

Making Faces

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CSC2529, Session 4

31 January 2011

How
many
letters in
this
alphabet?

AU1,2	(Frontalis):	2
AU4	(Corrugator):	1
AU5	(Levitor Palpabrae):	3
AU6,44	(Orbicularis Oculi):	6
AU9	(Alaeque Nasi Labius Superioris):	1
AU10	(Labius Superioris):	3
AU12	(Zygomatic Major):	3
AU14	(Buccinator):	3
AU15	(Triangularis):	3
AU16	(Labius Inferioris):	1
AU17	(Mentalis):	1
AU18	(Incisivus):	1
AU20	(Risorius/Platysma):	3
AU22,23	(Orbicularis Oris):	6
AU26	(Jaw):	4
TOTAL:		41 AU's

Putting the letters together into words:
Expressions

The six fundamental expressions:

1. Anger
2. Sadness
3. Disgust
4. Surprise
5. Fear
6. Happiness

The six fundamental expressions:

1. Anger
2. Sadness
3. Disgust
4. Surprise
5. Fear
6. Happiness

A Few Words of Anger

Glaring:



A Few Words of Anger

Glaring:



Slight creases in the middle brow
(*Currogator*)

Eyelids are slightly raised
(*Levitor Palpabrae*)

Lips are clenched backward
(*Buccinator*)

Slight downturn in lip corners
(*Triangularis*)



A Few Words of Anger

Miffed:



A Few Words of Anger

Miffed:



Classic, angry 'v-shaped' eyebrows
(*Currogator*)

Nasolabial fold deepens,
Upper lip is squared off
(*A.N. Labius Superioris*)

Lower lip raises into a pout,

Dimpling in the chin
(*Mentalis*)



A Few Words of Anger

Pissed off:



A Few Words of Anger

Pissed off:



Brow raises slightly
(*Frontalis*)

Sharper Nasolabial Fold,
Raised upper lip
(*A.N. Labius Superioris*)

Lower lip juts out
(*Orb. Oris, Lower Lip out*)



A Few Words of Anger

Very Pissed off:



A Few Words of Anger

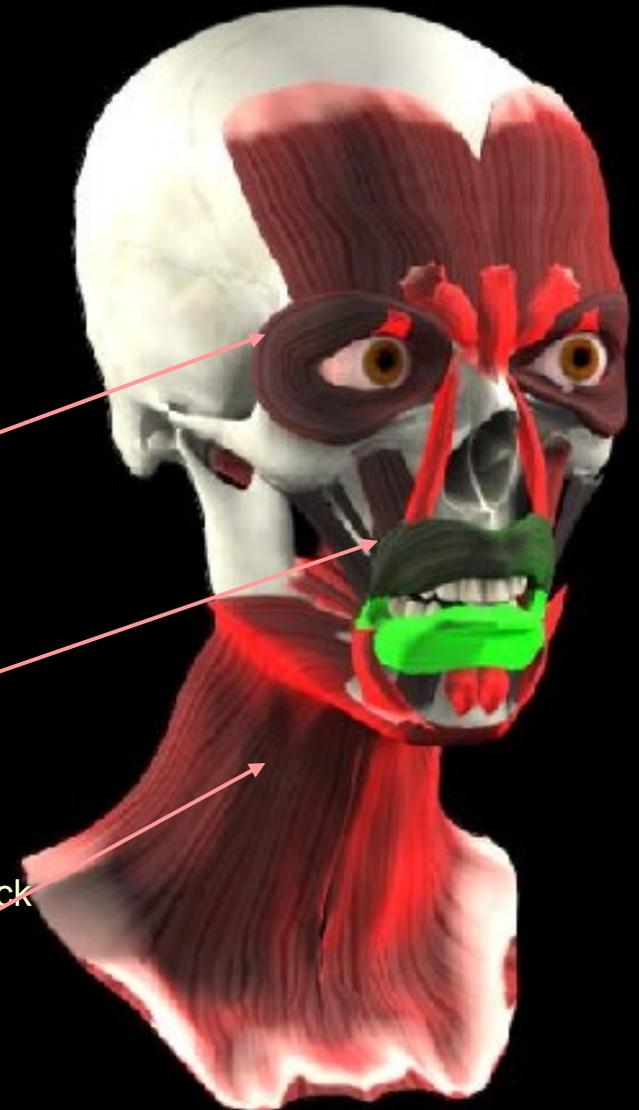
Very Pissed off:



Slight squinting
(*Orb. Oculi*)

Bared upper teeth
(*Orb. Oris, Upper Lip Out*)

Squared lower lip corners,
Sharp tendon creases in her neck
(*Risorius/Platysma*)



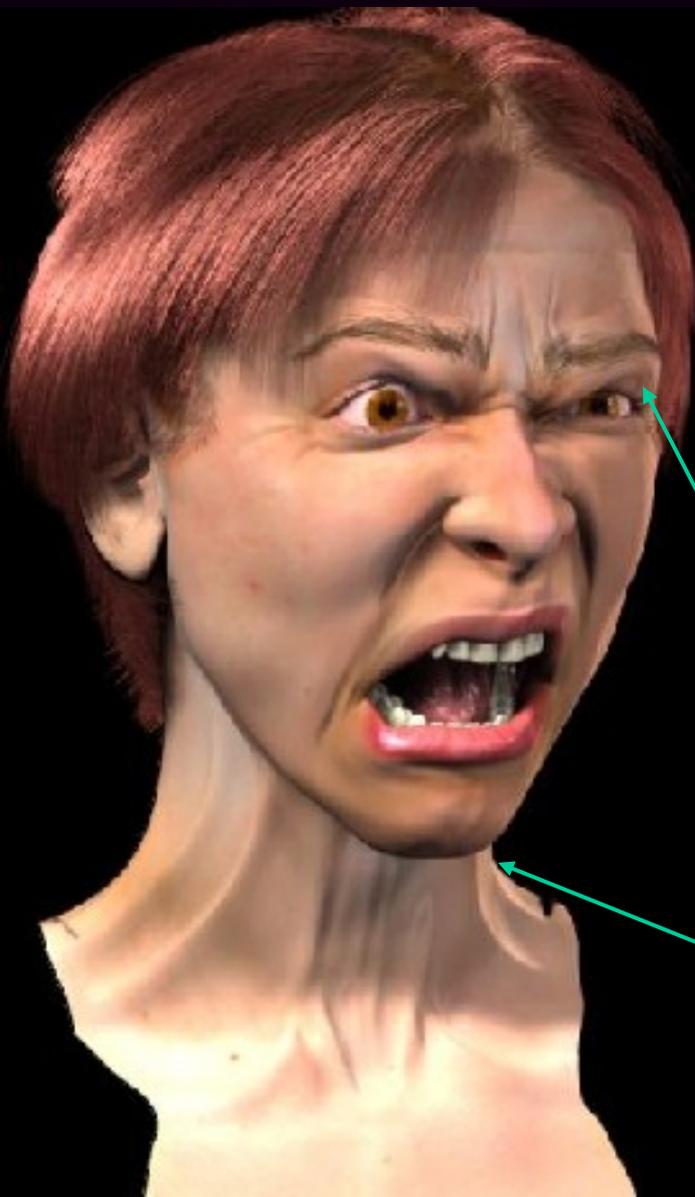
A Few Words of Anger

Consumed in Rage:



A Few Words of Anger

Consumed in Rage:



Intense, asymmetrical squinting
(*Orb. Oculi*)

Open Mouth

Prominent tendons in her neck
(*Risorius/Platysma*)



The six fundamental expressions:

1. Anger
- 2. Sadness**
3. Disgust
4. Surprise
5. Fear
6. Happiness

A Few Words of Sadness

Pouting:



A Few Words of Sadness

Pouting:



Eyelids droop
(*Levator Palpabrae*)

Jaw slightly open, lips locked
(*Orb. Oris, Lip Locking*)

Downturned lip corners
(*Triangularis*)

Slight dimpling in her chin
(*Mentalis*)



A Few Words of Sadness

Melancholic:



A Few Words of Sadness

Melancholic:



Tug Of War between two brow muscles,
creating the classic sad
“Upside-Down V-Shaped” eyebrows:

Worry lines in Middle Brow
(*Medial Frontalis*)

Brow Creases
(*Currogator*)



A Few Words of Sadness

Sorrowful:



