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Some pragmatic functions of conversational facial gestures*

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Conversational facial gestures are not emotional expressions (Ekman, 1997). Facial gestures are co-speech gestures – configurations of the face, eyes, and/or head that are synchronized with words and other co-speech gestures. Facial gestures are the most frequent facial actions in dialogue, and the majority serve pragmatic (meta-communicative) rather than referential functions. A qualitative microanalysis of a close-call story illustrates three pragmatic facial gestures in their macro- and micro-context: (a) The narrator's *thinking faces* (Goodwin & Goodwin, 1986) occurred as the narrator was getting started, and they accompanied verbal collateral signals of delay, such as “uh” or “um”. (b) The narrator *pointed at his hand gestures with his head and eyes* (Streeck, 1993), drawing the addressee's attention to depictions that would later be crucial to the close call. (c) The meta-communicative functions of *smiles* included marking the narrator's description of danger as ironic or humorous, hinting at key elements, and acknowledging errors.

Keywords: conversational facial gestures, pragmatics of gestures, face-to-face dialogue, smiles, thinking faces, gaze, emotional expressions, collateral signals

In a face-to-face dialogue, the faces of the speaker and addressee are rarely still, and most of these facial movements are synchronized with the spoken discourse. Kendon (2004) called these “*facial gestures*, such as eyebrow movements or positioning, movements of the mouth, head postures and sustainments and changes in gaze direction” (p. 310, italics added). Similarly, Bavelas, Gerwing, and Healing (2014c) proposed to include “any configuration or movement of the face or head (including the eyes) that is synchronized with speech in both timing and meaning” (pp. 16–17) as a co-speech gesture comparable to hand gestures. They went on

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to map all of Kendon's (2004) criteria for hand gestures onto facial gestures, showing that facial gestures also convey referential content and serve pragmatic and interactive functions. Their analysis showed that the gesture-speech relationship is also flexible for facial gestures, as speakers adjust to the constraints and possibilities in the immediate context.

As early as 1946, Bolinger, a linguist, described the lip actions that he was analyzing as *facial gestures* and illustrated their phonemic and syntactic functions. He concluded that

[t]hey form as much a part of our communicative system as words and tones, and must, along with other communicative acts, be integrated into our organon of that system before we can fully know how much importance to attach to any one of the parts – in particular, whether the present all-pervasive attention to phonology is justified. (p. 95)

However, emotion theory has dominated the face in more recent history, and a close link between the face and emotion has become received wisdom for both academics and lay persons. It is therefore essential to begin by distinguishing between *emotional facial expressions* and *facial gestures*. Then an overview of the functions of facial gestures in dialogue will show that the majority of functions are pragmatic. Finally, a microanalysis of a close-call narrative will illustrate three pragmatic examples, with an emphasis on their multimodal relationships to words and hand gestures.

Distinguishing between facial gestures and emotional expressions

Ekman's position

The best authority for differences between emotional and communicative facial actions is the pre-eminent expert on facial expressions of emotion, Paul Ekman (1997). By asking "Should we call it expression or communication?" (p. 1), Ekman stressed the importance of precise terms. He used *express* or *expression* for involuntary manifestations of specific underlying emotions and distinguished these from what he called *conversational facial signals*.¹ Ekman's criteria for the latter were:

1. Bolinger (1946) and Kendon (2004) used the term *facial gestures*. Kraut and Johnston (1979) introduced *facial displays*.

Most importantly the conversational signals are part of the structure of the conversation, part of the flow of talk, and governed by the rules which govern the production of speech. While facial expressions of emotion often occur during conversation, their location in the speech flow is related not to the structure of talk but to the semantics, revealing an emotional reaction to what is being said or not being said. (p. 340)

Among other things, Ekman's distinction implies that for an emotional expression even to occur, the talk would have to include or imply something emotional for the speaker. However, Ekman pointed out that, even when the talk is about an emotion, the *timing* would differ: conversational facial signals are synchronized with speech, not with an underlying emotion:

Take for example, a person who says he had been afraid of what he would learn from a biopsy report, and was so relieved when it turned out to be negative. When the word "afraid" is said, the person stretches back his lips horizontally, referring facially to fear. (p. 340)

In other words, because it is highly improbable that an emotional reaction of fear would appear and subside in the time it took to say the word "afraid", this facial action *refers to* a past fear; it does not *express* this emotion in the current moment.

Even when the timing of an expression might seem to reveal "an emotional reaction to what is being said or not being said" (Ekman, 1997, p. 340), closer examination is necessary. Goodwin, Cekaite, and Goodwin (2012) illustrated how a classic disgust expression was displayed as the individual's *stance*. They proposed "a framework for the investigation of affective stance that conceptualizes such phenomena as dialogic and embedded within ongoing interaction within the lived social world" (p. 24).

The vast majority of research on facial expressions of emotion relies on photographs, not face-to-face dialogues.² There is some evidence, including Ekman's own, that emotional expressions are relatively rare in dialogue. Because there was no primary publication, the secondary source (Fridlund, Ekman, & Oster, 1987) is used here:

The most fine-grained measurement of facial expressions under naturalistic conditions was performed by Ekman and Friesen (unpublished data), who viewed videotapes of psychiatric interviews of patients who were largely diagnosed as having affective disorders [e.g., depression, bipolar]. In this population, wherein

2. There are increasing challenges to the validity of methods for establishing a distinctly recognizable and universal set of emotional expressions in photographs; e.g., Crivelli, Russell, Jarillo, & Fernández-Dols (2017) and DiGirolama & Russell (2017). However, those issues are not relevant to our point here, which is simply to free the face from being solely about emotion.

more emotional expressions might have been expected, less than one third of the corpus of facial actions – nearly 6000 facial [actions], scored for 30 ten-minute interviews – were classifiable as emotional expressions. To restate, Ekman and Friesen regarded this proportion as perhaps an overestimate of what may occur in nonpatients, because the patients interviewed were mostly “discussing their feelings”! (pp.160–161, exclamation mark in original)

If at least two-thirds of facial actions in dialogue are not emotional expressions, what are they?

A survey of faces in dialogue

In the only systematic study of what faces do in dialogue, Chovil (1989, published in 1991a), examined over 700 meaningful actions of facial muscles. The closest category to emotional expressions was “personal reactions” (e.g., Ekman’s, 1997, example of having been afraid before a biopsy report); these were 24% of the total. However, Chovil’s instances of personal reactions were timed with speech, thereby fitting Ekman’s criteria for conversational facial signals rather than emotional expressions. This suggests that the frequencies reported in Fridlund et al. (1987) may indeed be an overestimate of what happens in dialogue. In any case, Chovil’s study provided the following data on what the interlocutors’ faces were doing the rest of the time.

Chovil’s dyads talked about three topics aimed at eliciting a variety of facial displays: planning a dinner of foods they both disliked, a minor conflict with someone, and a close-call story. A two-way split with a camera close up on each participant’s face ensured that both faces were clearly visible at all times. Inter-analyst agreement for the following results was at least 90% (which was higher than the reliability of the comparable -etic analysis of muscle action groups using the Facial Action Coding System; Ekman, Friesen, & Ancoli, 1980, p.1127).

