

Supplementary file:

Mirror Mirror: Crowdsourcing Better Portraits

In this supplementary document, we present additional results that we could not fit in the main paper. Please refer to the corresponding sections in the main paper for discussions and analysis.

1. Ranking Results

We show the most and least *attractive* expressions for 11 subjects in Figure 1 ~ Figure 3, and show the most and least *serious* expressions for 11 subjects in Figure 4 ~ Figure 6. We rank the attractiveness/seriousness of the expressions by solving the MAP problem discussed in Equation (1). Please check Section 5.1 in the main paper for detailed discussion.

2. Visualizations

In Figure 4 of the main paper, we show the most attractive expressions across 25 discretized seriousness levels for three subjects; serious scores decrease from the upper left to the lower right in reading order (left-to-right, top-to-bottom), and the most attractive image within each seriousness level is shown. Here, we show visualizations for the other 8 subjects in Figure 7 ~ Figure 14. Please check Section 5 in the main paper for detailed discussion.

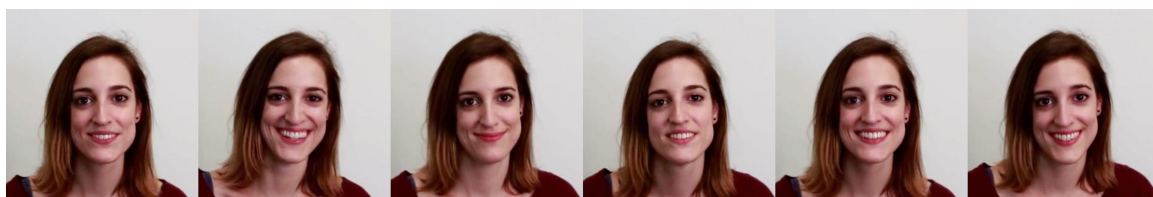
Most attractive
expressions



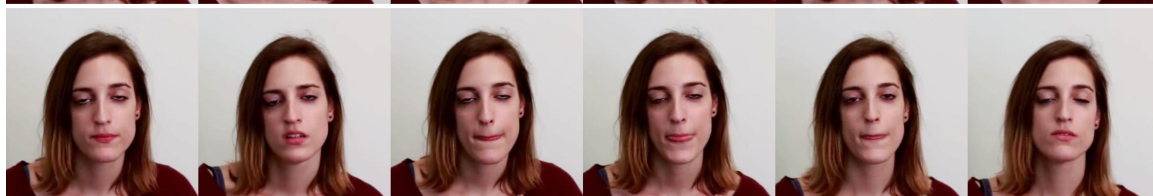
Least attractive
expressions



Most attractive
expressions



Least attractive
expressions



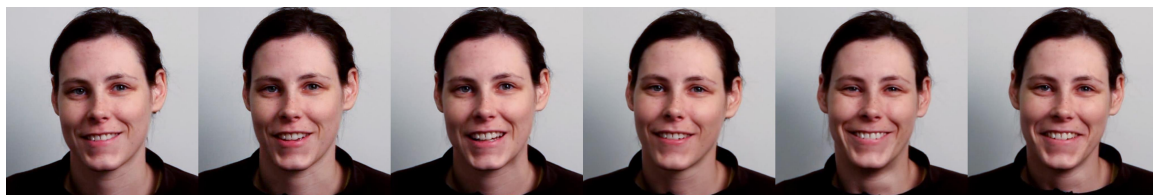
Most attractive
expressions



Least attractive
expressions



Most attractive
expressions



Least attractive
expressions

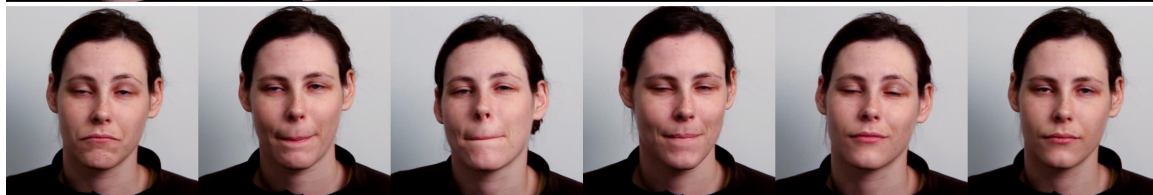
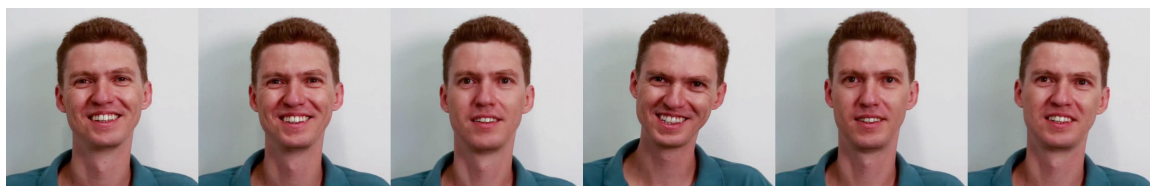
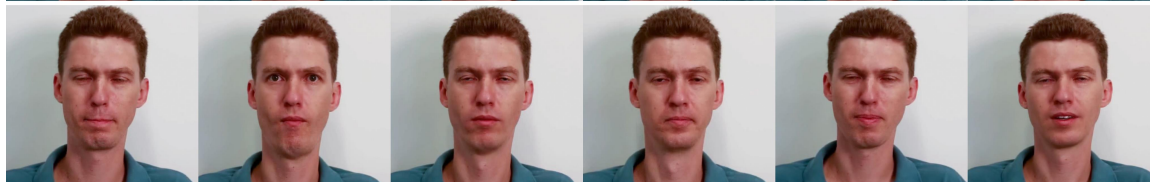


Figure 1. The six most *attractive*, and the six least *attractive* expressions for four subjects. (Part I)

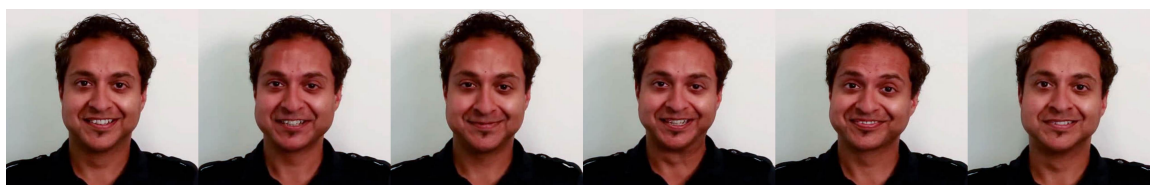
Most attractive
expressions



Least attractive
expressions



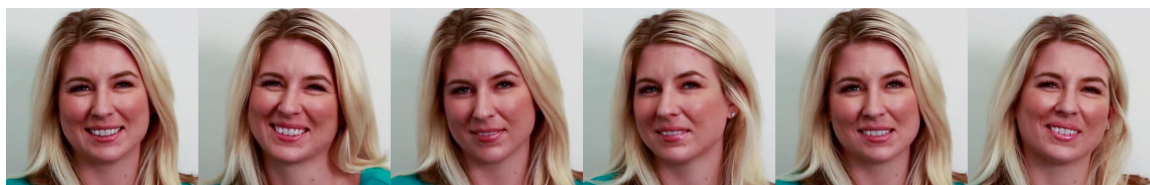
Most attractive
expressions



Least attractive
expressions



Most attractive
expressions



Least attractive
expressions



Most attractive
expressions



Least attractive
expressions



Figure 2. The six most *attractive*, and the six least *attractive* expressions for four subjects. (Part II)

