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Nancy L. Segal
Glenn E. Weisfeld
Carol C. Weisfeld

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Expression or Communication About Emotion

Paul Ekman

Daniel Freedman was working on his first research grant in 1961 at Langley Porter Neuropsychiatric Institute when I arrived there as a postdoctoral fellow to initiate my research on facial expression and gesture. His interest in behavior genetics, and more broadly in the biological basis of behavior, was at that time quite out of vogue and not at all compatible with my own approach, which strictly emphasized social learning. Over the years the evidence from my cross-cultural research and from Dr. Freedman's cross-cultural studies converged, requiring an evolutionary perspective and recognition that emotional expressions are biosocial phenomena.

The two questions this chapter addresses presume that the reader accepts the evidence that there are universals in facial expressions of emotion. Granting that, the question still can be asked about what it is that we know when we observe a facial expression of emotion. Is it an emotion term, such as the person is *angry, afraid, disgusted, sad, happy,*

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and so forth? Or is it some other kind of message about what is happening inside the person or what the person is likely to do? Should we consider these as messages sent to us, a form of communication, or are they involuntary expressions of an internal state? First I will describe what information can be provided by a facial expression of emotion and then whether it is better to conceptualize these as communication rather than expression.

WHAT INFORMATION IS PROVIDED BY FACIAL EXPRESSIONS?

Consider the expression shown by the woman looking directly out in Figure 1. I took this photograph in 1967 when I was working in the highlands of what is now called Papua New Guinea. Consider the diverse information that someone who observes this expression, totally out of context, just as it appears on the page, might obtain.

- Someone insulted/offended/provoked her.
- She is planning to attack that person.
- She is remembering the last time someone insulted her.
- She is feeling very tense.
- She is boiling.
- She is about to hit someone.
- She wants the person who provoked her to stop what he/she is doing.
- She is angry.

Compare this to the information that can be obtained from the expression shown by another person from Papua New Guinea in Figure 2.

- Someone or something revolted him.
- He is thinking about how to get rid of it.
- He is remembering the last time he was revolted.
- He is feeling nauseous.
- He feels like he's on a roller-coaster.

Figure 1

Woman in New Guinea Highlands, 1967. Copyright Paul Ekman, 1980. Ekman, P. (1980). *Face of Man: Universal Expression in a New Guinea Village.* New York: Garland. Used by permission.

- He is going to leave.
- He wants the person who revolted him to stop what he/she is doing.
- He is disgusted.

Each expression provides very different information, yet they both provide information about the same seven kinds or *domains* of information.

Figure 2

Man in New Guinea Highlands, 1967. Copyright Paul Ekman, 1980. Ekman, P. (1980). *Face of Man: Universal Expression in a New Guinea Village.* New York: Garland. Used by permission.

1. The antecedents, the events that brought about the expression;
2. The person's thoughts: plans, expectations, memories;
3. The internal physical state of the person showing the expression;
4. A metaphor;
5. What the expresser is likely to do next;
6. What the expresser wants the perceiver to do;
7. An emotion word.

Note that Hinde (1985a) made some of these distinctions in his discussion of expression, as has Smith (1985).

We do not know which information domains those actually engaged in a conversation derive from each other's expressions. It could be only one information domain or all of them. Which it is may depend on who those people are, how well they know each other, what they are talking about, their social class, and their culture. In other words, we do not know the answer, and there is no certain way to find out.

The people involved in the conversations could not tell us. Even if we interrupted an individual and asked her what she thought when she saw a particular expression on the other's face, we would not find out. For she could only tell us what she thinks happened. Although that is interesting to know, it is likely to be a retrospective construction, not what actually happens when the expression first registers. The initial translation of an expression into some meaning (any one of the information domains listed) is likely to be so immediate that we are not aware of the process we go through. Darwin noted this in saying, "It has often struck me as a curious fact that so many shades of expression are instantly recognized without any conscious process of analysis on our parts" (1872/1955, p. 359).

There are exceptions, of course, when we ponder the meaning or significance of an expression. This happens when an expression is unusual or its occurrence at a particular moment in time is incongruous with everything else that is happening. Then the persons trying to figure out the meaning of the expression are quite aware of their thought processes, but these may not be the thought processes that are typically involved when expressions are translated into meaning immediately.

Although we cannot find out what people actually do, we can find out what they *can* do. We can determine if each of the domains of information listed earlier *can* be derived from an expression. We know that if we show people a facial expression of emotion they will agree in their choice of which emotion word (anger, fear, etc.) fits the expression. But what if we ask them to choose which plan a person is making, which event preceded the expression, which sensations might be felt, and so forth? A

preliterate people that Friesen and I studied in Papua New Guinea (Ekman, 1972) and another such group that Karl Heider (unpublished, described in Ekman, 1973) studied in West Iran had no trouble identifying the events associated with particular facial expressions. Rosenberg and Ekman (1995) also found that Americans show similar agreement. To my knowledge no one has yet determined whether each of the other information domains I listed can be derived from facial expressions. That work could be done, and I expect it would find that agreement is good for each domain of information. Facial expression can provide, I believe, each of these different types of information, but that is not a demonstrated fact within or across cultures.