Chovil’s (1991a) analysis excluded adaptors such as blinking or swallowing and a very small number of unclassifiable actions. It also excluded smiles, primarily because their frequency and variety would overwhelm all other facial gestures. The purpose of the present article is to emphasize the pragmatic functions of facial gestures, so we have re-organized Chovil’s (1991a) terminology into Kendon’s (2004) distinctions for hand gestures, that is, between facial gestures that conveyed *referential content* in the conversation at the moment and those that served *pragmatic* functions, that is, as meta-communicative or collateral signals (Clark, 1996) that frame, qualify, or make a comment *about* the content or the process of having a dialogue. Table 1 shows the most frequent facial gestures. (Both Chovil, 1991a, and Bavelas & Chovil, 1997, show the frequencies for all facial gestures.)

Table 1. Most frequent functions of facial gestures in Chovil (1989, 1991a)

Referential Content a					
Function	Frequency	While speaking or listening?	Context of example	Relation of facial gesture to words b	Description of facial movements
Displaying a personal reaction	160	speaking	Planning a dinner of disliked foods	"Snails? Maybe a little <i>sushi</i> in between."	Wrinkles nose
Portraying self or other	83	speaking	Telling a close call story	" <i>And I was concentrating on the kids...</i> "	Tilts head forward, raises brows, with eyes looking intently ahead
Displaying a personal reaction	48	listening	Relating a minor conflict	"And he said "Why didn't you get a hundred on the test?" [<i>addressee's facial gesture</i>]"	Raises brows, widens eyes, and drops jaw.
Motor mimicry of speaker	21	listening	Telling a close call story	"...in a huge van [<i>addressee's facial gesture</i>] started to accelerate..."	Raises brows, widens eyes slightly
Pragmatic c					
Function	Frequency	While speaking or listening?	Context of example	Relation of facial gesture to words b	Description of facial movements
Emphasizing a word	156	speaking	Planning a dinner of disliked foods	"Ah it tastes really, <i>really</i> nice. It's <i>really</i> rich."	Raises brows
Back-channel	84	listening	Telling a close call story	Speaker: "I got flown to the hospital and [<i>addressee's facial gesture</i>], spinal, I was in spinal for a week." " <i>Hmm, maybe with, maybe then...</i> "	Raises inner brow, forms mouth in slight "Oh!" Raises brows and looks up
Marking thinking or remembering	63	speaking	Planning a dinner of disliked foods	"The car right in front of me went to go <i>into the right hand lane</i> ."	Raises brows
Underlining a phrase	57	speaking	Telling a close call story	"She wanted us to include those too" [<i>facial gesture</i>]"	Pulls corners of mouth back and down Raises brows
Facial shrug	48	speaking	Planning a dinner of disliked foods	"Have, <i>have</i> you ever kayaked?"	Brows raised
Marking a question	45	speaking	Telling a close call story	"...and ah <i>anyhow</i> so all these, this garbage was floating	
Continuing or resuming	18	speaking	Telling a close call story		

Note. Adaptors and three unclassifiable facial actions are not included in these tables.

a Kendon's (2004) term, also used in Bavelas, Gerwing, & Healing (2014c). Other, equivalent terms are *topical* (Bavelas, Chovil, Lawrie, & Wade, 1992); *Track 1*, or *communicative* (Clark, 1996).

b Italics indicate where the facial gesture occurred.

c Kendon's (2004) term; includes *interactive* or *interpersonal*. Also used in Bavelas et al. (2014c). Other, equivalent terms are *interactive* (Bavelas et al., 1992); *Track 2*, *metacommunicative*, or *collateral signals* (Clark, 1996).

Referential functions

The most common facial gestures that conveyed referential content were those that displayed a speaker's *personal reaction* about what he or she was saying at the moment. Addressees, too, used facial gestures to convey their own personal reactions, although much less often. The next most frequent referential function of facial gestures was the speakers' *portrayal* of themselves or someone else at some other time or in some other situation. A closely related facial portrayal by the addressee was their *motor mimicry*, defined as a reaction that is appropriate to the speaker's situation but not to the addressee's own situation (Bavelas, Black, Lemery, & Mullett, 1986; see also Bavelas, 2007). All of these facial actions were timed with words; therefore, by Ekman's criteria, none were emotional expressions.

Experimental studies

To our knowledge, there have been only two experiments investigating referential facial gestures as part of face-to-face dialogue. Both of these experiments compared conditions where emotion and communication theories would make different predictions. In emotion theory, the expression is involuntary; if something elicits an emotion, an expression should appear. Mutual visibility (i.e., whether the speaker and addressee can see each other) should not make a difference unless a culture has display rules (Ekman & Friesen, 1969) that might suppress a particular facial expression (e.g., pain; Kleck, Vaughan, Cartwright-Smith, Vaughan, Colby, & Lanzetta, 1976). In contrast, a communication theory assumes that facial gestures are made for someone to see, so they should be less likely to occur when the interlocutor would not see them.

Furthermore, a communication theory links the function of conversational facial gestures directly to dialogue, so they should be more likely to occur when the individuals are in a dialogue than when one individual is talking in or listening to a monologue. Because emotional expressions are tied to the topic or stimulus, whether these occur in a dialogue or a monologue should make no difference in an emotion theory.

At first, dialogue and mutual visibility seem to be the same variable, but it is possible to separate their effects using three experimental conditions:

- a face-to-face dialogue (the interlocutors are in a dialogue and can see each other)
- a dialogue on the telephone (the interlocutors are in a dialogue but cannot see each other)
- a monologue (there is no interlocutor and, of course, no mutual visibility)

Chovil (1989, published in 1991b) used this design to study addressees' *motor mimicry* in response to their speakers' close-call stories (e.g., wincing when the narrator described an injury). She found that motor mimicry was virtually absent when listening to a monologue (although the recorded story was quite dramatic). It was significantly higher in the telephone dialogue and highest in the face-to-face dialogue. So dialogue and mutual visibility each increased motor mimicry.

Bavelas, Gerwing, and Healing (2014a) used the same design to study *facial portrayals*. While re-telling an excerpt from *Shrek 2*, speakers often facially portrayed a character in the movie (e.g., the cat pleading for his life). Their portrayals often included their head and gaze as well as facial configurations. The results replicated Chovil's findings: both dialogue and visibility, independently, led to significantly more facial portrayals. A semantic features analysis by Bavelas et al. (2014c) showed that, depending on whether the addressee was visible or not, speakers shifted information between words and a combination of hand gestures and facial portrayals, which demonstrated Kendon's (2004) "flexibility in the gesture-speech relationship" (p.111). All of these results are consistent with these facial actions being communicative facial gestures.

Pragmatic functions

As illustrated in Table 1, the majority of facial gestures in Chovil's (1991a) data had pragmatic functions in the same sense as Kendon (2004) described for hand gestures, that is, "any of the ways in which gestures may relate to features of an utterance's meaning that are not a part of its referential meaning or propositional content" (p.158; see also Bavelas et al., 2014c, pp.19–21). Regrouping Chovil's full data set reveals that referential functions (personal reactions, portrayals, and mimicry) were 35.5% of the total, whereas the much wider variety of pragmatic functions (syntactic, thinking/remembering, facial shrugs, back channels, etc.) were 64.5%. Thus, two-thirds of the facial gestures were not about the topic of conversation; they were about the process of having a conversation, that is, pragmatic. The diversity among pragmatic facial gestures is also striking (e.g., Chovil, 1991a, pp.175–179, including her Table 2 on p.176).