Most attractive
expressions



Least attractive
expressions



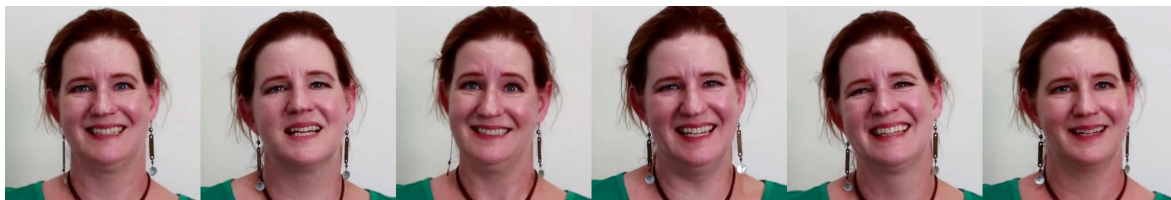
Most attractive
expressions



Least attractive
expressions



Most attractive
expressions



Least attractive
expressions



Figure 3. The six most *attractive*, and the six least *attractive* expressions for three subjects. (Part III)

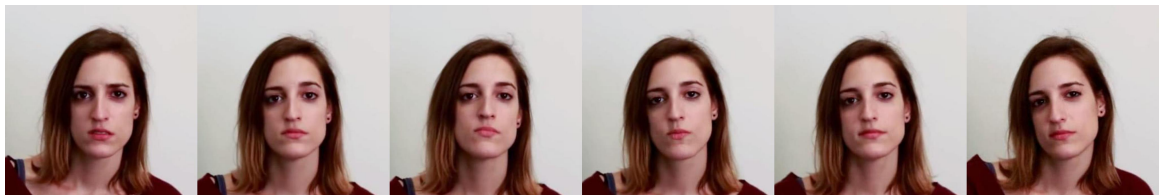
Most serious
expressions



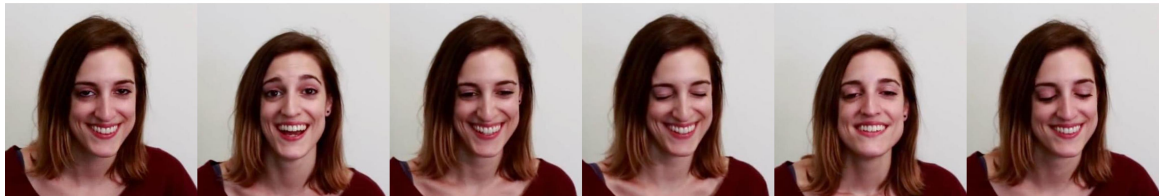
Least serious
expressions



Most serious
expressions



Least serious
expressions



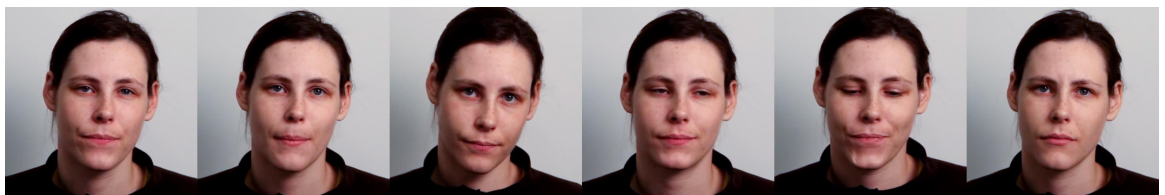
Most serious
expressions



Least serious
expressions



Most serious
expressions



Least serious
expressions

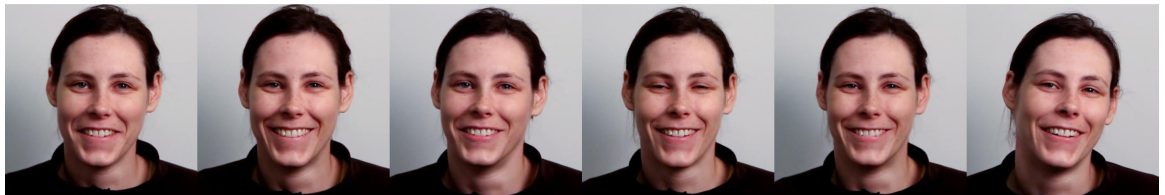
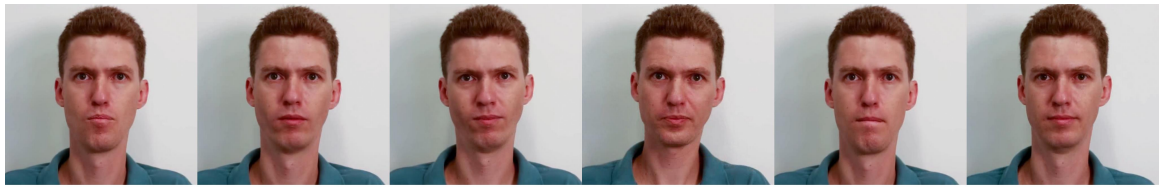


