele – BaseVC | $t(28) = 0.64$ , .525<br>$t(28) = 11.83$ , <.001<br>$t(28) = -8.15$ , <.001 | 0.12 [–0.25, 0.48]<br>2.20 [1.51, 2.87]<br>–1.51 [–2.04, –0.97]   |
| Horizontal offset of face fixations (face widths) | –0.113 (0.14) / –0.144 (0.15) / –0.139 (0.108)      | 6.73, .035, .047              | AI – BaseVC<br>AI – Tele<br>Tele – BaseVC | $t(27) = -1.23$ , .228<br>$t(27) = 1.74$ , .187<br>$t(28) = -2.32$ , .083   | –0.23 [–0.61, 0.14]<br>0.33 [–0.05, 0.71]<br>–0.43 [–0.81, –0.05] |

**Table S8:** Equivalence tests (two one-sided tests) with bounds  $d_z = \pm 0.5$  ( $t_1, t_2$  refer to these bounds) and  $\pm 0.4$ ; bounds standardised by the SD of the paired differences;  $df = n - 1$ . Equivalence is established if  $p_{TOST} < .05$ , i.e., if the 90% CI lies within the bounds.

| DV                                                | Contrast      | <i>n</i> | $d_z$ | 90% CI        | $t_1$ | $t_2$ | $p_{TOST}$ | eq. $\pm 0.5$ | $p_{TOST} (\pm 0.4)$ | eq. $\pm 0.4$ |
|---------------------------------------------------|---------------|----------|-------|---------------|-------|-------|------------|---------------|----------------------|---------------|
| <i>eye tracking</i>                               |               |          |       |               |       |       |            |               |                      |               |
| Dwell-time share on face                          | AI – BaseVC   | 28       | 0.00  | [−0.31, 0.31] | 2.66  | −2.63 | .007       | yes           | .022                 | yes           |
| Face area / frame area                            | AI – BaseVC   | 29       | 0.12  | [−0.19, 0.43] | 3.34  | −2.05 | .025       | yes           | .071                 | no            |
| Horizontal offset of face fixations (face widths) | AI – BaseVC   | 28       | −0.23 | [−0.55, 0.08] | 1.41  | −3.88 | .085       | no            | .192                 | no            |
| Face fixations per minute                         | AI – BaseVC   | 28       | −0.01 | [−0.32, 0.30] | 2.61  | −2.68 | .007       | yes           | .024                 | yes           |
| Fixations per minute                              | AI – BaseVC   | 28       | −0.08 | [−0.39, 0.23] | 2.21  | −3.08 | .018       | yes           | .052                 | no            |
| Gaze-sample share on face                         | AI – BaseVC   | 28       | 0.11  | [−0.20, 0.43] | 3.25  | −2.04 | .026       | yes           | .071                 | no            |
| Mean face-fixation duration (ms)                  | AI – BaseVC   | 28       | −0.09 | [−0.40, 0.22] | 2.16  | −3.13 | .020       | yes           | .057                 | no            |
| Mean fixation duration (ms)                       | AI – BaseVC   | 28       | −0.09 | [−0.40, 0.23] | 2.20  | −3.10 | .018       | yes           | .054                 | no            |
| Share of fixations on face                        | AI – BaseVC   | 28       | 0.06  | [−0.25, 0.37] | 2.97  | −2.32 | .014       | yes           | .042                 | yes           |
| <i>questionnaire</i>                              |               |          |       |               |       |       |            |               |                      |               |
| Camera Gaze Discomfort                            | AI – BaseVC   | 32       | 0.19  | [−0.10, 0.49] | 3.92  | −1.73 | .046       | yes           | .126                 | no            |
| Camera Gaze Discomfort                            | Tele – BaseVC | 32       | 0.09  | [−0.20, 0.38] | 3.34  | −2.31 | .014       | yes           | .045                 | yes           |
| Co-Presence                                       | AI – BaseVC   | 31       | 0.06  | [−0.23, 0.36] | 3.13  | −2.43 | .011       | yes           | .035                 | yes           |
| Co-Presence                                       | Tele – BaseVC | 32       | 0.16  | [−0.14, 0.45] | 3.71  | −1.94 | .031       | yes           | .089                 | no            |
| Direct Eye Contact                                | AI – BaseVC   | 31       | 0.12  | [−0.17, 0.42] | 3.48  | −2.09 | .022       | yes           | .068                 | no            |
| Direct Eye Contact                                | Tele – BaseVC | 32       | 0.32  | [0.02, 0.62]  | 4.64  | −1.02 | .158       | no            | .326                 | no            |
| Engagement Others                                 | AI – BaseVC   | 31       | 0.21  | [−0.09, 0.51] | 3.97  | −1.60 | .060       | no            | .153                 | no            |
| Engagement Others                                 | Tele – BaseVC | 32       | 0.10  | [−0.19, 0.39] | 3.39  | −2.27 | .015       | yes           | .049                 | yes           |
| Perceived Social Closeness                        | AI – BaseVC   | 32       | 0.18  | [−0.11, 0.48] | 3.87  | −1.78 | .042       | yes           | .116                 | no            |
| Perceived Social Closeness                        | Tele – BaseVC | 32       | 0.22  | [−0.08, 0.51] | 4.06  | −1.60 | .060       | no            | .154                 | no            |
| Webcam Awareness                                  | AI – BaseVC   | 32       | 0.11  | [−0.18, 0.40] | 3.46  | −2.19 | .018       | yes           | .057                 | no            |
| Webcam Awareness                                  | Tele – BaseVC | 32       | −0.05 | [−0.34, 0.24] | 2.53  | −3.13 | .008       | yes           | .029                 | yes           |

**Table S9:** Number of questionnaires per condition and serial position ( $N = 32$ ). The face-to-face questionnaire is missing for two participants whose face-to-face session was at position 1.

| Condition | Pos. 1 | Pos. 2 | Pos. 3 | Pos. 4 |
|-----------|--------|--------|--------|--------|
| F2F       | 12     | 0      | 0      | 18     |
| BaseVC    | 5      | 11     | 11     | 5      |
| Tele      | 4      | 10     | 12     | 6      |
| AI        | 9      | 11     | 9      | 3      |