Other observers have also documented most of Chovil's (1991a) pragmatic facial gestures. Ekman (1979) and Flecha-García (2010) described speakers' eyebrow movements that *emphasize* a single word or *underline* an entire phrase. Goodwin and Goodwin (1986) showed how speakers may mark a pause in their speech with a distinctive facial gesture of *thinking or remembering*, looking away with a thoughtful, puzzled, or stereotypic blank face. Ekman (1985) described the *facial shrug* – pulling one corner of the mouth back or down with a quick eyebrow flash – which conveys the same range of meanings as a shoulder shrug. Ekman

(1985) credits Darwin (1872/1955) as the first to describe a facial gesture that makes a declarative sentence into a *question* by finishing with raised eyebrows and a rising intonation contour.

In addition to the above, two different pragmatic functions of *smiles* have been identified by Kendon (1975/1990) and Brunner (1979), both of whom explicitly distinguished the smiles they studied from any emotional state. Kendon analyzed a 4 min excerpt of a couple in a public park who were sitting close to each other and occasionally kissing. This analysis documented how two different kinds of smiles by the woman functioned to regulate their interaction at key moments:

“Teeth smile”: Brows at rest to wrinkled; eyes open to “laughing” or “screwed”; lips parted and protruding slightly.

“Closed smile”: Brows and eyes at rest; lips closed, with upper lip retracting to form smile [...]. (Kendon, 1990, pp.123–124)

There was no audio recording, but Kendon’s precise timing suggested that Teeth Smiles were associated with the woman’s initiating involvement but avoiding kissing. In contrast, her Closed Smiles led to the man coming closer and kissing her.

Brunner’s (1979) analysis of four laboratory conversations showed that addressees’ smiles functioned as back channels. He first located speakers’ within-turn signals for a back channel (i.e., completing a grammatical unit and directing the head toward the addressee), which Duncan (1974) and Brunner (1977) had identified as eliciting the more familiar back channels such as “Yeah” and nodding. Brunner then showed that the addressees were significantly more likely to smile in the presence of a within-turn signal than in its absence.

Experimental evidence

There seems to be only one experiment that might be considered to be about a pragmatic facial gesture, although the focus was on when a dialogue would begin. Dolgin and Sabini (1982) followed up on the extensive observations of Smith, Chase, and Lieblisch (1974) on humans’ and primates’ use of a *tongue show*, in which the tongue is slightly protruded, ranging from a quick flick to a few seconds or even minutes. Smith et al. had concluded that this display occurred in contexts where the individual was reluctant to interact. Dolgin and Sabini’s experiment confirmed that participants who needed some information from the experimenter waited significantly longer to approach him when the experimenter was displaying a tongue show.

Summary

Table 2 summarizes the major distinctions between conversational facial gestures and emotional expressions. (See also Bavelas, Gerwing, & Healing 2014b, pp. 121–127.) In addition to the theoretical differences emphasized here, it is important to note important methodological departures from typical research on emotional expressions. (a) As previously noted, facial gestures could involve actions or configurations of any part of the face, defined as “the front part of the head from the forehead to the chin” (*Oxford dictionary of current English*). (b) Rather than focusing on individuals, often in still photos, researchers have moved to videos of dyads in face-to-face dialogues. (c) Moreover, the context and details of the dialogue were of primary importance, not the presence or absence of emotional material.

Table 2. Major distinctions between conversational and emotional approaches to the face

	Conversational facial gestures	Emotional facial expressions
Theoretical framework	The linguistics of multi-modal language use	The psychology of emotion
Purpose of analysis	Understanding language use in face-to-face dialogue	Understanding emotion
Function of facial movements	Contribute to the ongoing conversation	Reveal a set of specific emotions
Minimum unit of analysis	A dialogue	An individual
Research data	Videos of face-to-face dialogue with both participants in view	Still photos of posed facial expressions or emotional responses by individuals who are alone
Physical focus	Any facial, eye, or head configuration, movement, or position	The effects of specific muscle action groups on the face
Relation to speech	Tightly synchronized to speech, occurring on the same second-by-second scale Spontaneous but voluntary and intentional in the same sense as speech is	May occur in social interactions but timed and connected to the underlying emotion Involuntary
Frequency in dialogues	More frequent	Less frequent; rare?

Facial gestures with pragmatic functions: A narrative example

Pragmatic facial gestures are often in the background, embedded in the dialogue at a particular moment, even at a particular word. In order to bring them into the foreground and to illustrate the macro- and micro-contexts in which these facial gestures occur, we present three of the speaker's pragmatic facial gestures within a complete close-call story:

- *Thinking faces* (e.g., Goodwin & Goodwin, 1986), especially their integration with verbal indicators of a pause in speaking;
- *Pointing with gaze and head at hand gestures* (Streeck, 1993);
- *Smiles* with their highly varied functions.

None of these pragmatic facial gestures referred to the content of the narrative. Instead, they were about the process of delivering the narrative.

Nate (the narrator) and Adam (the addressee) were friends and students in the same honours program. They volunteered to be video-recorded while telling about a close call, that is, an incident when something bad could have happened, but, in the end, everything turned out all right. Nate's story was dramatic and well-told. We invite the reader to leave this text for a moment and read the verbal part of the transcript in Table 3, in order to appreciate the macro-context, that is, the overall plot and dialogue. (Readers may be unfamiliar with the setting and vocabulary of this story about tree-planting, which is an arduous but lucrative summer job for young people in Canada; if so, see <http://www.replant.ca/rookievideo.html>.)

Table 3. Nate's Close Call Story with His Thinking Faces, Pointing with Gaze, and Smiles
Note: This is a primarily verbal transcript. The facial gestures are located on the words with these fonts:

thinking faces (DotumChe)

pointing with gaze and head (Times New Roman, bold)

smiles (Segoe Print)

Background

1. Okay, let's see, my close call story. It happened to me a couple years ago, back when I was
 2. tree planting? I was working out in the bush. [pause] *Obviously*. [*laughs*]. [Adam *nods*].
 3. I was near um, you know, I was – *actu* – we were up in the Rockies, sort of, uh, west of
 4. Jasper, sort of northwest of Jasper, I don't know if you know the area. [then, quietly an
 5. overlapping Adam's "Yeah"] Doesn't really matter. *Anyway*, um [pause] we were planting
 6. and it was about the beginning of June, um, the middle of – since we were way up in the
 7. mountains – in the middle of snow-melt days so all the, all the rivers are gorged and
-

Table 3. (continued)

8. everything. And the block that we're working at, um, to get to it we had to go across the
 9. river, and that was all high with uh, snow melt? So like it's – we're going, ahhh, see there's
 10. sort of a – [pause] area of rapids and um [pause], like, uh, well, words-words-words-words.
 11. Area like a, like a rapid river you know like it's all high [Adam, overlapping: "Yeah, okay. It's
 12. dangerous"] And this – *Yeah, okay you got the danger part down.* Yeah, and um, we had uh,
 13. to get across we made a- *A log bridge, like A LOG.* [short laugh] [Adam interrupts with:
 14. "You guys made it yourself?"] Yeah-yeah, we just felled a tree across the river, that was our
 15. uh trip across the river, and we had sort of a loose rope you could sort of hang on to.

