

you encounter such a section, disregard it until after you have learned the Action Units that are mentioned in the chapter. Sometimes, other parts of the Manual besides the **Reference** section will mention Action Units that you have not yet learned. For example, the chapter on the Upper Face contains some mention of Lower Face Action Units. You do not need to look those AUs up or understand them in your initial learning. You will return to the chapters many times when scoring, and then you will understand how these sections are useful.

After the Manual introduces you to all of the individual AUs within a group, it explains the subtle differences among these AUs. Then, the Manual describes some of the combinations of two or more AUs, including the subtle differences among these combinations, and the specific difficulties in scoring two or more co-occurring AUs, such as how to score the AUs when one AU interferes with detecting another.

Initially, on first reading, you may find that certain issues are not clear. Instead of trying to clarify such issues immediately, you should continue reading up to the AU Combinations section of a chapter before returning and working harder to understand the material in the A, B, and C sections for individual AUs. Avoid skimming, but if you cannot figure something out, at least continue through the single AUs and the first Subtle Difference Table. If the difficulty is in recognizing the changes due to a particular AU, you may be able to understand the distinction better after reading about the AU in combination with the other AUs.

---

## ***Terminology***

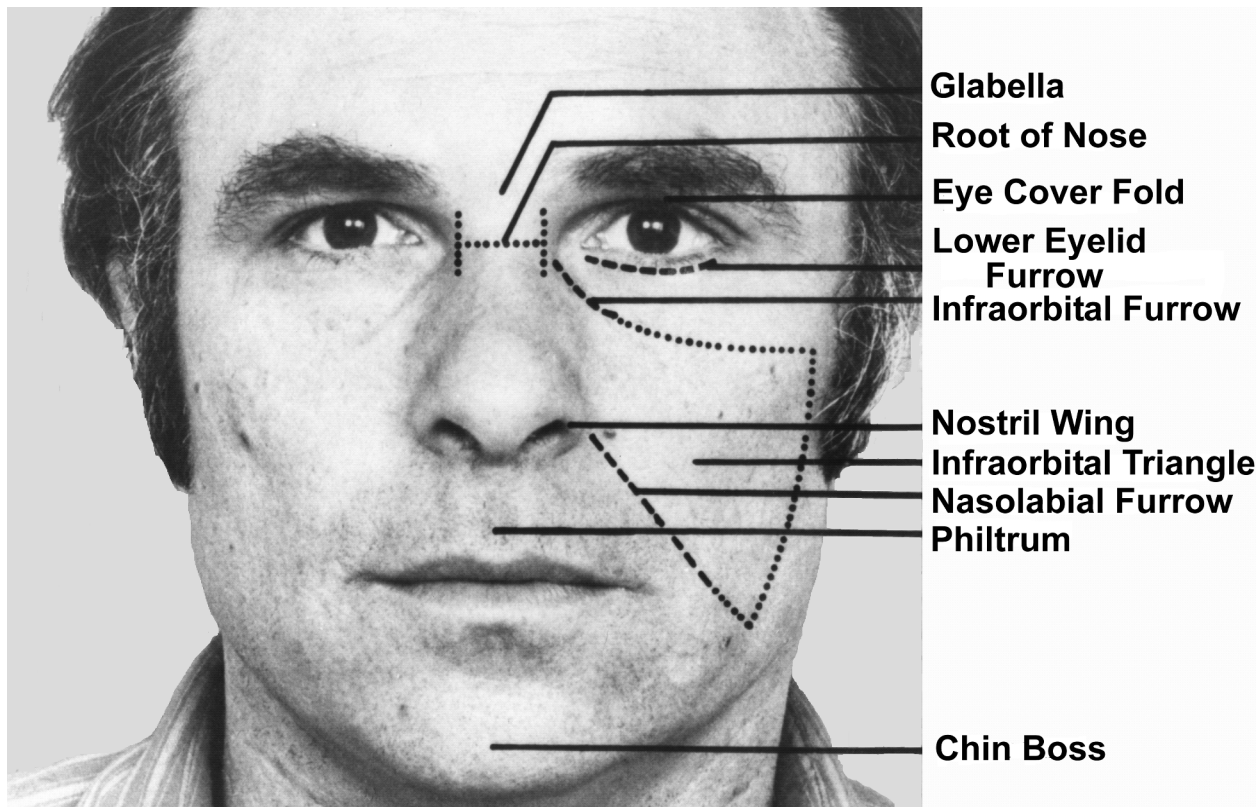
In order to describe changes in facial appearance you must learn a few terms which refer to particular areas and features of the face and the changes in them. Figure 1-1 illustrates some of the features of the face, which are explained in Table 1-1. Tables 1-2, 1-3, and 1-4 define additional terms that describe other aspects of the face. Check the definitions of each of these terms with the illustrations in Figure 1-1. Rather than trying to memorize all these new terms now, simply read them and look carefully at any illustrations of them. These terms are used to describe Action Units in Chapter 2. When you encounter each term there, you can return to the illustration and tables to look up the definition. The terms will become understandable in the context of their use. By the time you have finished Chapter 2, you will have learned the terminology.