Figure 4. The six most *serious*, and the six least *serious* expressions for four subjects. (Part I)

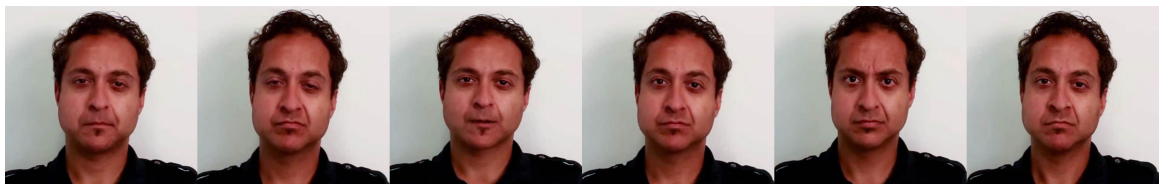
Most serious
expressions



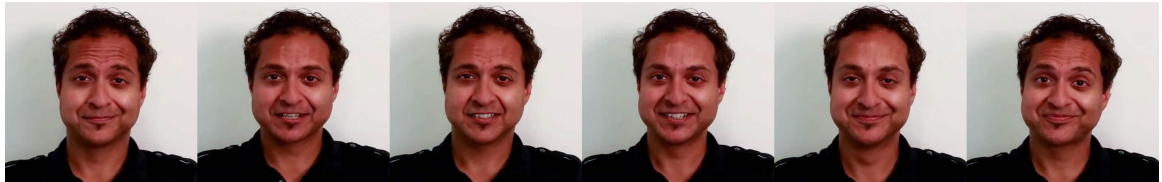
Least serious
expressions



Most serious
expressions



Least serious
expressions



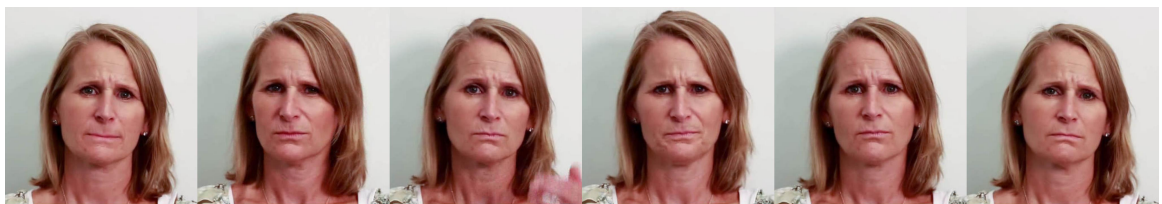
Most serious
expressions



Least serious
expressions



Most serious
expressions

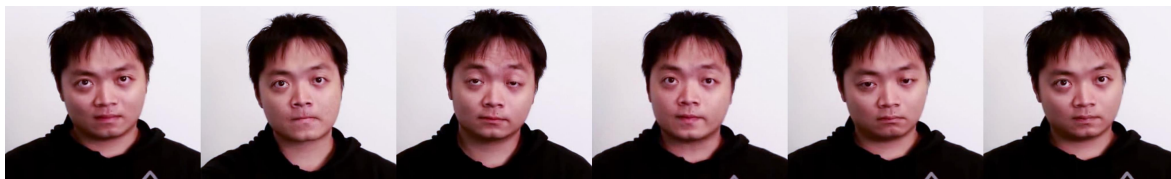


Least serious
expressions



Figure 5. The six most *serious*, and the six least *serious* expressions for four subjects. (Part II)