The day of the accident

16. Anyway, to go planting, like we-we made this bridge a couple of days beforehand. And uh
 17. the day we had to go out the front to get out to the block. Um, this was a couple of days
 18. later, and the water has gone up HIGHER since we were there. And so it's actually now the
 19. water's sort of coursing over the bridge a bit? So we have to walk *across this log.* And the
 20. water's going over it. And uh [pause], okay, and-uh, uh [pause]. And it was about – six in the
 21. morning and I'm like non-functional in the morning. So uh the crew's all down there, I've
 22. got – all my gear for the day on, and we're walking across this uh – basically everybody has to
 23. *walk across* the log to get to where-where we work on the other side. So, I've got um – I
 24. don't know if you know what planting bags look like, anyway they're sorta **like uh [pause]**
 25. **THREE BIG BUCKETS, sort of.** Well, canvas buckets, **they're about** the size of two ice
 26. cream pails at the top, **and you have like one on each side, one behind you.** So I've got
 27. this on, full of **my water jugs**, and I've got a big uh um army duffel bag? And *to balance*
 28. *myself, I've got this army duffel bag wrapped around my neck, the cord of it around my*
 29. *neck.* Got *these planting bags* on. And to walk across this – since it's full of water, **we've got**
 30. **these uh thigh waders on** as well, *little uh [pause], thigh waders like gumboot material thigh*
waders. [Adam: "Whew" and wince]

Onto the log

31. And, yeah, basically I'm *stunned out of it* at 6 in the morning, got these, all my gear on, like
 32. 60 pounds of stuff hanging off of me. [Adam, overlapping: "The bags would be heavy."
 33. *Yeah, you can tell.* You know, it's really heavy. So we're *walking across.* Everybody's
 34. going across *fine, till-till it's Nate's* turn. You know, walking across, 'n. It was okay, and
 35. I started to look down at the water, and it started to mesmerize me a bit? Just the, just the
 36. rushing rapids, going over the water. And so I started to get a little wobbly [Adam moans
 37. briefly, then *smiles* with Nate], I'm *walking across* this log. And we're-we're in this rapid area,
 38. which is, we're about 50 metres upstream from the canyon. And, yeah, rapids all over the
 39. place, 'n.
-

Table 3. (continued)

The accident
40. So I started to get a little mesmerized by the water, I'm going "Oh god" [<i>nervous laugh</i>].
41. I'm walking across and my foot – I step on a piece of loose bark? And my foot slips off and
42. I go into the river [Adam: "Ohhh"]. So yeah I'm – my hip – I-I'm sort of HALF on the log at
43. this point 'n my thigh wader's starting to fill up with water. I'm <i>hanging on to the rope for</i>
44. <i>dear life</i> , screaming, screaming my head off, I'm going [in falsetto] "Oh my god we're [sic]
45. going in." Then my – then what happened, my planting bags started to go in. And since
46. they're like a-three big things, it's just like a SCOOP. [brief pause] SUCKED me into the
47. river and I was hanging. So basically I've got – at this point now I'm hanging, I've got this
48. duffel bag wrapped around my neck [<i>slight pause</i>]with the-the bag going <i>behind</i> me.
49. THREE <i>planting bags</i> sucking me down with the river. I'm hanging onto the rope for dear
50. life, like this. I'm slowly, slowly – [Adam, interrupting: "Did you go off one at a – one across
51. at a time?"] Yeah we went across one at a time. [Adam: "Okay"] Yeah. So okay at this
52. point I'm getting SLOWLY sucked under the log. I'm holding on for my dear life, you
53. know, like I'm doing-trying, my foreman runs across, he's trying to pull me up but he hasn't-
54. hasn't a hope, I'm bigger to begin with, you know. They're trying to pull me up but they
55. can't do it. So I'm slowly, slowly getting sucked underneath, I'm-like I'm trying to pull
56. myself up but I don't have the strength. [pause] And so like – basically it's slowly, slowly
57. <i>sucking me</i> , it felt like it was going on for like – an hour, you know, but of course it was
58. probably like 30 seconds before I had to – before I had to let go. Basically, I'm getting
59. sucked under and – [pause] I knew I couldn't make it, my ears were like, at this point I knew
60. I couldn't get out, I couldn't pull myself out so I-I'm my head is in the water like this and
61. basically it's – water's going over my head [Adam: <i>pained laugh</i>] And it's really stra – I
62. grew really really calm, and then I just let go of the rope [Adam: "Ohh!"] And I got
63. sucked – like I sort of bounced off the bottom of the log and <i>got nice</i> and cut up. Got sucked
64. down the river? And so anyways I was about, um, yeah basically I'm floating down the
65. river, I sorta lucked out, with my duffel bag sorta wrapped underneath me? [Adam: "You're
66. still conscious?"] Yeah, still conscious. [Adam: "Just in a daze, probably"] Yeah, yeah I
67. was I was almost totally out of energy because the water's so cold, just SUCKED everything
68. away 'n I was bouncing down the rapids? But <i>fortunately, like I had the bag in front</i> of me.
69. And ah, like it was, I sorta used it, I could use that a bit, as um , I think it sorta, like, took
70. away most of the blows, like I didn't really get hurt too bad. And, but anyway, like I'm
71. slowly getting down towards the canyon. And what happened is <i>I'm getting sucked under</i>
72. [Adam reacts intensely, and <i>Nate laughs</i>], bouncing off these rocks [Adam: "How fast were
73. you going? I guess pretty fast in rapids] Yeah I was going pretty fast. I'm not really quite
74. sure exactly, [Adam: "Yeah"] no speedometer. <i>You know. 'Course everybody's still still</i>
75. <i>laughing at me</i> as they realize "Oh god, this is serious, he's toast", you know. So I was
76. bouncing down and I managed to sort of – well, mostly fluke, I jammed my leg against a
77. rock and sorta twisted myself towards the side [Adam: "Yeah"] At the same time there's
78. people sprinting down both banks trying to be able to pull me out and I started to get close
79. to the right hand bank of the river. Yeah, this guy's reaching out, trying to grab me, and I'm
80. sorta, you know, the last bit of strength I tried – he tried to get me but he can't get me and I
81. got sucked back in [Adam shakes head, <i>exhales, smiles, grimaces</i> ; Nate gestures and <i>laughs</i>
82. <i>with him</i>]. So yeah, I bounced down the river some more. Um. Basically, y'know,
83. at-at the very last point I could get out of the river, I got sucked towards the side, a guy who-

Table 3. (continued)

-
84. who ran in, managed to grab me, 'n two other guys came in, managed to pull me out. I was
 85. about a mete-not me-, you know, like TEN metres up straight from this canyon. So yeah, I
 86. got OUT of the river [exaggerated sigh of relief, *little laugh*].
-

Epilogue (both talking, often overlapping)

-
87. Nate: So that's basically it –
 88. Adam, overlapping: [Shakes head with concerned face, then] “Wow!”
 89. Nate: Yeah!
 90. Adam, overlapping: [slight laugh, then a quick *smile*]
 91. Nate: Kinda like – you know, if I'd –
 92. Adam: So what would've happened if you'd kept going?
 93. Nate: I wouldn't be here telling you this story.
 94. Adam: Yeah you would've been
 95. Nate: I'da been had
 96. Adam [exaggerated agreement: pursed mouth, nodding, then *smiling*]
 97. Nate, overlapping: It was pretty *close*!
 98. Adam: [*smiling*] Yeah that's pretty close.
 99. Nate, overlapping: *Pretty scary it didn't really hit me until like* – big evening afterwards, I'm
 like [portraying himself as serious] “Oh god. I just about got it.” [*pause*]
 100. Adam: [shakes head]
 101. Nate: You know the – Yeah.
 102. Adam: Were you uh – what did they do to you after they got you outta the?
 103. Nate: Well, basically, I had like –
 104. Adam, overlapping: water.
 105. Nate: I had hypothermia was starting to set in, so um
 106. Adam: [nodding, then overlapping] Yeah [unintelligible]
 107. Nate: I got, y'know, carried up to camp
 108. Adam: [shakes head]
 109. Nate: and in my sleeping bag all day, basically.
 110. Adam: [winces]
 111. Nate: Tore my knee up pretty badly when I jammed it on the river.
 112. Adam, overlapping: [more intense wince], Yike!
 113. Nate: Yeah. [*pause*] Yeah, *that's my close-call story, anyway*
 114. Adam, completely overlapping: [still looking pained, shakes head, raises brows, purses lips]
 115. Nate: That's pretty freaky. [*pause*].
 116. Adam: [now laughing] *That is pretty freaky!*
 117. Nate: [*Joins in laughing*]
-

It is important to keep in mind that facial gestures (even more than hand gestures) cannot be fully conveyed in text or still photographs. The facial muscles, eyes, and head are capable of extremely rapid and complex actions, as they move in and out of a particular facial gesture, often in ≤ 1 s and in precise synchrony with the co-occurring word(s) or hand gesture(s).

