Action Unit Combinations – 20+26, 20+27

A. Appearance Changes due to AU Combinations 20+26, 20+27

The elements described separately for 20 and for 26 or 27 are combined additively, altering in small ways the appearances associated with 20 and 27. AU 25 invariably occurs with 20+26 and 20+27 when no other AUs are acting to unite the lips and the scores for these combinations are 20+25+26 and 20+25+27, respectively.

AU 20

- 1. Pulls the lips back laterally; elongating the mouth. This action is less obvious in 20+27 because the shape of the mouth is stretched in the vertical direction, although the lips are still elongated horizontally.
- 2. The lips become flattened and stretched by the lateral pull, if the action of 20 is strong.
- **3.** Pulls the lower portion of the nasolabial furrow and the skin in that area laterally; may or may not wrinkle or deepen the lower portion of the nasolabial furrow.
- **4.** Pulls the skin beyond the lip corners laterally.
- 5. Stretches the skin over the chin boss laterally. May cause the chin to appear flattened and/or wrinkled.

AU 26

- **6.** Jaw dropped open by relaxation with a limited excursion.
- 7. Space evident between upper and lower teeth can usually be seen when 20 is present, but can at least be inferred.

AU 27

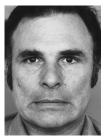
- **8.** Jaw pulled wide open, usually rapidly and beyond the excursion limit of 26.
- **9.** Space between teeth should be apparent in combination with 20.

If you are considering scoring AU 16 in these combinations, review the Reference for AU 16 on page 115.

Compare images 20i, 20ii, 20+25, 26, and 27 with 20+25+26i, 20+25+26i, 20+25+27i and 20+25+27i. Note that in 20+25+27ii both the 20 and the 27 actions are stronger than those shown in 20+25+27i. Inspect the image of L20+25+26i, comparing it to 26 and to 20+25+26i. Note that L20+25+26i shows all the appearance changes shown in 20+25+26i except the changes due to 20 are unilateral, and appearance change 5 above may not be evident in the unilateral action. Inspect the video of 20+25+26i and 20+25+27i.



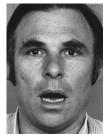
0 page 465 page 381 for score



20i page 481 page 396 for score



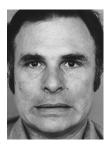
20ii page 481 page 396 for score



26 page 477 page 393 for score

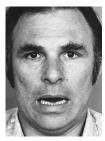


27 page 478 page 393 for score



20+25 page 480

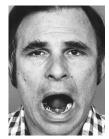
page 396 for score



20+25+26i page 482 page 397 for score



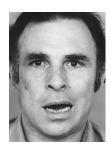
20+25+26ii page 482 page 397 for score



20+25+27i page 482 page 397 for score



20+25+27ii page 482 page 397 for score



L20+25+26 page 483 page 397 for score



video 20+25+26



video 20+25+27

page 420 for score

page 420 for score

B. How to do AU Combinations 20+26 and 20+27

Follow the instructions for AU 20 and for AUs 26 and 27, repeated below, and combine these actions to form 20+25+26 and 20+25+27.

AU 20 (repeated from page 146): This movement is a fairly easy to do. Pull your lip corners back, stretching the lips as hard as you can. Be careful not to pull the corners down (AU 15) and not to pull the corners up (AU 12). If you have difficulty, place your fingers adjacent to the lip corners and pull horizontally towards the back of your jaw and try to hold the appearance when you remove your fingers. You can also induce AU 20 by tightening you neck muscles (AU 21 on page 300) extremely, and you should see your lip corners being pulled. Once you have the feeling of this lip corner

stretch, try this stretching alone without the neck muscles. Try to make only a weak action as shown in the 20i and 20+25 images, and then a stronger version as shown in the 20ii image.

AU 26 (repeated from page 104): To perform AU 26, relax your mouth and let your jaw fall open; do not pull or force your jaw open, just relax the muscle that clamps your teeth together and let your jaw fall open so that your teeth are separated. You have made AU 26. If you are doing this correctly, there is no muscular tension in your lips, and no stretching of your lips. Once your jaw closing muscle is relaxed enough to permit the jaw to drop wide enough, your lips should part, scored 25+26. It is easier to detect a 26 if the lips part than if they remain closed. How soon the lips part with a drop of the jaw varies in different people, and as indicated above, some people need no jaw drop to part their lips. Examine whether your jaw needs to drop in order to part your lips, and if so, how far it must drop. Notice also how far you can drop your jaw merely by relaxing, not pulling it open. You should find that this jaw drop is limited; beyond this limited extent, AU 27 is scored because a muscle must act to pull the jaw open further. Most people can drop their jaw with AU 26 so that the tongue or index finger can fit between the teeth, but not much more, when their head is in a normal upright position.

Notice what happens at the corners of your lips as the mouth and lips move from being closed, to the relaxed drop of the jaw of AU 26, and beyond as you pull your mouth open. Relax your jaw to perform an AU 26, then nod your head up and down – the relaxed jaw drop is greater when the head is back than when it is forward.