Most serious
expressions



Least serious
expressions



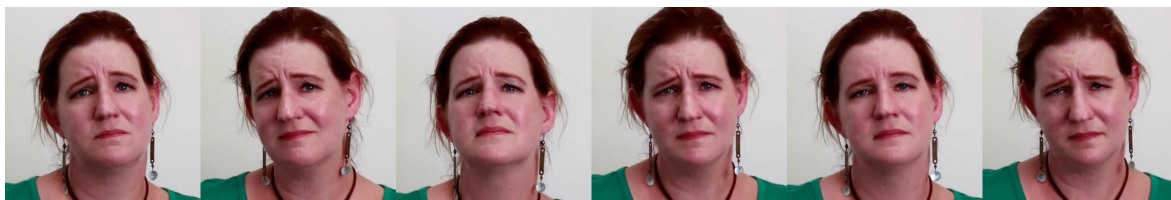
Most serious
expressions



Least serious
expressions



Most serious
expressions



Least serious
expressions

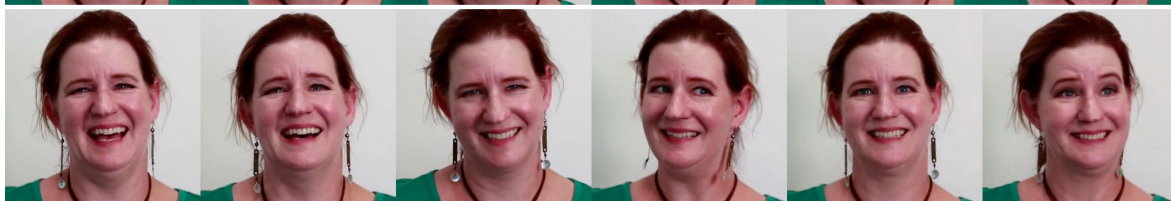


Figure 6. The six most *serious*, and the six least *serious* expressions for three subjects. (Part III)