Thinking faces as collateral signals

Using transcript data, Clark and Fox Tree (2002) identified *uh* and *um* as a pair of *collateral signals* that serve important functions as discourse markers, which makes them part of language use in spontaneous dialogue. Also called *Track 2* signals (Clark, 1996), *uh* and *um* are pragmatic. One function of a collateral signal is to “refer to the performance itself – to timing, delays, rephrasings, mistakes, repairs, intentions to speak, and the like” (Clark & Fox Tree, 2002, p.74). Smith and Clark (1993) showed that *uh* projected a short delay in speaking and *um* projected a longer delay. Both are presumably informative to the addressee, although neither conveys any referential information about the topic of the dialogue.

We propose that a *thinking face* (Goodwin & Goodwin, 1986; Chovil, 1991a) is also a collateral signal. These are somewhat stylized facial gestures in which the speaker pauses, turns his or her head or looks away, often with a blank, puzzled, or thoughtful face. In their intensive analysis of word searches, Goodwin and Goodwin showed that a thinking face is not an inadvertent by-product of the word search itself (i.e., not due to cognitive demand). Seen in the context of the second-by-second requirements of a spontaneous dialogue, a thinking face is a socially sensitive marker of a brief and temporary change of pace. It is essential for the addressee to know that this brief pause is neither a cue for a turn exchange nor an unexplained lapse. Rather, it is a temporary hesitation that requires nothing of the addressee but to wait. In short, thinking faces serve the same function as Clark and Fox Tree (2002) documented for *uh* and *um* and should therefore often occur together. Goodwin and Goodwin’s data seem to support this: Virtually all of their examples of thinking faces included *uh/um* or an explicit marker (e.g., “W’t th’hell w’z’er name”; p.58). We sought to replicate this pairing of *uh/um* or a verbal collateral signal (or both) with thinking faces in Nate’s narrative.

It is striking that all of Nate’s thinking faces (indicated in Table 3 with this font) occurred at the beginning of his story, when the problem of how to organize the relevant information was most acute (rather than at the more exciting or tense times). Nate began by saying “let’s see, my close call story” as he tilted his head and looked away thoughtfully, holding this thinking face for the remaining 1.9 s of the phrase. His facial gesture in this context signaled both that he was mentally engaged and that he would resume speaking. His words (“let’s see,”) also marked this as a pause before starting the story. Then at line 3, he said “I was near um, you know, I was – actu – we were up in the Rockies”, prefacing the completed phrase in several ways: In addition to “um” and “you know”, he broke off (“I was –”), then restarted and quickly broke off again with “actu –” while making a .4 s thinking face. Then on line 5, he dismissed the importance of the exact location (“Doesn’t really matter”) and then marked a transition to other details with

“Anyway, um” and a .9 s thinking face, both signaling a pause. He then continued on smoothly with relevant details, and Adam held an attentive listening face.

At lines 9–10, Nate’s story required him to explain the problem that a particular river-crossing presented during this season: “So like it’s – we’re going, ahhh, see there’s sort of a – [pause].” He started, then broke off and, while verbally marking his hesitation with *ahh*, he rotated one hand quickly in an interactive word search and made a thinking face, looking away and up to one side, then turned his head back toward Adam but with his eyes rolled up toward the other side. Then he looked back at Adam with a puzzled facial gesture and said “area of rapids and um.”

At line 10, he became more explicit about his difficulty. He tilted his head up, rolled his eyes up, looking away as he said quickly “uh, well, words-words-words-words” while repeating the same word-searching hand gesture, this time in rhythm with his words; see Figure 1. Then at line 11, he looked back at Adam and continued, still quickly, “Area like a, like a rapid river you know like it’s all high”, and Adam overlapped to articulate Nate’s point: “Yeah, okay. It’s dangerous.” At line 12, Nate immediately broke off to acknowledge Adam’s contribution verbally and with an interactive hand gesture that typically marks the delivery of shared information (Bavelas, Chovil, Coates, & Roe, 1995, p.395). This 14 s collaborative sequence in lines 9–12 had escalated to include pauses, a hand gesture for a word search, two thinking faces, *ahh*, *uh*, and *um* and other verbal signals, then a more explicit demonstration of his difficulty, repeating “words” four times with a hand gesture and thinking face (at line 10), to which Adam immediately responded, showing that he had understood what Nate was trying to say. They finished their joint production with mutual smiling at line 12.

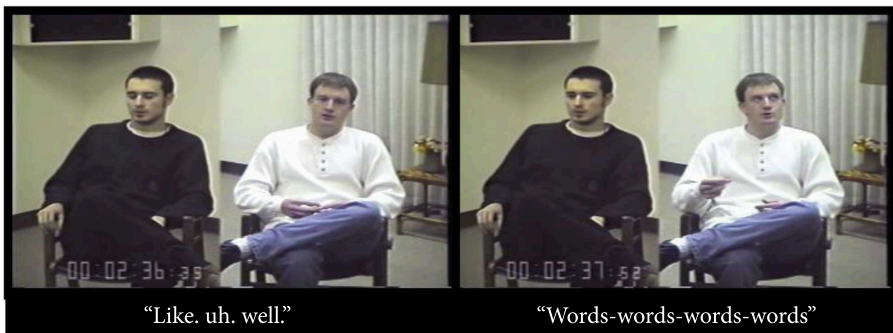


Figure 1. The speaker (on the right) is marking a temporary pause with a collateral verbal signal in frame 1, then a thinking face in frame 2 (line 10 on the transcript in Table 3) Note that speaker and addressee were sitting vis-à-vis and recorded in split screen

Nate's last thinking face occurred about a minute later (starting at line 20), as he shifted from providing background information to describing exactly what happened on the day of the close call: "And the water's going over [the log they have to walk across]. And uh [pause], okay, and-uh, uh [pause]. And it was about -." He was still looking away as he went on to say "6 in the morning", but smiling had replaced his thinking face. After this, he spoke more quickly with fewer and shorter hesitations, none marked with a thinking face.

Summary

Our proposal to treat thinking faces as highly social collateral signals in this story rests, first, on their pairing with similar collateral signals (verbal and sometimes manual) and, second, on their predominant occurrence in the initial and arguably more taxing part of the narrative, often at transition points. The pairing here was asymmetrical: Not every *uh/um* or other verbal signal included a thinking face, but every thinking face in this narrative was introduced or accompanied by some form of verbal collateral signal.

Pointing with gaze and head

The choice of what constitutes "the face" and how to analyze it has been understandably determined by the analyst's purpose. Birdwhistell's kinegraphs (1952, pp. 38–44) included physical descriptions of the face (e.g., medial brow contraction) but also easily recognizable colloquial descriptions (e.g. a "blank face", "rolled eyes", "glare"). He used the same mixture for the head (e.g., "tense medial multiple sweep" and also "full nod up and down or down and up"). In contrast, Ekman and Freisen's (1978) emotion theory proposed that specific emotions activate specific configurations of facial muscle groups, so their analysis used the language of facial anatomy.