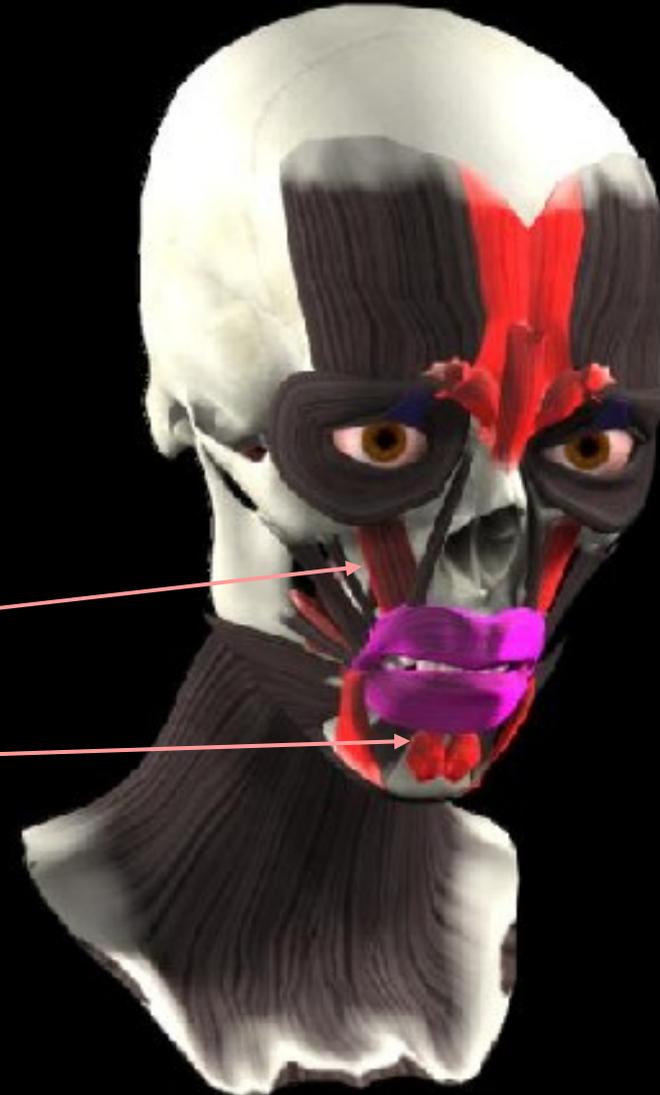
A Few Words of Sadness

Sorrowful:



Upper Lips squared off
(*Labius Superioris*)

Prominent dimples in her chin
(*Mentalis*)



A Few Words of Sadness

Mournful:



A Few Words of Sadness

Mournful:



Lip corners upturned
(*Zygomatic Major*)

Lower lip turned inward
(*Orb. Oris Lip Tight*)

Lower lip corners squared off
(*Risorius/Platysma*)

A Few Words of Sadness

Choking up:

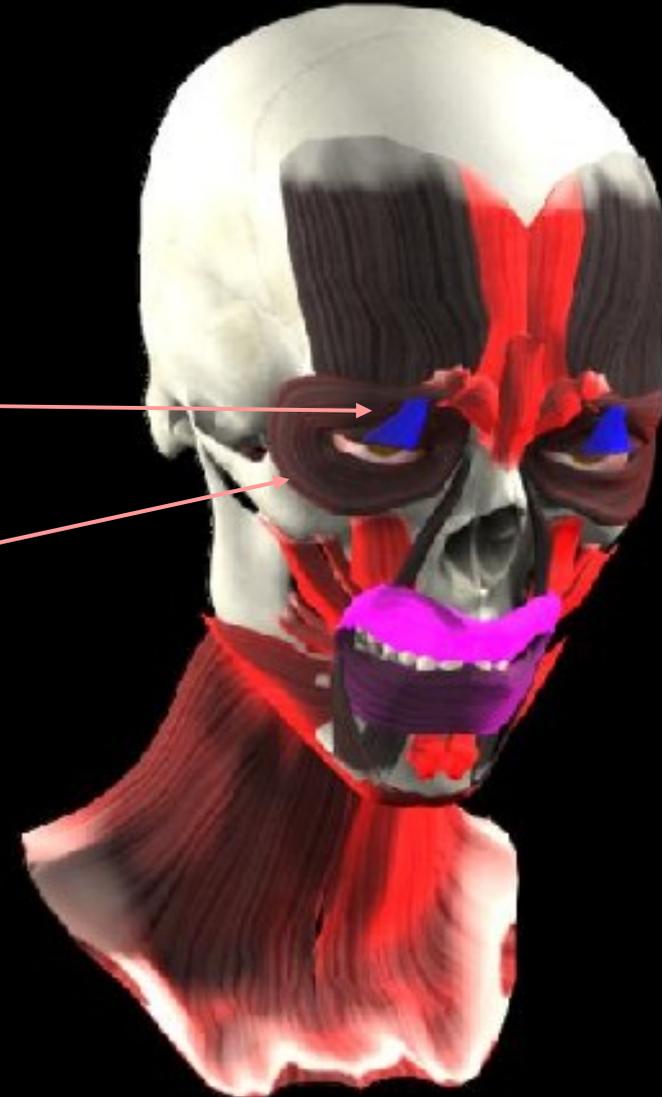


A Few Words of Sadness

Choking up:



Her eyes close
(*Levitor Palpabrae*),
and begin to squint shut
(*Orb. Oculi*)



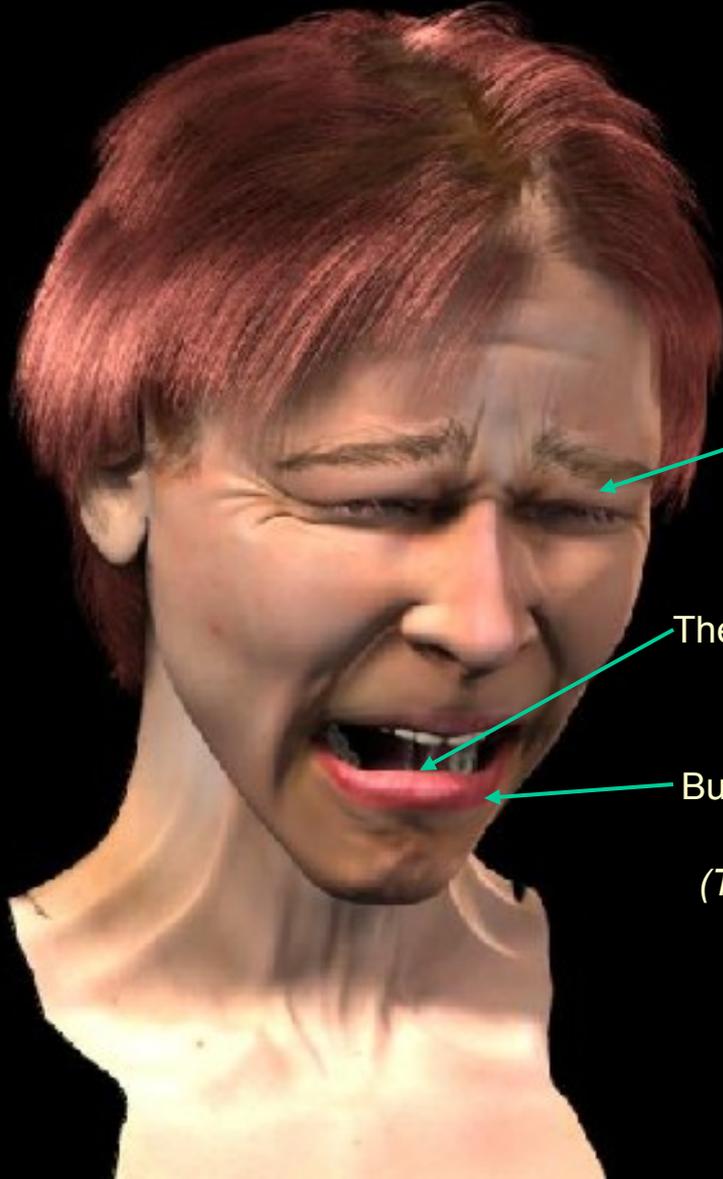
A Few Words of Sadness

Bawling:



A Few Words of Sadness

Bawling:



Eyes tightly shut
(Orb. Oculi)

The middle of her lower lip is raised
(*Mentalis*),

But the corners of her lower lip are
deeply lowered
(*Triangularis, Risorius/Platysma*)



The six fundamental expressions:

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2. Sadness
- 3. Disgust**
4. Surprise
5. Fear
6. Happiness

A Few Words of Disgust

Disdainful:



A Few Words of Disgust

Disdainful:

Brow raises and furrows slightly
(*Frontalis, Currogator*)

Eyelids droop
(*Levitor Palpabrae*)

Her upper lip curls slightly
(*A.N. Labius Superioris*)

Downturned lip corners
(*Triangularis*)

Balling below her tightened lips
(*Orb. Oris, Lip Tight*)

Slight dimpling in her chin
(*Mentalis*)



Portrait of Queen Elizabeth II
By Lucian Freud, 2001

A Few Words of Disgust

Contemptuous:



A Few Words of Disgust

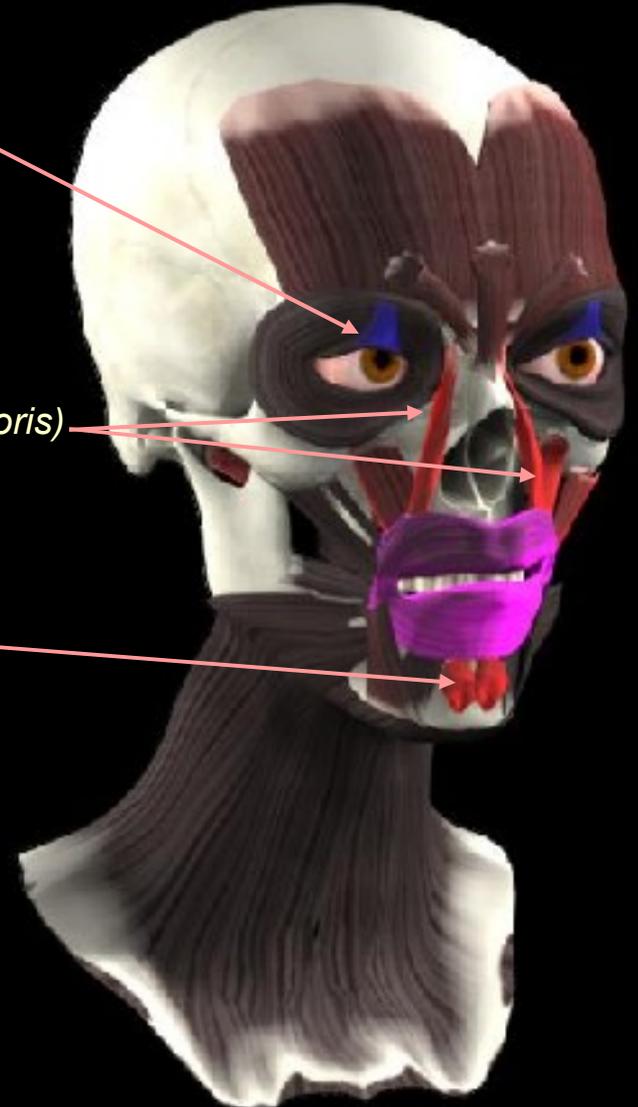
Contemptuous:



Eyelids droop further
(*Levator Palpabrae*)

Sharpened Nasolabial Fold,
Asymmetric lip curling
(*Lab. Superioris*, A.N. *Lab. Superioris*)

Increased dimpling in her chin
(*Mentalis*)



Dick Cheney
Photo by AP

Dick Cheney

A Few Words of Disgust

Squeamish:



A Few Words of Disgust

Squeamish:



Squinting and crows' feet
(*Orb. Oculi*)

Deep Nasolabial Fold,
Lips fully curled

(*Lab. Superioris*, A.N. *Lab. Superioris*)



A Few Words of Disgust

Queasy:



A Few Words of Disgust

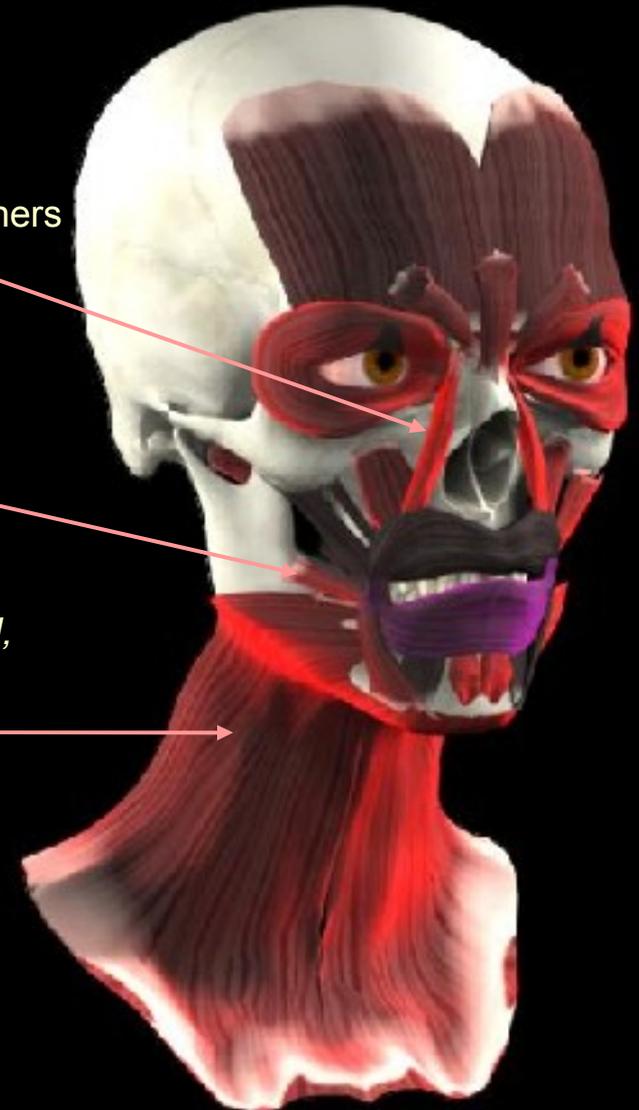
Queasy:



Crease forms in eyes' inside corners
(A.N. *Labius Superioris*)

Lips are clenched backwards
(*Buccinator*)

Lower lip is stretched outward,
Tendons form in her neck
(*Risorius/Platysma*)



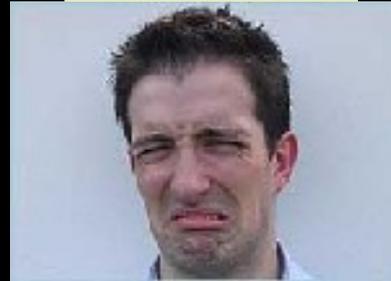
A Few Words of Disgust

Revolted:



A Few Words of Disgust

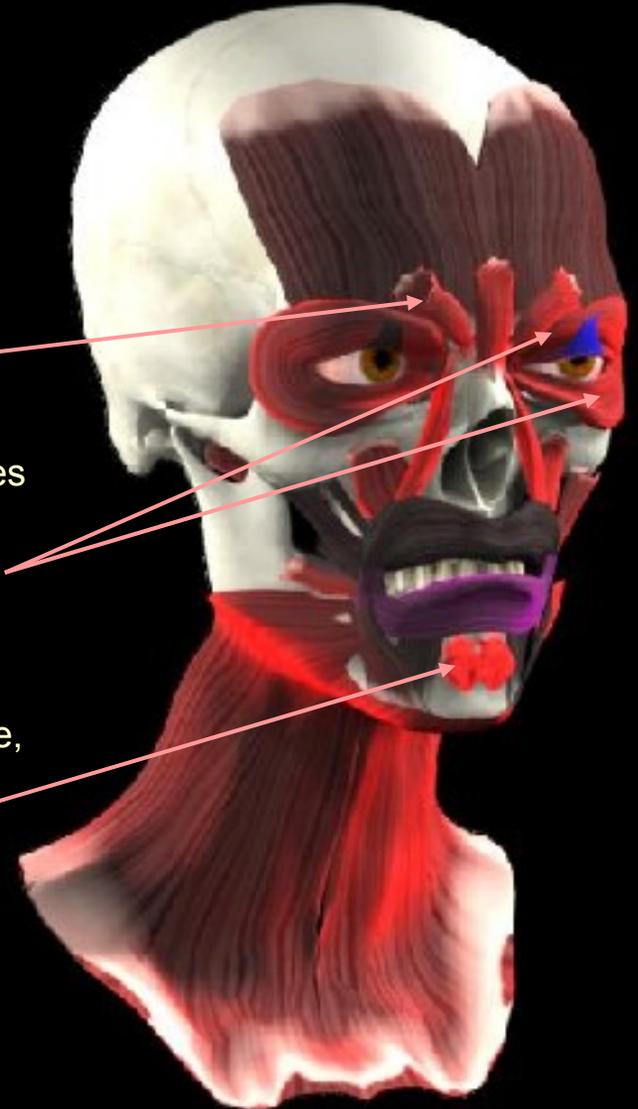
Revolted:



Deep furrowing in her brow
(*Currogator*)

She closes and squints her eyes
asymmetrically
(*Lev. Palpabrae, Orb. Oculi*)

Lower lip is raised in the middle,
Deep puckering in her chin
(*Mentalis*)



A Few Words of Disgust

Completely Grossed:



A Few Words of Disgust

Completely Grossed:



Deep squinting
(*Lev. Palpabrae, Orb. Oculi*)

Open Mouth

Lower lip tightens
(*Orb. Oris Lip Tight*)



The six fundamental expressions:

1. Anger
2. Sadness
3. Disgust
- 4. Surprise**
5. Fear
6. Happiness

A Few Words of Surprise

Stunned:



A Few Words of Surprise

Stunned:



Her brow is raised,
worry lines slightly visible
(*Frontalis*)

Eyelids are retracted, showing
Whites of her eyes above her irises
(*Levitor Palpabrae*)



A Few Words of Surprise

Dumbstruck:



A Few Words of Surprise

Dumbstruck:



Mouth hangs open from gravity



A Few Words of Surprise

Awed:



A Few Words of Surprise

Awed:



Her mouth puckers into an "O" shape
(*Incisivus*)



Rosella Sees a Crab
By Cassie
Age 8



A Few Words of Surprise

Gobsmacked:



A Few Words of Surprise

Gobsmacked:



Brow is completely raised
(*Frontalis*)

Eyelids are completely retracted
(*Levator Palpabrae*)

Mouth is fully open



The six fundamental expressions:

1. Anger
2. Sadness
3. Disgust
4. Surprise
- 5. Fear**
6. Happiness

A Few Words of Fear

Worried:

As with sadness, there's a Tug of War between Medial Frontalis (up), and Corrugator (down).