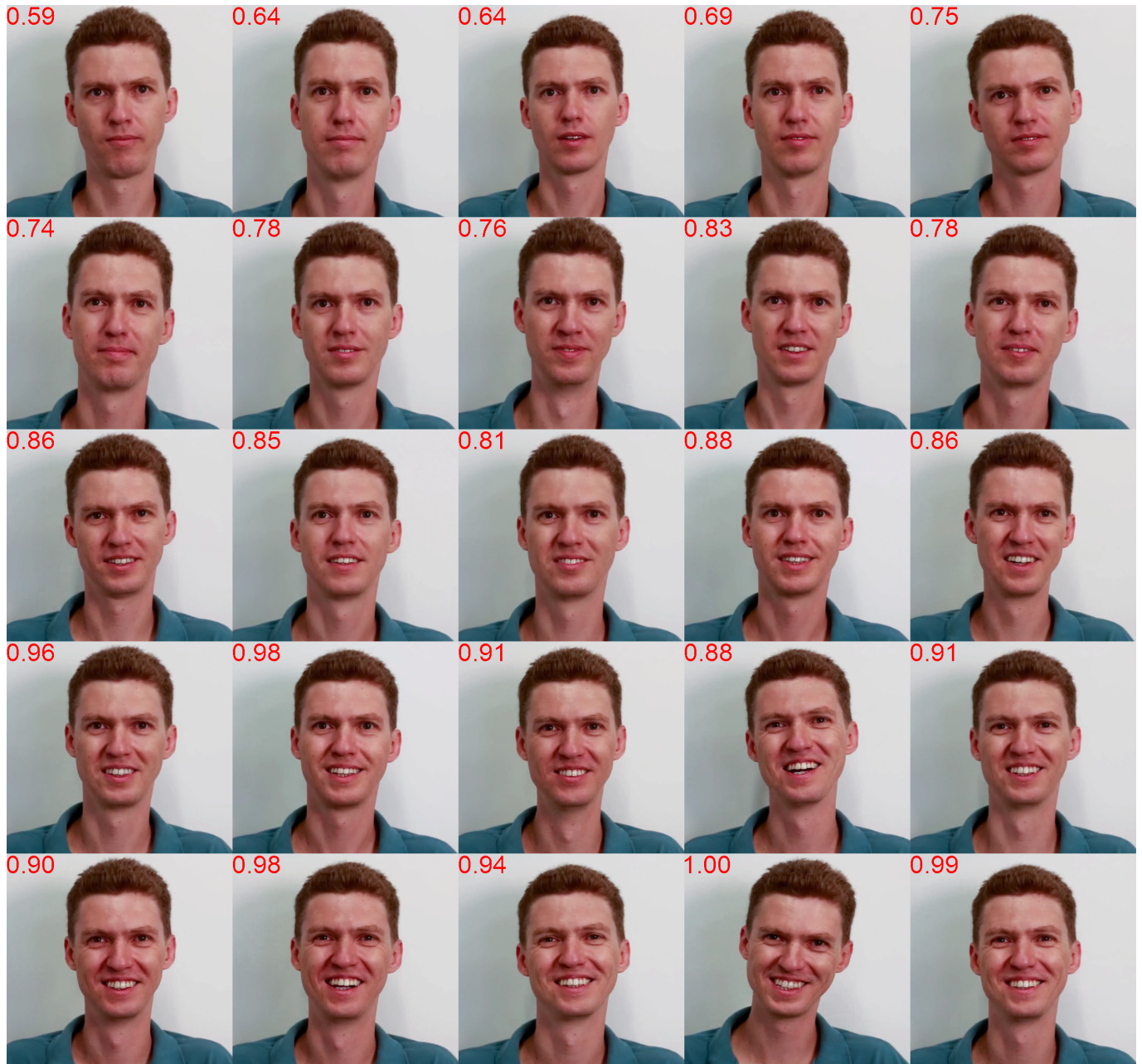


Figure 7. Visualizations of the most attractive expressions across a range of seriousness (the upper-left is the most serious, the lower-right the least, and seriousness decreases in reading order; attractiveness scores are shown in red). The frames are automatically selected from 12 minutes of video using a combination of crowdsourcing and machine learning. (Subject 1)



Figure 8. Visualizations of the most attractive expressions across a range of seriousness (the upper-left is the most serious, the lower-right the least, and seriousness decreases in reading order; attractiveness scores are shown in red). The frames are automatically selected from 12 minutes of video using a combination of crowdsourcing and machine learning. (Subject 2)



Figure 9. Visualizations of the most attractive expressions across a range of seriousness (the upper-left is the most serious, the lower-right the least, and seriousness decreases in reading order; attractiveness scores are shown in red). The frames are automatically selected from 12 minutes of video using a combination of crowdsourcing and machine learning. (Subject 3)



Figure 10. Visualizations of the most attractive expressions across a range of seriousness (the upper-left is the most serious, the lower-right the least, and seriousness decreases in reading order; attractiveness scores are shown in red). The frames are automatically selected from 12 minutes of video using a combination of crowdsourcing and machine learning. (Subject 4)



Figure 11. Visualizations of the most attractive expressions across a range of seriousness (the upper-left is the most serious, the lower-right the least, and seriousness decreases in reading order; attractiveness scores are shown in red). The frames are automatically selected from 12 minutes of video using a combination of crowdsourcing and machine learning. (Subject 5)



Figure 12. Visualizations of the most attractive expressions across a range of seriousness (the upper-left is the most serious, the lower-right the least, and seriousness decreases in reading order; attractiveness scores are shown in red). The frames are automatically selected from 12 minutes of video using a combination of crowdsourcing and machine learning. (Subject 6)