As outlined earlier, our communicative theory focuses on what is visible to the interlocutor in the face as whole, including the eyes, head, and their movements. The eyes, their direction, and movements are highly salient, independently of visible muscle actions such as widening or squinting. Gaze serves a number of pragmatic functions in talk. It is well established that, in Western cultures, reciprocal gaze patterns help coordinate turns and addressee feedback. Addressees look fairly constantly at speakers who look primarily around and away; see review in Bavelas, Coates, and Johnson (2002), who also showed that, when a speaker does glance at the addressee, thereby creating mutual gaze, the addressee is highly likely to respond with a back-channel, then the speaker

breaks off and continues. These brief gaze windows permit the necessary feedback without initiating a turn exchange.

Head movements such as nodding or shaking the head are obvious facial gestures. Less obvious is the observation that the head and eyes often move together in the same direction. Turning the head to look is not just a mechanical adjustment; it is more conspicuously visible to an interlocutor than just shifting the eyes. For example, one feature of a thinking face was looking away from the addressee, which often included turning the head.

This section will illustrate another pragmatic use of gaze and head movements, namely, how speakers use their gaze (often along with their head), not to look at something, but *to be seen looking* (i.e., pointing). Streeck (1993) described speakers using these actions to draw attention to co-occurring hand gestures. He found this pattern in his cross-cultural data and proposed that speaker gaze "highlighted" the communicative relevance of a hand gesture:

By visibly orienting to their hand-gestures, [speakers] can make these *overtly relevant* to their talk of the moment and they can indicate to the [...] recipient that attention to the gestures is wanted [...]. Differential gaze-direction thus serves the participants in practically distinguishing between functionally different uses of gestures: not all gestures warrant the same amount and kind of attention.
(p. 295; italics in original)

Gullberg and Kita's (2009) studies confirmed that speakers' shifting their gaze to their hands would indeed "increase the likelihood of addressees fixating the same gestures [...] [and] also increase the likelihood of addressees' uptake of gestural information" (p. 258). Thus, gazing at one's own gestures constituted "a very powerful attention directing device for addressees, influencing both their overt visual attention and their uptake" (p. 259). They went on to propose that speakers' gazing at their own gestures is a social act analogous to verbal deictics:

Speakers can manipulate [addressee gaze], highlighting gestures strategically as a relevant channel of information in various ways. For instance, speakers can use spoken deictic expressions such as "like this" to draw direct attention to gestures, or use their own gaze [...] to do the same thing visually.
(p. 270)

Finally, Gullberg and Kita concluded by noting that the information in their study "was deliberately chosen to be unimportant to the gist of the narratives. It is important to test whether these findings generalize to discursively vital information" (p. 270). Here we analyze Nate's use of head and eye deictics to emphasize a vital part of his close call, namely, to highlight his referential hand gestures that were describing the bulky and cumbersome gear he was wearing, which would

add to his danger when he fell into the river. In Table 3, these pointing gestures are marked in **this font**.

Nate used his eyes and head gestures rapidly and precisely as he initially described the details of his working gear, which included three large planting bags full of small trees (see part 2 of <http://www.replant.ca/rookievideo.html>) as well as water jugs, a duffel bag, and full-length thigh waders. Unknown to Adam at this point, this gear was going to add to Nate's danger when he fell in. It is noteworthy that Nate started these head and eye deictics during the preparatory phase of each hand gesture, thereby first drawing Adam's attention down to the gesture he was about to demonstrate.

The first sequence (7 s long) started at line 24 when Nate said "they're [the planting bags are] sorta **like uh, (pause)**," and assumed a serious, almost didactic face as he looked down at his hand gestures, which demonstrated hanging a planting bag at waist level on his left side. As he went on to say "**THREE BIG BUCKETS, sort of**," he continued looking at his hands as he brought them up and out in front of his chest to illustrate measuring the height of the bucket (between his shoulder and midsection); see Figure 2.



Figure 2. The speaker (on the right) points with his head and gaze at his gestures placing the buckets on his sides (frame 1), then at his gestures showing the height of the buckets." (Lines 24–25 on the transcript in Table 3)

Note that speaker and addressee were sitting vis-à-vis and recorded in split screen

In the next .8 s, Nate momentarily broke off these facial deictics for an aside, "Well, canvas buckets" (line 25, presumably because "bucket" implies a metal container). Simultaneously, he quickly collapsed his measuring hand gesture slightly, looked at Adam, shrugged, and made an interactive hand gesture with his index fingers, marking knowledge that is already shared (the equivalent of "as you know"; Bavelas et al., 1995, p. 395). Still at line 25, as he resumed with "**they're about**" he looked quickly at his measuring gesture before looking up again.

After providing a verbal analogue for the diameter of the planting bags (“they’re about the size of two ice cream pails at the top”), on line 26 Nate described their placement with both hands moving around his body (“**and you have like one on each side**”). His head and gaze followed his hand gestures as far as physically possible, only stopping right before saying (and gesturing) that one was behind him, where he could no longer look. As he said “So I’ve got this on, full of **my water jugs**” (lines 26–27), he again watched his hands, this time pushing both of his water jugs forcefully down to hang on either side of his waist. In lines 27–29, his hands gestured the duffel bag strap around his neck, but it was not possible to point with his gaze and head.

When he mentioned the planting bags again, it was given (not new) information, and there was no gaze and head pointing. At lines 29–30, he added one more thing he was wearing that would become a problem. As he said “**we’ve got these uh thigh waders on**”, his head and gaze again pointed to his hand gestures, which were marking the very top of his legs, indicating how tall the thigh waders were.

Later, at line 65, as he was being carried down the river, Nate resumed pointing his head and eyes at gestures depicting his equipment. Although he had explained that the bags had sucked him into the river, he now explained that “I sorta lucked out, with **my duffel bag sorta wrapped** underneath me?” while directing his head and eyes at his hand gestures, which were wrapping the duffel bag rather haphazardly around his chest. He returned to build on this gesture when he said (at line 68) “**like I had the bag in front** of me” and looked at his hands placing the duffel bag right in front of his chest where, he then explained, it “took away most of the blows” (lines 69–70).

Nate’s pragmatic use of head and eye positions was different from physically similar gestures being used as referential content that was part of a portrayal. For example, at lines 35–36, Nate said “I started to look down at the water, and it started to mesmerize me a bit?” while portraying himself looking down with a mesmerized expression. As he went on to say “Just the, just the rushing rapids, going over the water,” he again portrayed himself, this time as if he were glancing quickly down at the rapids which he had just finished gesturing with one hand. His glance was part of his portrayal of being mesmerized by looking down at the water and was not timed to draw attention to any simultaneous hand gesture.