A Few Words of Fear

Worried:

As with sadness, there's a Tug of War between Medial Frontalis (up), and Corrugator (down). The eyebrows are Upside-Down-V-Shaped.



A Few Words of Fear

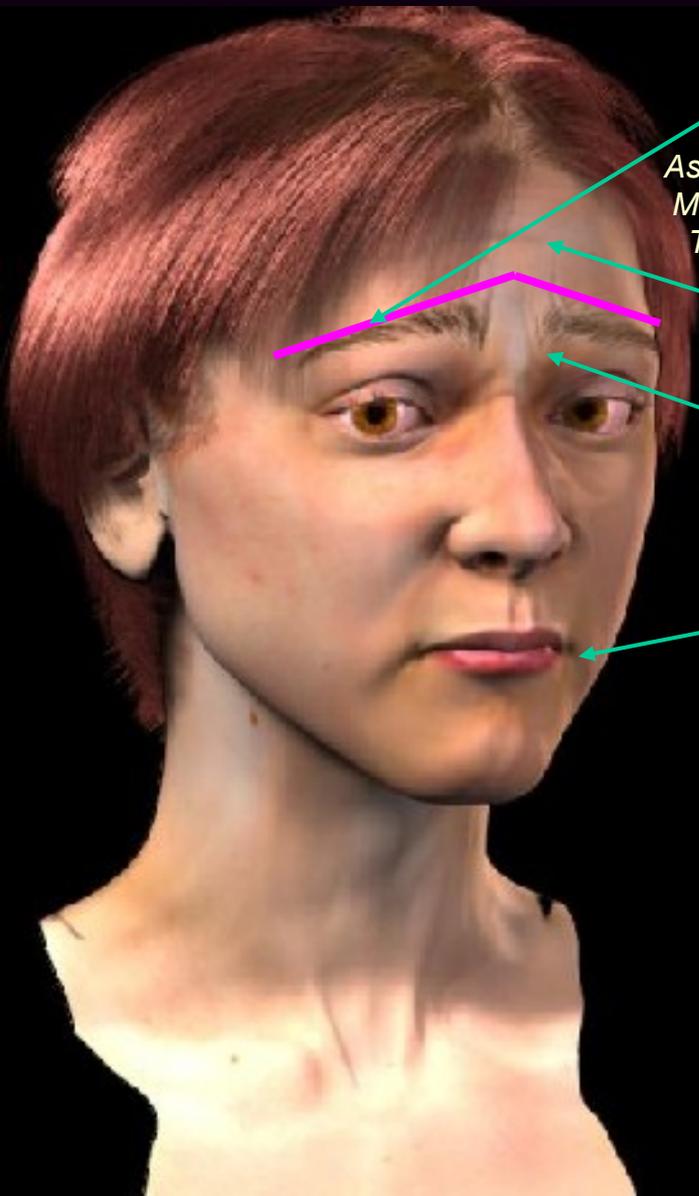
Worried:

As with sadness, there's a Tug of War between Medial Frontalis (up), and Currogator (down). The eyebrows are Upside-Down-V-Shaped.

Worry Lines in mid-brow
(*Medial Frontalis*)

Furrowed brow
(*Currogator*)

Slight Frown
(*Triangularis*)



A Few Words of Fear

Disturbed:



A Few Words of Fear

Disturbed:



Eyes wide open; whites visible
above her irises
(*Levitor Palpabrae*)



A Few Words of Fear

Alarmed:



A Few Words of Fear

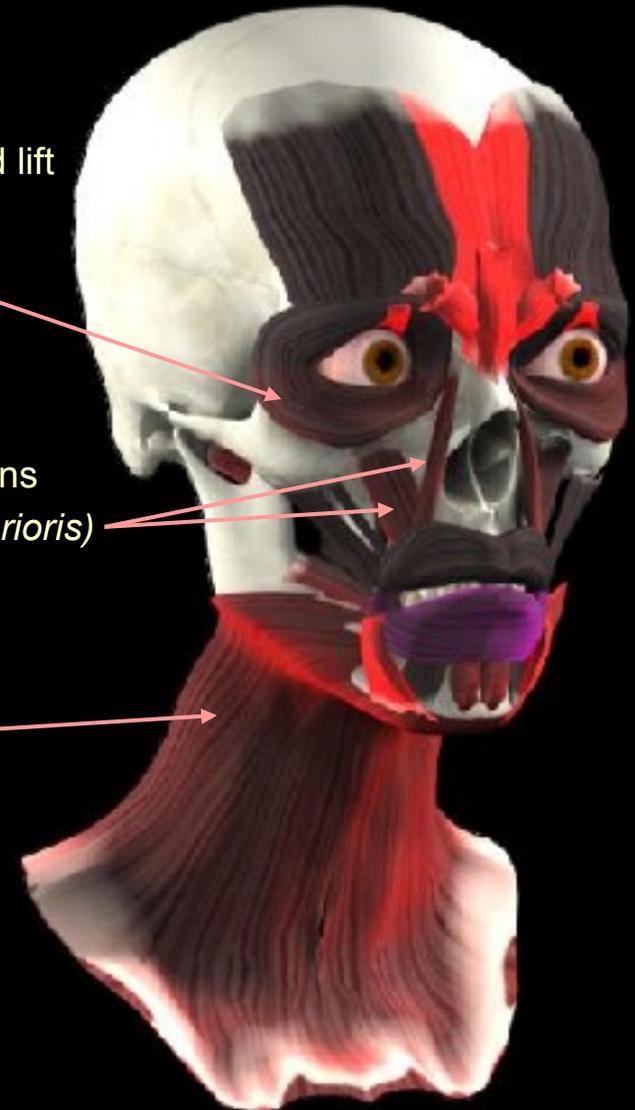
Alarmed:



Lower eyelids become tense, and lift upwards, toward the pupils
(*Lower Orb. Oculi*)

Lip curls, Nasolabial Fold deepens
(*Labius Superioris, AN Labius Superioris*)

Squared lower lip,
Tension in her neck
(*Risorius/Platysma*)



A Few Words of Fear

Terrified:



A Few Words of Fear

Terrified:



More tension in her lower lids
(*Lower Orb. Oculi*)

Increased tension in her neck
(*Risorius/Platysma*)



A Few Words of Fear

Screaming:



A Few Words of Fear

Screaming:

The act of screaming works out nearly all the muscles in a human face. Nearly every crease or fold that is hidden in a relaxed face become visible during a scream:

Worry lines (*Frontalis*)

Brow furrows (*Currogator*)

Crow's feet (*Orb. Oculi*)

Wrinkle on inner eye corners
(A.N. *Labius Superioris*)

Nasolabial folds
(*Labius Superioris*, A.N. *Labius Superioris*)

Chin Puckering (*Mentalis*)

Neck Tendons (*Risorius/Platysma*)



The six fundamental expressions:

1. Anger
2. Sadness
3. Disgust
4. Surprise
5. Fear
- 6. Happiness**

A Few Words of Pleasure

Crooked Half-Smile:



A Few Words of Pleasure

Crooked Half-Smile:



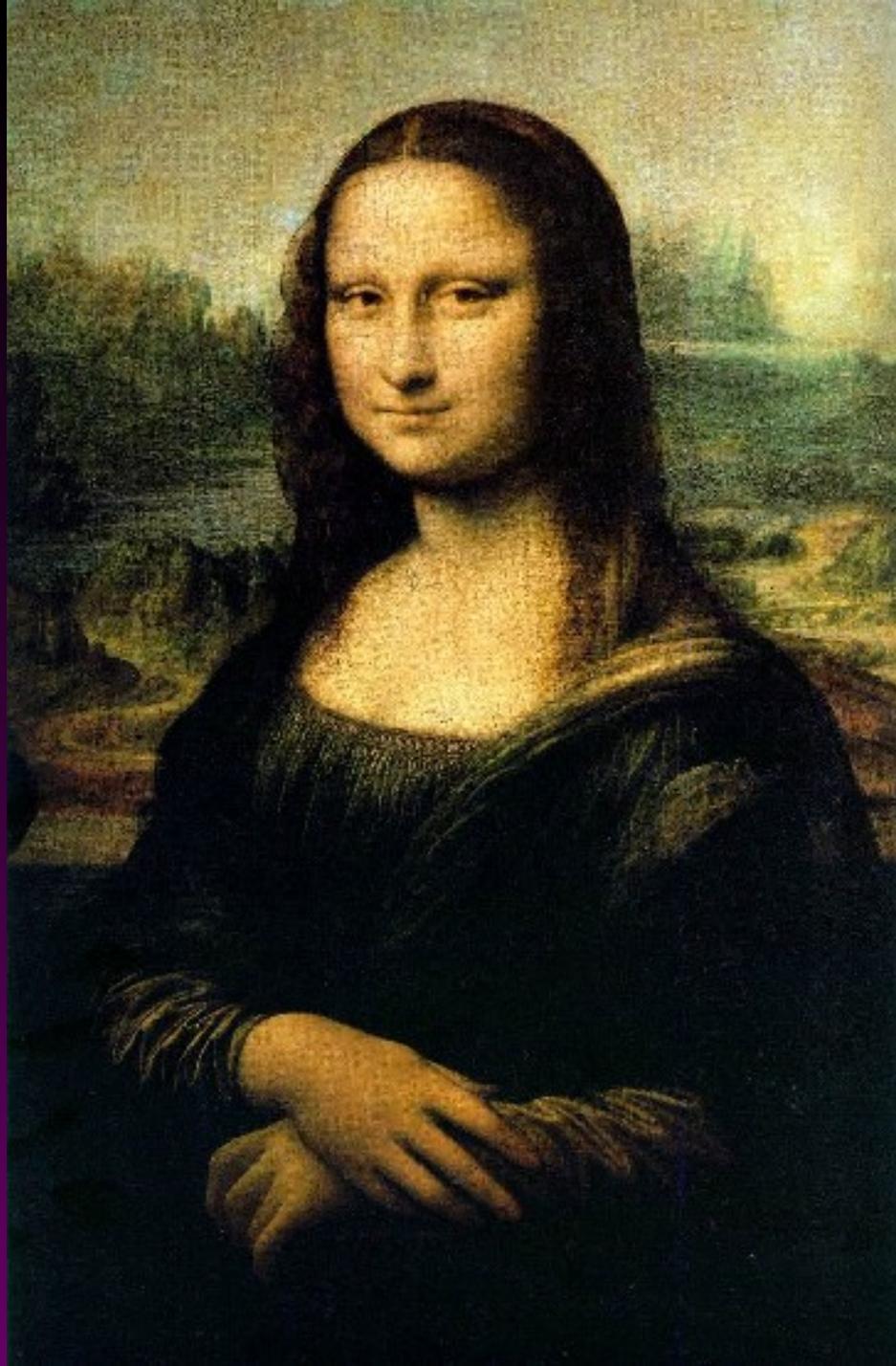
Corners of her mouth are pulled straight upward
(*Caninus*)

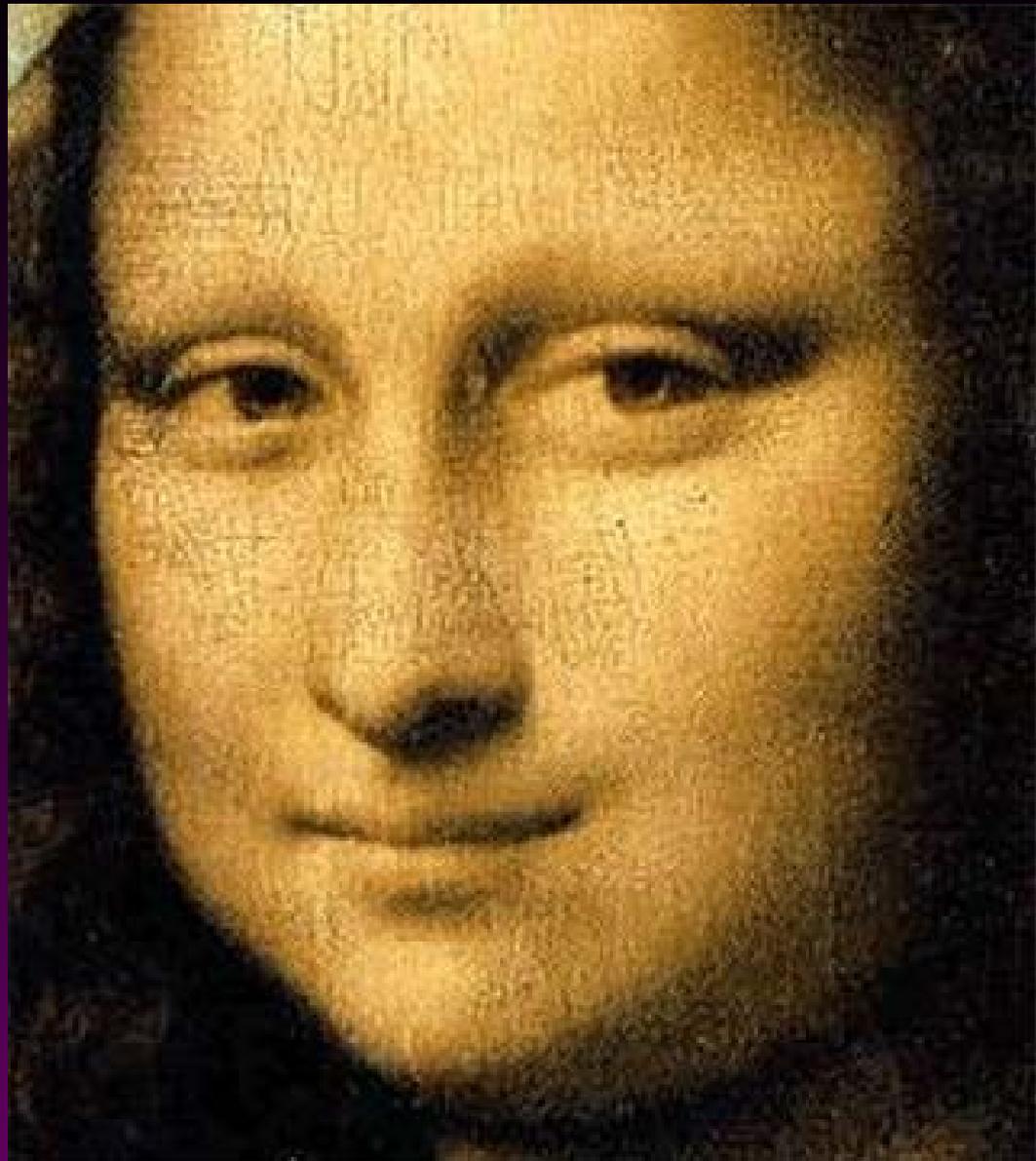
The rest of her mouth is nearly unaffected.