AU 27 (repeated from page 104): To perform AU 27, pull your jaw down, far down, opening your mouth wide open as if a physician were going to examine your tonsils. You have made a large AU 27, scored 25+27 because of the lip parting. Note that while you have not tensed your lip muscles, they are stretched somewhat by the extent of opening of your mouth. The shape of your mouth opening is also stretched in the vertical direction. Notice what happens to the position of the red parts of the lips relative to the teeth when the jaw is dropped, keeping the lips relaxed, i.e., no other actions moving the lips. You should see that the center part of the upper lip does not change its position relative to the upper teeth, but the lateral parts near the corners are pulled down relative to the upper teeth as the mouth is stretched open. The center and corners of the lower lip, on the other hand, move higher relative to the lower teeth as you stretch your jaw down, which tends to pull the teeth down more than the lower lip. You need to be familiar with the effect of jaw dropping and stretching alone on the position of the lips relative to the teeth in order to score the intensity of AU 25 with 27. Can you cover your mouth opening with your lips when the stretching open of the jaw is maximum? Try to perform the minimum AU 27 starting with your teeth together, then rapidly pull or snap your jaw down to open your mouth about as much as you were able to relax it open when performing AU 26. If you need some motivation to help you do this movement, imagine you were trying to yell "Hey!" to someone as a warning. Look in the mirror to see how the time course of this rapid, jerky jaw movement differs from that of the much slower relaxed opening of AU 26, which results in much the same appearance at its end point. This quality of movement is what you must use to distinguish an AU 26 from an AU 27 when the jaw drop is no more than the maximum that can be produced by merely relaxing the jaw closing muscle. A jaw drop beyond the maximum that can be produced by relaxing (space between the teeth about that which permits the tongue or index finger to fit) must be scored an AU 27, regardless of the rapidity of the movement.

C. Intensity Scoring for AU Combinations 20+26, 20+27

The intensity criteria for 20, 26, and 27 are unchanged in these two combinations and are repeated below.

AU 20A

The appearance changes for AU 20 are sufficiently present to indicate AU 20, but are insufficient to score 20B (e.g., a *trace* of lateral pulling of the lip corners and skin with a *trace* of mouth elongation).

AU 20B

- **1.** The lip corners and skin adjacent to the lip corners are pulled laterally *slightly*. If you do not see the <u>movement</u>, then use the following criteria:
- **2.** *Pronounced* elongation of mouth.
- **3.** *Slight* elongation of mouth, and one of the following:

a. Slight evidence of flattening of skin beyond the lip corners.

or

b. Slight evidence that the lower portion of the nasolabial furrow or the skin in that area pulled laterally.

or

c. *Slight* evidence of chin boss skin stretched and flattened. Unilateral 20 does not produce this appearance, and this criterion is not relevant for unilateral 20.

AU 20C

At least *pronounced* pulling of the lip corners laterally or mouth elongation is *pronounced*, but the evidence is less than the criteria for 20D.

AU 20D

At least *severe* pulling of the lip corners laterally or mouth elongation is *severe* and other signs in 20secA are present, but the evidence is less than the criteria for 20E.

AU 20E

Appearance changes 1, 2, 3, and 4 of 20secA must be extreme to maximum.

AU 26A

The intensity scoring for AU 26 reflects the difference between the teeth being together versus the most the jaw can be lowered merely by relaxing the muscle that closes the jaw (not the degree to which the jaw can be stretched open, which is a greater absolute opening).

In 26A, the appearance changes for AU 26 are sufficiently present to indicate AU 26, but are insufficient to score 26B (e.g., you see the jaw drop *slightly* by relaxation).

AU 26B

- **1.** *Marked* and unambiguous dropping of the mandible by relaxation. If you score 26B or greater without a 25 (i.e., the lips do not part), look carefully for signs of AU 17 and/or 24. If you do not see the movement:
- **2.** You must see space between at least some of the upper and lower teeth, or a space between the teeth must be unambiguously inferred from the lips, a finger, or other object held between the teeth.

AU 26C

The lowering of the jaw by relaxation is about midway between teeth together and as far as the jaw can drop from relaxation of the muscle that closes the jaw, i.e., the lowering is in at least the *pronounced* range, but the evidence is less than the criteria for 26D. In 26C, if the lip parting permits, you can see space between all of the upper and lower teeth. For scores of 26C and above, you generally scoring 25 as well, unless there is some other action uniting the lips and causing them to remain closed.

AU 26D

The lowering of the jaw by relaxation is at least *severe*, about as much as the tongue can stick through, but the evidence is less than the criteria for 26E.

AU 26E

The lowering of the jaw by relaxation is in the *maximum* range, and is a gap of not much more than one finger.

AU 27A

Score 27A when you see the jaw actively pulled down, but the jaw is lowered no more than about what a 26E might do. You must see the jaw jerked or pulled rapidly downward in distinction to the slower opening of relaxation in 26. If in doubt between 26 and 27, score 26 when the jaw lowering is no more than a *trace* different from that which might be caused by AU 26E. 27A is not a proper score for a still picture because you cannot detect the required active pulling.

AU 27B

- 1. Jaw lowering is at least *slightly* more than might be produced merely by relaxing the jaw closing muscle, e.g., *slightly* more than needed to stick your index finger between the teeth, regardless of whether you see a rapid pulling or not. and
- **2.** Lip stretching by the downward pull on the jaw is clearly evident at least in the corners of the lips which begin to loose their angular form and start to become rounder from the stretching. This lip stretching must be *marked* at least.

AU 27C

The jaw lowering is *markedly* more than might be produced by relaxation alone, and the stretching of the lips is *pronounced* at least, but the evidence is less than the criteria for 27D.

AU 27D

The jaw lowering is *severely* more than might be produced by relaxation alone, and the stretching of the lips is *severe* at least, but the evidence is less than the criteria for 27E.

AU 27E

The jaw lowering that separates the teeth and the stretching of the lips is in the *maximum* range.