**Table 1-1: Terms that name areas and features of the face**

<b>GLABELLA</b>	Area of the forehead between the eyebrows.
<b>ROOT OF NOSE</b>	The beginning of the nose between the eyes; also called the nasal root.
<b>EYE APERTURE</b>	The degree to which the eye is open; the eye opening.
<b>EYE COVER FOLD</b>	The skin between the eyebrows and the palpebral part of the upper eyelid (the part that contacts the eyeball), which folds into the eye socket.
<b>LOWER EYELID FURROW</b>	A place below the lower eyelid where a line or wrinkle may appear. A line or wrinkle may be permanently etched into the face; if so, it will deepen with certain AUs. If not, it should appear when these AUs are contracted.
<b>INFRAORBITAL FURROW</b>	A place where a line or wrinkle may appear parallel to and below the lower eyelid running from near the inner corner of the eye and following the cheek bone laterally.
<b>NOSTRIL WINGS</b>	The fleshy skin of the side of the nose that forms the outside of each nostril.
<b>NASOLABIAL FURROW</b>	A place where a line or wrinkle may appear which begins adjacent to the nostril wings and runs down and outwards beyond the lip corners. In some people it is permanently etched in the face; if so, it will deepen with certain AUs. If not, it will appear on most peoples' faces with certain AUs.
<b>PHILTRUM</b>	The vertical depression in the center of the upper lip directly under the tip of the nose.

<b>CHIN BOSS</b>	The skin covering the bone of the chin.
<b>SCLERA</b>	The white part of the eyeball.

**Figure 1-1: Names and locations of facial areas and parts.**



The appearance of the lips can change in so many ways that it is necessary to define a few terms specifically for this feature. Table 1-2 contains these terms and definitions.

**Table 1-2: Terms that describe appearance changes in the lip and other features**

<b>ELONGATE</b>	The mouth appears to be longer than usual in the horizontal plane.
<b>DE-ELONGATE</b>	The mouth appears to be shorter than usual in the horizontal plane.
<b>NARROW</b>	The red part of the lip is less visible or narrower than usual (opposite of widen).
<b>WIDEN</b>	The red part of the lip is revealed more or wider than usual (opposite of narrow).
<b>FLATTEN</b>	The lips appear flattened against the teeth. They protrude less than usual. Does not involve sucking in the lips.
<b>PROTRUDE</b>	The lips come forward or out away from the face more than usual, (opposite of flatten).
<b>TIGHTEN</b>	The lips appear tight, the lips are not relaxed or loose. The muscle within the lips has contracted.

<b>STRETCH</b>	The lips are pulled and the skin stretched like a rubber band.
<b>ROLLED IN</b>	The lips are turned, or rolled, inwards, disappearing entirely or almost entirely, but they are not tightened, pressed, or stretched.

Some of the terms used to describe the lip in Table 1-2 are also used to describe other parts of the face, but the same basic meaning applies. Examples are:

- *Narrow* is used to describe a decrease in the eye aperture.
- *Widen* is used to describe an increase in the eye aperture.
- *Widen* is used in reference to enlarging the opening of the nostril and may also be used to refer to the extent of mouth opening in AUs 25, 26, 27.
- *Flatten* is used to refer to the effect of AU 20 on the cheek area that reduces its curvature.
- *Tighten* is used to describe the appearance of the lower and upper eyelids.

In discussing changes in the appearance of the skin, the words *bulge*, *bag* and *pouch* are used. These terms have somewhat overlapping meaning, but can be distinguished as described in Table 1-3.

**Table 1-3: Terms that describe transient excrescences of the skin**

<b>BULGE</b>	A protrusion of the skin, where the skin is pushed outward by muscle, or by skin being stretched over the eyeball or bone.
<b>BAG</b>	Loose skin which wrinkles as it is gathered together or pushed; a bag remains loose, not taut; it may be permanent, but will thicken or become larger or more prominent with certain actions.
<b>POUCH</b>	A pocket-like shape, often protrudes like a bulge; also, may be permanent in some faces, but certain actions will make it more evident.

The distinctions between bulge, bag and pouch are subtle; often the three occur together, or what happens involves something in between them. When they are discussed in the context of a particular action, appearance change, and visual example, you will understand the terms better.

The terms *furrow*, *wrinkle*, and *line* are used to describe another aspect of the appearance of the skin as described in the following table:

**Table 1-4: Terms that describe marks in the skin**

<b>LINE</b>	A surface line with no depth, usually quite fine in terms of width. Some faces may show permanent surface lines; these may deepen to a wrinkle when certain actions occur.
<b>WRINKLE</b>	A line which has some depth and often has more width than a surface line; some faces may show no permanent wrinkles, but they will appear with certain actions. Other faces may show permanent wrinkles but they will deepen with certain actions.
<b>FURROW</b>	This term describes a place on the face where certain wrinkles may appear: lower eyelid furrow; infraorbital furrow; or nasolabial furrow (see Figure 1-1). In some faces there is no wrinkle or line in such a facial location until there is action. Some faces show a line permanently, but it will deepen to a wrinkle with certain actions, e.g., some faces show a permanent line in the lower eyelid furrow, infraorbital furrow or nasolabial furrow, which will deepen with an action.

These distinctions might not be clear now, but when you read Chapter 2, where these terms are used in context with visual examples, their meaning will clarify. You may find it useful to refer back to these definitions.

In discussing Intensity Scoring for an Action Unit, we explain how to score variations in the strength of the actions, which result in variations in the intensity of the appearance change. You will learn to score *intensity*, with the terms A, B, C, D,