Summary

As Streeck (1993) concluded,

Even though there are otherwise many intimate and direct connections between speech and gesture, in some ways these two modalities of communication are

linked together by yet another modality, *gaze* [...]. Abstracting the study of these modalities from the overall process of embodied communication (for example by relying on transcripts that only record gesture and speech) not only limits our understanding but also distorts the attributions of function we can make. [...] For example, we might miss the fact that interaction participants make practical distinctions between “descriptive” and “pragmatic” gestures (Streeck & Hartge, 1992). (pp. 295–296; italics added, citation in original)

Smiles have many functions

Smile is a broad colloquial term, and Ekman (1985) proposed that

Smiles are probably the most underrated facial expressions, much more than most people realize. There are dozens of smiles, each differing in appearance and in the message expressed. (p. 150)

He went on to describe many different smiles, assigning them emblem-like meanings: fear, contempt, dampened, miserable, enjoyable-anger, enjoyable-fear, enjoyable-surprise, flirtatious, embarrassment, qualifier, compliance, coordination, listener response, Chaplin smile, and false smile (pp. 150–159). He emphasized that, in his theory, the only smile that expresses genuine positive emotion is the “felt” (or Duchenne) smile (Ekman, Figure 5a, p. 152).

Similarly, after observing smiles from “one part of the United States to another,” Birdwhistell (1970) concluded that

The presence of a smile in particular contexts indicated “pleasure,” in another “humor,” in others “ridicule,” and in still others, “friendliness” or “good manners.” Smiles have been seen to indicate “doubt” and “acceptance,” “equality” and “superordination” or “subordination.” They occur in situations where insult is intended and in others as a denial of insult. Except with the most elastic conception of “pleasure,” charts of smile frequency clearly were not going to be very reliable as maps for the location of happy Americans. (pp. 30–31)

As noted in the Introduction, only Kendon (1975/1990) and Brunner (1979) have provided details on how smiles can function in dialogue.

In our experience with close-call stories, smiles are surprisingly frequent. Such stories are often frightening, but they are not tragedies because both participants know that everything turned out all right. Given the frequency of smiling in these stories, exactly how narrators deploy their smiles within the story bears closer examination. Our analysis of the smiles during Nate’s close-call narrative illustrated the varied and predominantly pragmatic functions of smiles in this dialogue.

Describing smiles is more difficult than describing the gaze and thinking faces above. The term “smile” covers a wide range of mouth positions and related facial actions. Moreover, like words, smiles are polysemic, taking their meaning and function from their immediate context. Physically, most of Nate’s smiles were either slightly upturned corners of his closed mouth or upturned corners over his articulation of words; these varied mainly in duration. At some points, his mouth opened into the full shape of a smile, and especially at the end of his story, his teeth also showed. Thus, in contrast to the movements and positions of hand gestures, physical descriptions are minimally helpful for smiles. For example, the anatomical differences that Ekman (1985) proposed for many different kinds of smiles (e.g., a “dampened” versus “miserable” smile; p.154) are not convincing. Like all gestures, especially those that are not emblems, the functions of facial gestures such as a thinking face, directed gaze, or a smile arise *in the context of a particular moment in the dialogue and in conjunction with the precise words and other actions*. What follows is an attempt to explicate some of these relationships for smiles. Just before Nate began his story, Nate and Adam had been chatting, smiling, and laughing. The moment Nate began his close call at line 1, their faces became more serious (but not grim), which became the baseline for both of them, providing a contrast to other facial gestures, including their smiles. In the text and Table 3, *this font* indicates where Nate smiled.

On lines 1–2, Nate was describing what he was doing (“tree planting”) and where he was doing it (“out in the bush”). As a native of British Columbia, Adam would have already known that tree planting is possible only in remote areas (colloquially, “out in the bush”). At line 2, Nate interrupted himself and with the first part of “*Obviously*,” he tilted his head far to the side, closed his eyes, and made an interactive “as you know” hand gesture (Bavelas et al., 1995, p.395). In addition, during the .33 s he was saying “*Obvi*,” he also raised the corners of his mouth in a smile that, in the context of his self-correction and hand gesture, acknowledged his error. As he finished the word (“*Obviously*”), he looked back at Adam and transitioned into a broad, open-mouthed smile as he *laughed*. Within .7 s, Adam nodded while smiling with him.

A similar but more complex series of smiles occurred at lines 11–12 when Nate was explicitly searching for how to describe the state of the river (“words-words-words-words”). Adam finally helped out, interjecting a succinct summary of what Nate was trying to say about the snow melt and rapids (“Yeah, okay. It’s *dangerous*”) with a slight laugh then a closed-mouth smile. As shown in Figure 3, Nate immediately acknowledged Adam’s summary (“*Yeah, okay, you got the danger part down*”). Nate looked briefly at Adam; then, while nodding, he ducked his head as he had earlier and made the same “as you know” hand gesture, which transitioned into two-handed interactive hand gesture crediting Adam with his

contribution (Bavelas et al., 1995, p.396). For the first .69 s (with “*Yeah, okay*”), he included the same self-mocking smile with the corners of his mouth. Then, as he raised his head, he also transitioned into an open-mouthed smile. Adam had joined in, nodding and smiling broadly with Nate. Then their smiles faded and ended at the same moment.



Figure 3. In frame 2, the speaker (on the right) smiles as he acknowledges that the addressee has, in frame 1, provided the words the speaker was searching for. (Line 12 on the transcript in Table 3)

Note that speaker and addressee were sitting vis-à-vis and recorded in split screen

Nate's next series of smiles began at line 13. He raised the corners of his mouth slightly as he said “*A log bridge*”, followed by a much broader smile and short laugh with “*A LOG*.” Exactly with “*A LOG*”, he also leaned forward, looking directly at Adam while pushing both hands out forcefully to gesture a narrow log in front of him. The narrative context of his emphasis on a narrow log bridge is important here: This is a close-call story where the addressee does not yet know what the close call will be; however, Nate has just emphasized how dangerous the river was. Arguably, Nate's smile was drawing attention to the narrow log bridge over this river, which would turn out to be the site and cause of his close call – a pattern of smiling that repeated each time he added another risky element. These smiles are best glossed as hinting, almost teasing, that “this is going to be a key part of the close call.” Like the smile in line 13 at “*A log bridge*”, Nate's subsequent hinting smiles were partly hidden by his speech articulation movements and often fleeting. Yet they consistently foreshadowed and emphasized each element that was going to make the situation dangerous:

- line 19: “So we have to walk *across this log*.”
- lines 22–23: “basically everybody has to *walk across* the log”
- line 26: when describing the large canvas buckets, with “*one behind you*”

As the danger became more obvious, at lines 27–28, Nate’s smiles became longer and therefore more obvious, for example, as when he said “and to *balance myself, I’ve got this army duffel bag wrapped around my neck*” and used hand gestures to wrap the strap of the duffel bag over his throat. Adam continued to look serious until Nate repeated the key words “the cord of it *around my neck*” and “Got these *planting bags on*” (lines 28–29). As Nate’s smile broadened to show his teeth with the repetition of “*around my neck*”, Adam started smiling with him, although his smile was more tentative and faded out slowly after “Got these *planting bags on*.” Nate would return to each of these dangers later in the story.

At lines 29–30, Nate added further features that would turn out to be key contributors to his danger, including the heavy boots which, as his two-handed gesture had shown, came up almost to his hips. As Nate repeated that he was wearing “as *well, little uh* [pause], thigh waders like gumboot material thigh waders”, he looked up from gazing at his gestures to look directly at Adam, paused, and smiled pleasantly. This smile matched his ironic description of the “*little*” thigh waders. Adam showed that he understood the irony and the danger these long, heavy boots could present by pursing his mouth out in a silent “*whew*” and then wincing.

At line 31, having set the scene, Nate again referred to being less than alert early in the morning, “And yeah, basically, I’m *stunned out of it* at 6 in the morning.” He shook his head with an asymmetrical, wry smile (i.e., “using or expressing dry humour: *a wry smile*. [...] bending or twisted to one side”; *Oxford dictionary of current English*, italics in original). This asymmetrical wry smile reappeared at lines 33–34 with “Everybody’s going *across fine, till-till it’s Nate’s turn*.”