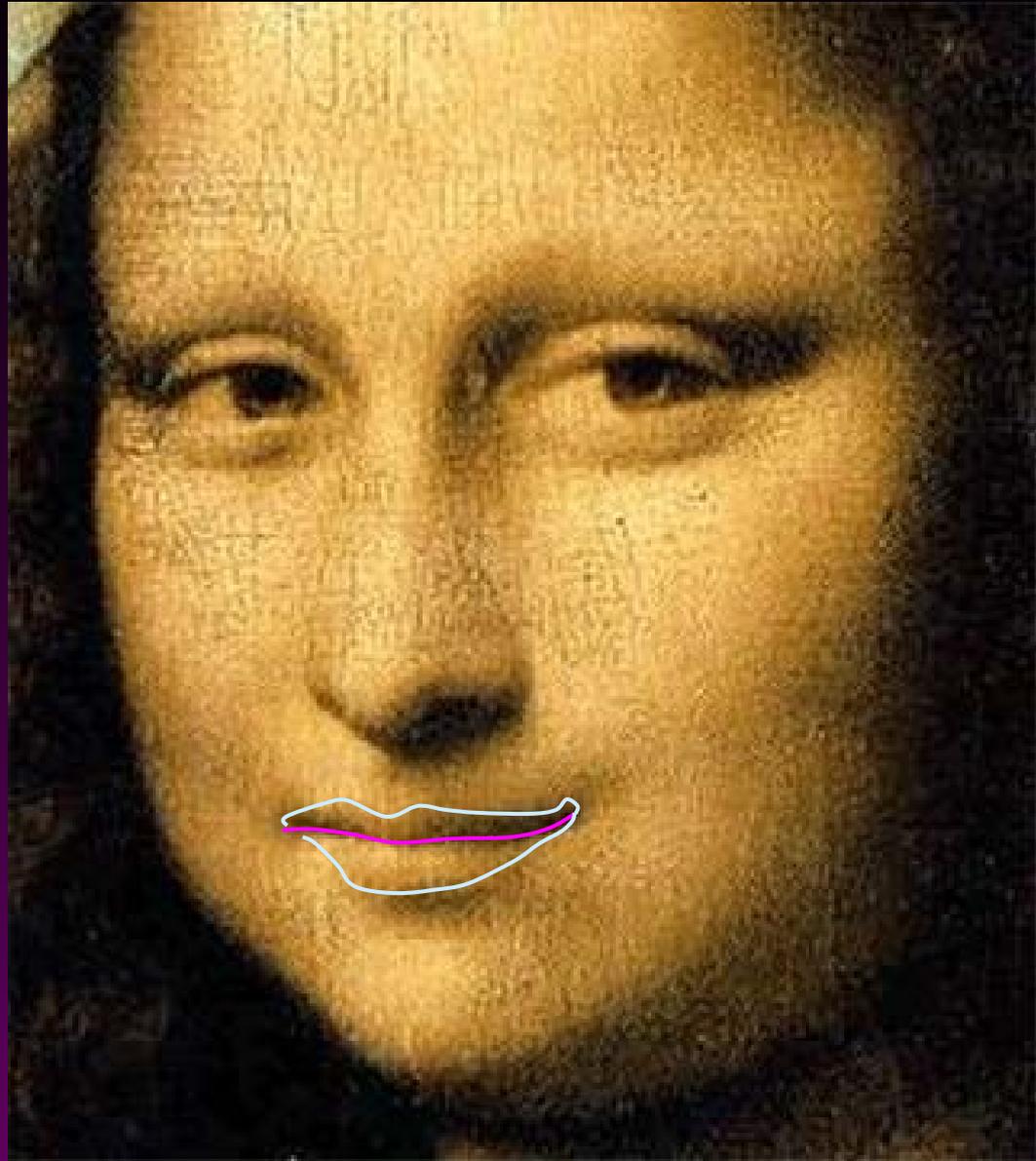












A Few Words of Pleasure

Mona Lisa Smile:



A Few Words of Pleasure

Mona Lisa Smile:



A Few Words of Pleasure

Mona Lisa Smile:



A Few Words of Pleasure

Mona Lisa Smile:



A Few Words of Pleasure

Mona Lisa Smile:



A Few Words of Pleasure

Mona Lisa Smile:



A Few Words of Pleasure

Mona Lisa Smile:



A trace of sneer
on the Right Side
(R. Labius Superioris)

A Few Words of Pleasure

Mona Lisa Smile:



A Few Words of Pleasure

Basic Smile:



A Few Words of Pleasure

Basic Smile:



Lips pulled up, back and out
(*Zygomatic Major*)



A Few Words of Pleasure

Genuine Smile:

If she's really happy and not just acting pleasant, her eyes will show it:



A Few Words of Pleasure

Genuine Smile:

If she's really happy and not just acting pleasant, her eyes will show it:

Her lower eyelids compress into a squint, with crow's feet
(*Orb. Oculi, Lower Portion*)



Smiling with your eyes

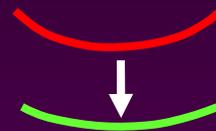
Neutral eyes:



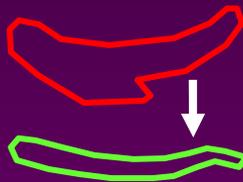
Smiling eyes:



When someone is genuinely smiling, the lower lid of the eye flattens out (Lower Orbicularis Oculi):



...and the pocket of shade below the eye compresses and flattens:



A Few Words of Pleasure

Basic Grin:



She exposes her upper teeth with two separate actions:



A Few Words of Pleasure

Basic Grin:



She exposes her upper teeth with two separate actions:

Jaw hangs slightly open

Her lower lip is pulled down
(Labius Inferioris)



A Few Words of Pleasure

Genuine Grin:

When she's grinning out of real happiness, she uses an additional muscle action:



A Few Words of Pleasure

Genuine Grin:

When she's grinning out of real happiness, she uses an additional muscle action:

Her upper lip contracts slightly upward, exposing her gums
(*Orb. Oris, Lip Loose*)



A Few Words of Pleasure

Wedding Picture Grin:

If she's feeling stress while grinning, she may compensate with a single revealing muscle action:



A Few Words of Pleasure

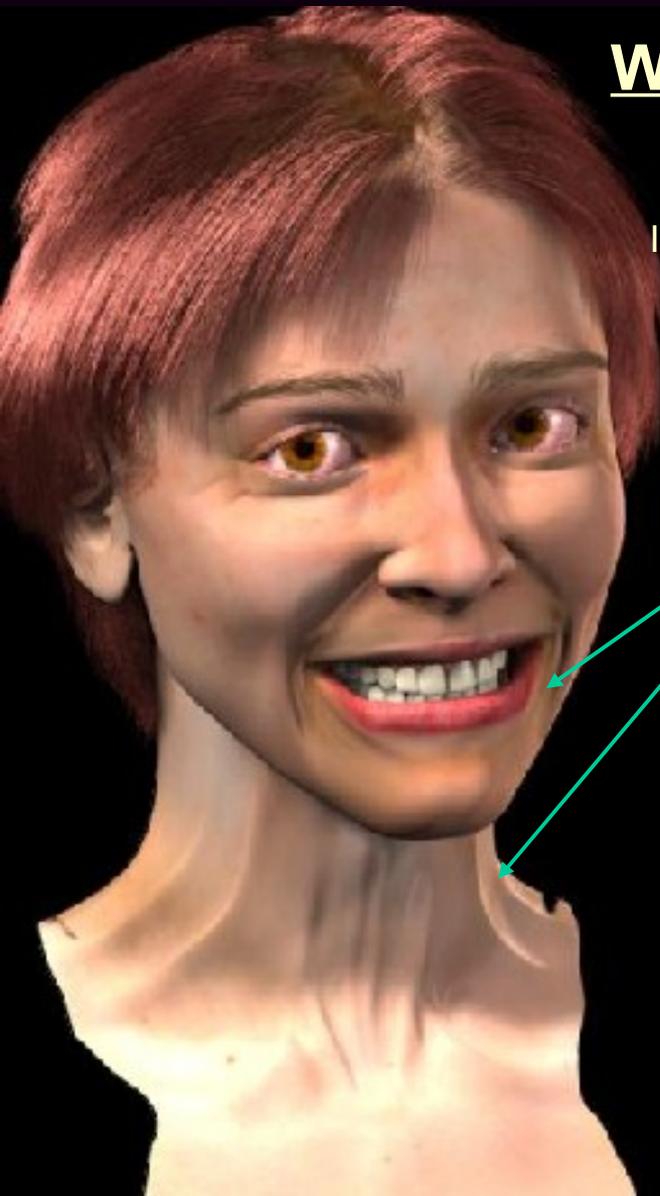
Wedding Picture Grin:

If she's feeling stress while grinning, she may compensate with a single revealing muscle action:

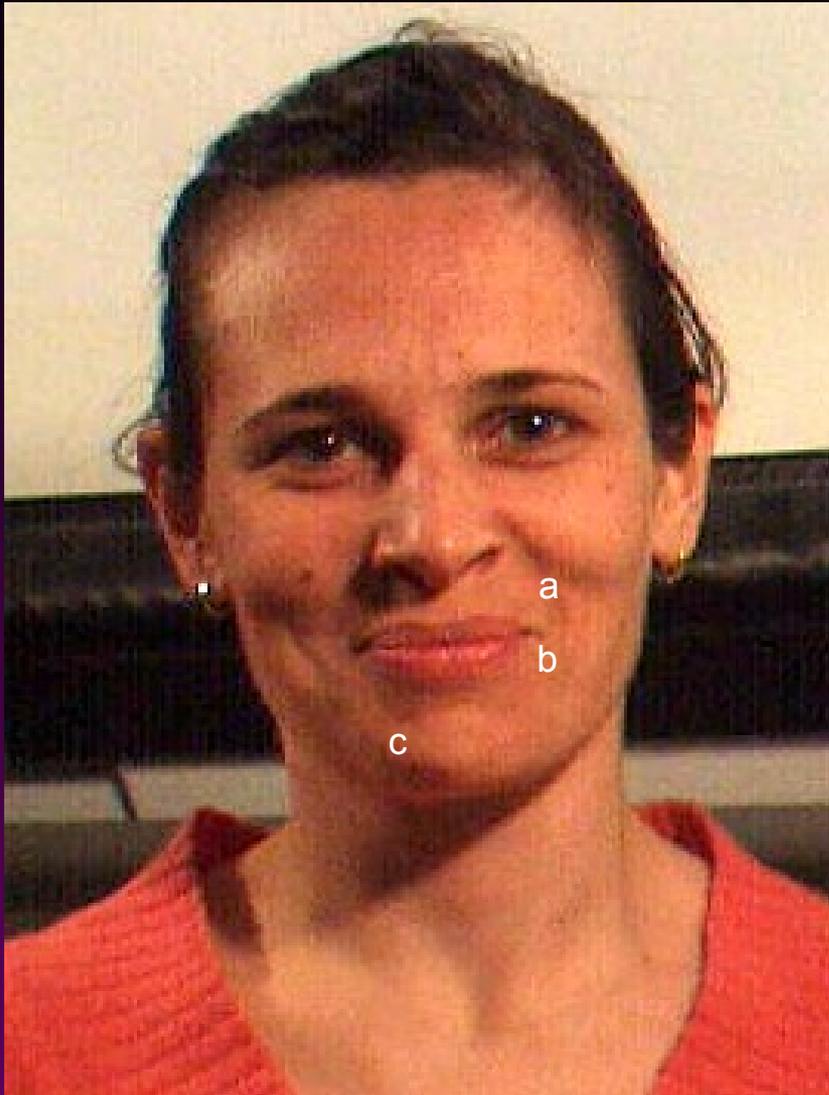
Her lower lip is stretched outward and downward, forming her lips into a rectangular shape.

Tendons form on her neck.

(Risorius/Platysma)



The Frown Smile: a uniquely human face



The Frown Smile is living proof that we have a subconscious. It's the result of internal psychological conflict.

The conflict is between being happy, and trying not to show that we're happy.

Three muscles are involved in the conflict: Zygomatic, Triangularis and Mentalis.

Zygomatic is on the side of happiness. Clearly, Genevieve is happy—her rounded nasolabial fold (a).

Triangularis and Mentalis are on the side of looking serious. Subconsciously, she's trying not to look too happy. She fires up her Triangularis muscles to counteract the upward turn of her lips from Zygomatic. The corners of her lips thus turn downward (b).

Mentalis kicks from the middle of her face, also to counteract her Zygomatics. The skin below her lips balls up and puckers slightly (c).

The result—although she's smiling, her mouth is actually turned *downward*:



A Few Words of Pleasure

The Frown Smile:

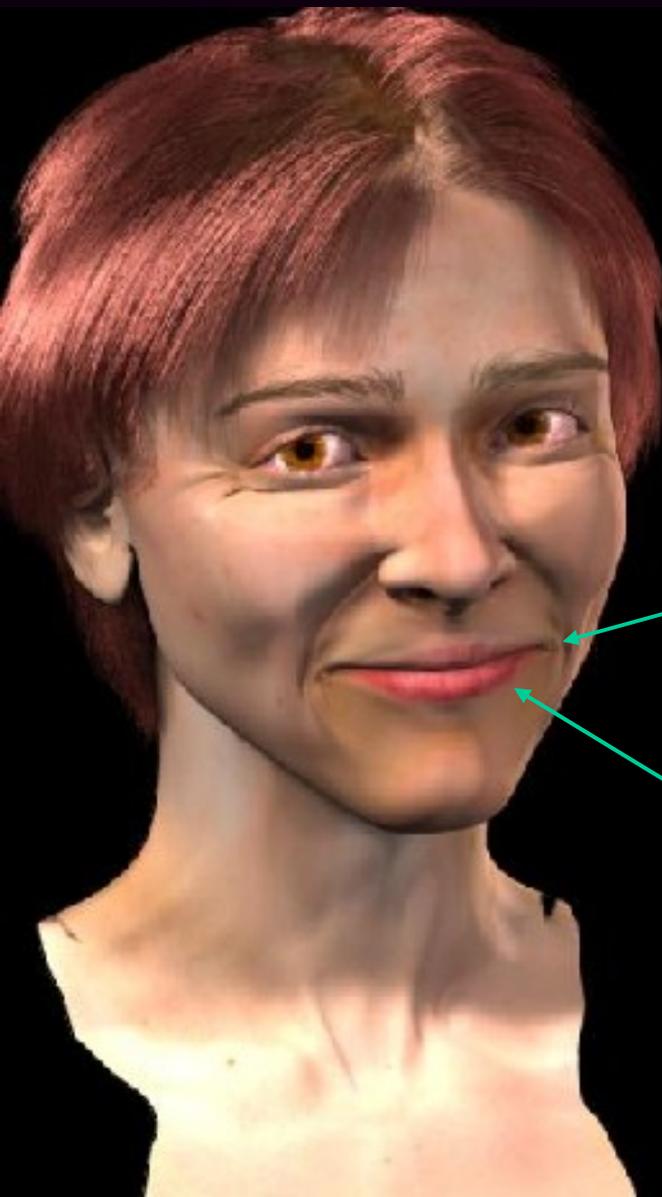
Two actions are pulling against her smiling Zygomatic muscles:



A Few Words of Pleasure

The Frown Smile:

Two actions are pulling against her smiling Zygomatic muscles:



The lip corners are pulled down as in a frown (*Triangularis*)

The lips are pulled toward the middle of her face (*Incisivus*)



















Bill Clinton: master of the Frown Smile

A Few Words of Pleasure

The Frown Laugh:

She is trying hard to stifle a laugh.
She will need even more muscle
firepower to do this:



A Few Words of Pleasure

The Frown Laugh:

She is trying hard to stifle a laugh.
She will need even more muscle
firepower to do this:

She draws the middle of her chin
upward, forcing the middle of her
Lower lip against her upper lip
(*Mentalis*)



A Few Words of Pleasure

About to crack up:

She is heroically trying to keep her composure, but it's about to fail. As a last desperate measure, she uses one more muscle:

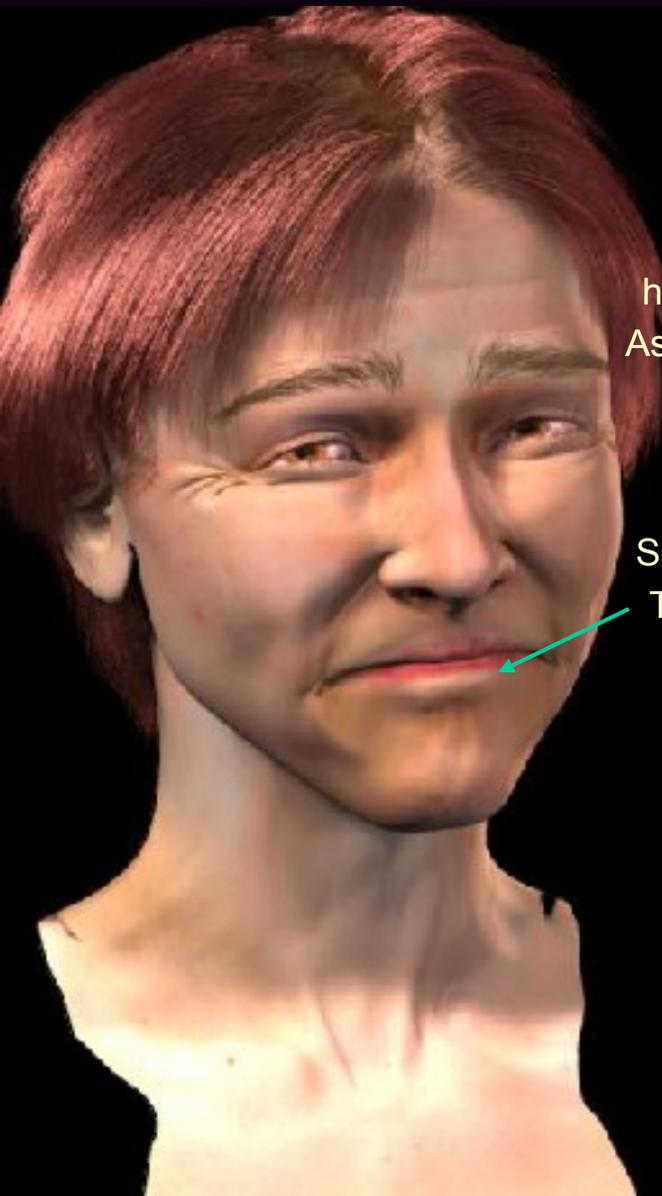


A Few Words of Pleasure

About to crack up:

She is heroically trying to keep her composure, but it's about to fail. As a last desperate measure, she uses one more muscle:

She pulls her lower lip into her mouth. The skin under her lower lip balls up (*Orb. Oris, Lower Lip Tight*)



A Few Words of Pleasure

Laughter:

*The most difficult expression
to animate.*



A Few Words of Pleasure

Laughter:

The most difficult expression to animate.