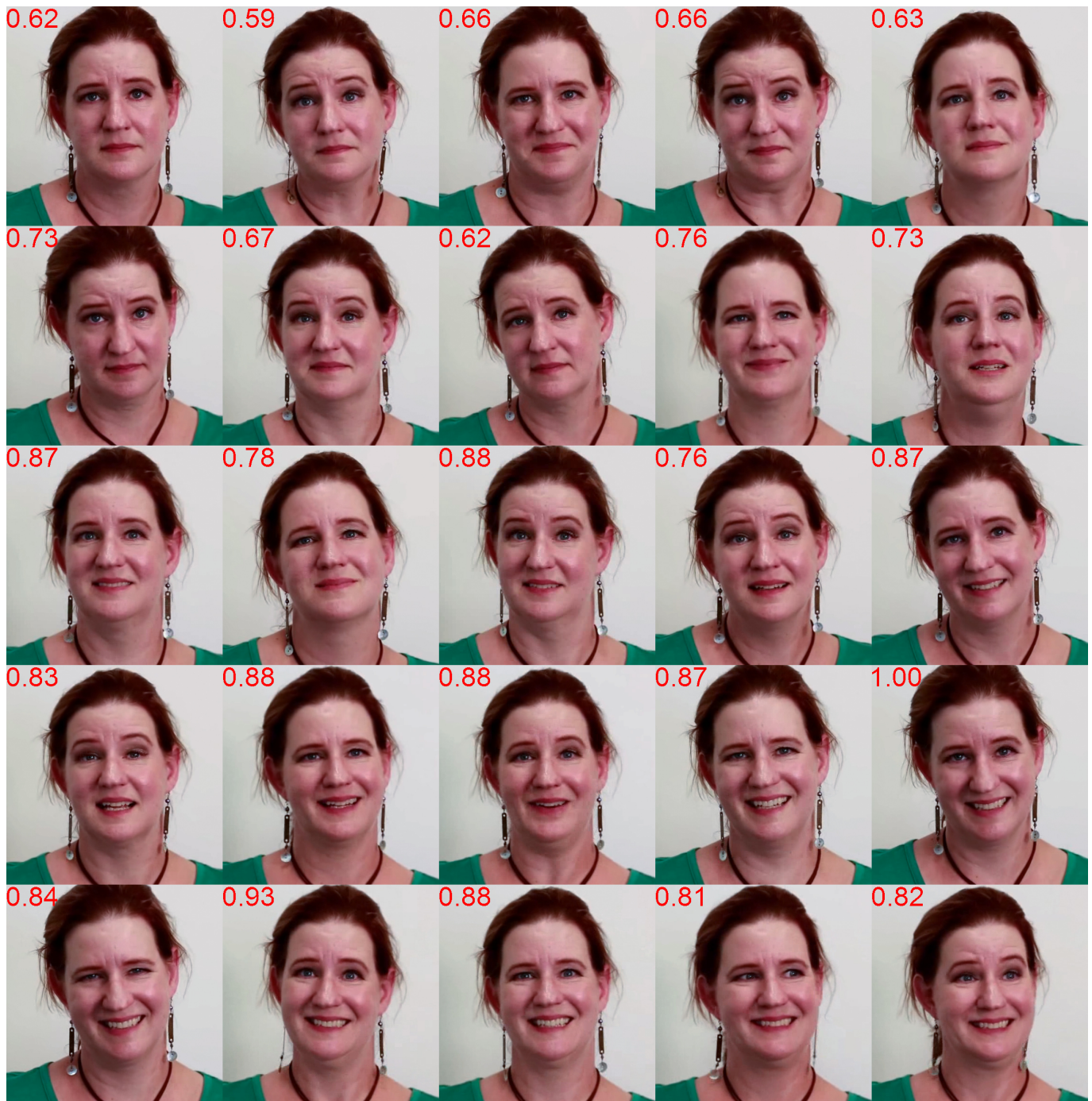


Figure 13. Visualizations of the most attractive expressions across a range of seriousness (the upper-left is the most serious, the lower-right the least, and seriousness decreases in reading order; attractiveness scores are shown in red). The frames are automatically selected from 12 minutes of video using a combination of crowdsourcing and machine learning. (Subject 7)



Figure 14. Visualizations of the most attractive expressions across a range of seriousness (the upper-left is the most serious, the lower-right the least, and seriousness decreases in reading order; attractiveness scores are shown in red). The frames are automatically selected from 12 minutes of video using a combination of crowdsourcing and machine learning. (Subject 8)