At line 32, it was Adam who initiated a smile at potential danger as he emphasized Nate’s understated “60 pounds of stuff” by interjecting “The bags would be *heavy*”, smiling quickly on the last word. Nate reciprocated as he acknowledged this (“*Yeah, you can tell*”), but in contrast to the smiles that hinted at the danger or were part of the irony or wry humor, this one was barely a smile, more a matter-of-fact acknowledgment.

Nate’s smile and laughing at line 40 were different from those described above because they functioned as part of a 1.07 s portrayal of himself looking at the narrow log that he was now standing sideways on. He quoted himself (“I went ‘Oh god’”) then smiled hesitantly with a *nervous laugh*, while glancing as if at the walk ahead of him, with his hands shaking slightly. At line 41, Nate acted out slipping off the log with arm and leg gestures and a tense, serious face. In contrast, at lines

43–44, Nate looked up at Adam and said “I’m *hanging on to the rope for dear life*, screaming” with up-turned corners in the slightest of smiles. Adam apparently treated this incongruity as ironic humour because he responded with an equally slight smile.

Nate continued with his first-person portrayal, culminating in a falsetto quotation of himself at lines 44–45, “Oh my god, we’re [sic] going in.” (Note that because Nate apparently said “we”, Adam interrupted at lines 50–51 to clarify, “Did you go off one at a – one across at a time?”) From lines 46 to 47, Nate’s face became serious again, as his hand gestures demonstrated how the planting bags contributed to his danger by acting “just like a SCOOP. [brief pause] SUCKED me into the river.”

From the end of line 49 through line 62, Nate’s more serious tone emphasized his hopeless situation with only a few fleeting smiles. One of these occurred at arguably the most dramatic point in the story (lines 59–62): Nate was still hanging on to the rope, and he portrayed himself with his head far back, almost horizontal, with both hands gesturing the water rushing over this head, as he said very slowly,

At this point I knew I couldn’t get out, I couldn’t pull myself out so I-I’m my head is in the water like this and basically it’s – water’s going over my head. *And* it’s really stra – I grew really really calm, and then I just let go of the rope.

His face was neutral except when he looked back up at Adam with a puzzled face and a fleeting smile as he said “*And*” (line 61) as if he still could not explain what he was about to do.

Then, as the river took him, Nate immediately picked up the pace of his story. Two quick smiles shortly after were presumably ironic: At line 63, Nate smiled while saying how he “bounced off the bottom of the log and *got nice* and cut up.” At line 68, he said “I was bouncing down the rapids? But *fortunately*”, he had the bag in front of him. His asymmetrical smile marked the ironic good fortune that the heavy duffel bag, which had contributed to “sucking [him] down the river”, was now protecting him.

The section of the story between lines 36 and 57 included other smiles not yet mentioned here. As it was becoming increasingly clear where and how the close call was going to happen, a series of Nate’s smiles were serving a different function. He was smiling at the same narrative points where he had previously planted each of his hints and was now began to show how they fit into his story:

- At lines 33 and 37, after having stressed the “60 pounds of stuff hanging off me”, he smiled as he said “we’re *walking across*”, then “I’m *walking across* this log” – the narrow log he had described gesturally and smiled at in line 13. His smile was wider this time, although not a full, open-mouthed smile.

- At lines 47–48, he again mentioned “this duffel bag wrapped around my neck”, and in the *slight pause* after gesturally drawing the strap of the duffel bag from his throat to the back of his neck, he smiled quickly, just as he had done when he said “*around my neck*” twice at lines 28–29.
- Also at line 48, he also smiled as he mentioned “the bag going *behind me*” (just as at line 26)
- At line 49, he smiled at “THREE *planting bags*” (as he had at line 29).
- At lines 56–57, he smiled as he said “it’s [the planting bag’s] slowly, slowly *sucking me.*”

This pattern suggests that Nate had indeed been smiling to hint at what would turn out to be key elements of the close call and that now he was showing the connection.

Returning to the main narrative, the next smile at lines 74–75 is referential, as Nate illustrated his co-workers’ reactions after he went into the river. He gestured in the direction of “everybody” on the river bank and smiled broadly as he said “*You know. ’Course everybody’s still still laughing at me*”, but when he continued with “as they realize ‘Oh god, this is serious, he’s toast’”, his smile faded, and he looked serious, as they would have.

As the extreme danger of Nate’s situation became vividly clear, Adam’s facial gestures began tracking each event every second or two with motor mimicry, such as wincing and alarm. However, as described above, Nate himself was often smiling as he related (or hinted at) the danger he was in. A close call story potentially has elements of humour, whether because the narrator had escaped the danger and can now laugh at it or simply because it makes a good story. However, these contradictory elements are awkward for the addressee who is tracking the narrative in real time. The difference in Nate’s and Adam’s facial gestures was particularly apparent at lines 71–72: Nate was smiling as he said “And what happened is *I’m getting sucked under*”, but Adam was reacting with an intense series of motor mimicry. As Nate finished his description, he smiled broadly and *laughed* at Adam’s reactions.

They began to coordinate their facial gestures between lines 79–82. Nate described how an attempted rescue failed, dramatically gesturing the rescuer’s arm reaching out, then his own arm reaching out – not quite far enough. Adam’s reaction was to shake his head and *exhale* as he smiled but quickly changed to a grimace. Nate smiled as he wiped his hand down his cheek in a “that was close” gesture, and they *laughed together*. In this 2 s, they had begun to align on treating this story as both frightening and (in retrospect) funny. After Nate “got OUT of the river”, they began to talk in a rapid dialogue, both of them mixing seriousness and humour. Nate wrapped up his story with “Yeah, that’s my close call story

anyway, it's pretty freaky." They both started laughing and smiling when Adam emphasized "*That IS pretty freaky*", and they ended by *laughing and smiling broadly together*.

Summary

The smiles in this narrative were much more varied than the Duchenne smile that is equated with happiness in emotion theory. Instead, they served many different functions. Only occasionally was Nate smiling as he portrayed himself or others smiling at the time of the close call (i.e., referential smiles). The vast majority were pragmatic, that is, *about* the narration rather than depicting something in the story. Nate smiled to acknowledge that he had started to point out the obvious or that he was being inarticulate. He smiled to mark ironic or wry humor. He smiled to hint about (and later confirm) the importance of key elements of his story. And he often smiled to characterize danger as humorous. The smiles of either Nate or Adam could only be attributed to the emotion of happiness by a circular logic such as,

All smiles indicate happiness.

Nate smiled (at line 2) when acknowledging his error.

Therefore Nate felt happy during the first two syllables of "*Obviously*").

Conclusions

This article began with empirical features that distinguish facial gestures from emotional expressions, specifically that they are timed with and illustrate speech rather than expressing an underlying emotion. Moreover, there is no reason to limit facial gestures to the muscle groups proposed for a theory of emotional expression; interlocutors use positions and movements of the eyes and head.

The descriptive and experimental data reviewed support a communicative theory of facial gestures in face-to-face dialogues and, further, reveal a predominance of pragmatic rather than referential functions. By examining a complete narrative, it was possible to specify how three pragmatic facial gestures were shaped by and shaped their macro- and micro-context. These observations, first, contributed to earlier evidence for thinking faces and for the use of gaze to point at hand gestures and, second, identified the many different pragmatic functions of smiles. The results suggest that there are many more facial gestures waiting to be noticed.

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