Her eyes are shut into a full squint
(*Orb. Oculi*)

Her smile is at its most extreme
(*Zygomatic Major*)

Her mouth opens convulsively

She bares her upper teeth to her gums
(*Orb. Oris, Upper Lip Loose*)

She bares her lower teeth
(*Labius Inferioris*)



A Few Words of Pleasure

She Laughs Until She Cries:



A Few Words of Pleasure

She Laughs Until She Cries:



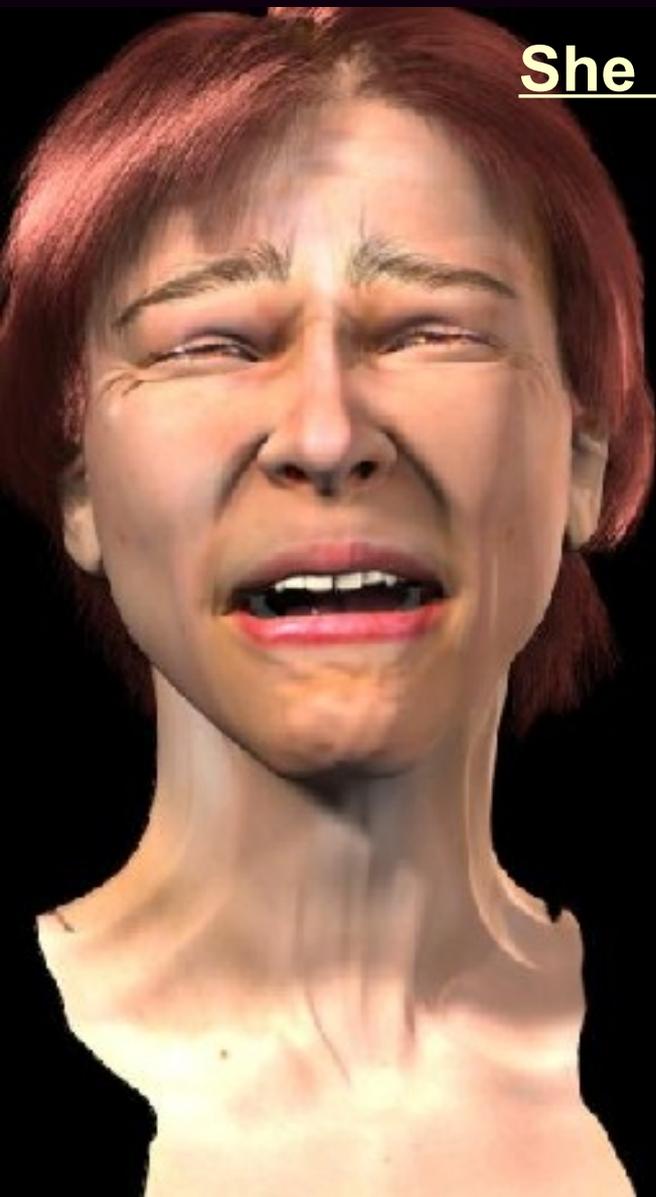
A Few Words of Pleasure

She Laughs Until She Cries:



A Few Words of Pleasure

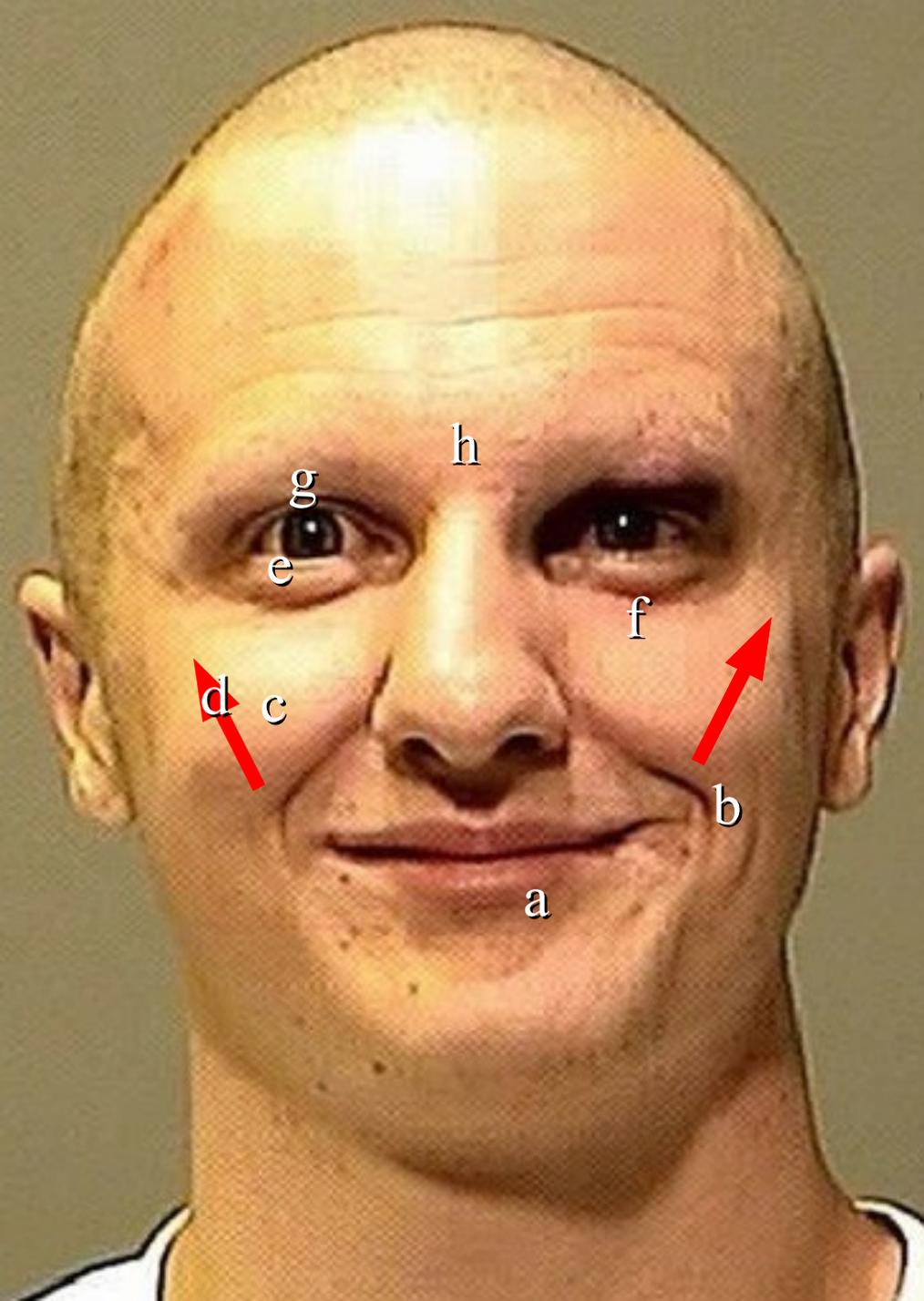
She Laughs Until She Cries:



Homework Assignment 1 (for Monday Feb. 28):

Give a thorough description of the facial expressions in three of the photographs included in the following slides.

Example:



This is a mugshot of Jared Loughner, taken shortly after he shot 19 people, including US Representative Gabrielle Giffords, in Tucson AZ on January 8 2011.

The expression on Loughner's lower face is obviously that of a smile, as clearly seen by his upturned mouth (a): the LBL (line between the lips) is “U” shaped: 

Outside the corners of his mouth are the distinct “C” shaped curves of his Nasolabial Folds (b). Above these folds, his cheeks are puffed out and rounded in shape (c).

These features are typical of the use of the Zygomatic Major muscles (d), which make the lower face smile.

But unlike that of a typical smile, Loughner's upper face has none of the pleasurable features, such as the squished lower eyelids, that a genuine smile shows.

Instead, Loughner's eyelids are pulled taut and are nearly horizontal (e), but the pouches under his eyes are not contracted at all—they are round (f), as in a neutral face:



Thus, his lower Orbicularis Oculi muscle is relaxed, even though his lower eyelids are tightly clenched.

The upper eyelids are pulled back (g), the result of the Levator Palpabrae muscle being contracted (his left eye is bruised and thus partially swollen shut). The look in his upper face is thus that of an angry glare. The glare is accentuated by a slight contraction of his brow (h), the result of his Currogator muscle.

The conflicting appearance between his angry upper face and his smiling lower face is virtually impossible for most people to emulate. It's clearly a look intended to convey menace.





















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Homework Assignment 2 (for Monday Feb. 28):

Obtain a copy of Maya, and familiarize yourself with it. We will be using it extensively for the remainder of the course.