I think we use emotion words—*anger, fear, disgust, sadness,* and so forth—as a shorthand, an abbreviated way to refer to the various events and processes that make up the phenomenon of emotion. Each word refers to a different set of these organized, integrated processes. When someone says or thinks—that woman is angry or that man is disgusted—we do not know which of these events or processes they are considering or if they are actually considering any of them. It is much more convenient, if less precise, to use the single emotion term than to list, as I have in these examples, the various information domains that term encompasses. But remember, as my examples show, I know very different sets of information for *anger* than for *disgust.*

I expect that most people who use emotion words use them in this short-hand fashion, but we do not know if people in all cultures do so. If we were to show people a videotape of an expression and ask them to tell us about the person, I expect they would use these emotion words more often than they would describe an antecedent event or what the person is about to do next, or any of the other information domains I have listed. Perhaps the tendency to use emotion terms (*anger, fear,* etc.) rather than antecedent events, sensations, consequent acts, is related to education, with more educated people more likely to use the emotion terms. Also, in research it is easier to write a single word than many words, and this may bias people to use them.

When an expression is seen out of context, alone without the usual accompaniments of speech, body movement, posture, and knowledge of what is transpiring, the expression does convey information, but not as much information as when it is seen in context. When the observer has no ongoing relationship with the person who shows the expression, no past experience, no current knowledge or intended future, then the information provided by the expression cannot be as precise. The reader cannot know, for example, what is revolting the man in Figure 2, not even whether it is someone's social action or a taste of food he just had.

In actual life we never see a facial expression of emotion totally out of social context, unless we glance at a magazine. Even when we see an expression on the face of a stranger who walks by on the street, we have contextual information—the person's dress, gait, what we know about the types of people who at that time of day are in that location, and so on. To remove an expression from its social context and then ask us what it means is to put us into a unique situation, deprived of all the other sources of information that we use to amplify, make more precise, and confirm the information we get from an emotional expression. Yet, standing alone, facial expressions of emotion do have meaning and provide information about each of the domains I listed. Whether the information is accurate or not is a different matter. My research (Ekman, 1985) has shown that most people can quite successfully lie with their facial expressions, but careful measurement can usually unmask such attempts.

Before moving on let me describe the specific situations in which the expressions shown in Figures 1 and 2 occurred. I did not know that in this culture a single man endangers himself and a single woman by paying obvious attention to her in public. I did just that and photographed the reaction she showed in Figure 1. No one then knew what a camera was. I moved away, and others who saw what happened probably excused my behavior, knowing I was a well-meaning but uncivilized person. The man in Figure 2 was watching me eat some of the canned food I had brought with me. His reaction to my food was similar to my reaction to some of the food he would often eat.

WHAT SHOULD WE CALL THESE EXPRESSIONS?

Now let us consider whether we should call these expressions or communications. In an article titled, "Was the 'Expression of the Emotions' a misleading phrase?", the ethologist Robert Hinde said, "The phrase carries the implication that the behavior Darwin studied involved simply the expression of an internal state" (1985b, p. 985). Margaret Mead described her very similar dissatisfaction with the term *expression* in the introduction she wrote to a now out of print edition of Darwin's expression book: "When we substitute the word *communication* for Darwin's word *expression*, each of his questions, asked with such vigor and acumen . . . can be asked anew" (1955, p. vi). I also was uncomfortable with this term. In my first book *Emotion in the Human Face* (co-authored with Friesen and Ellsworth), I wrote, "I have avoided the phrase *facial expressions* because it implies that some inner state is being manifested or shown externally" (1972, p. 3).

There seems little doubt that what we were all objecting to —the idea that expressions make manifest an internal state—is precisely what Darwin meant by using that term in his book *The Expression of Emotion in Man and Animals*. He wrote about "expressions of our feelings by certain movements" (1872/1955, p. 14), that actions that "regularly accompany a state of mind are at once recognized as expressive" (p. 349). Facial movements, he said, "reveal the state of mind" (p. 356).

I have come to think that there is nothing wrong per se with the word *expression*, for these facial movements are outward manifestations of changes that have occurred and are occurring internally in the brain. Information about some antecedent event has been processed and evaluated, setting off the cascade of events that make up emotion: Memories are being retrieved, expectations formed, plans made, actions may be about to occur, and sensations may be felt. All of this does happen internally, in the brain. Expression is part of those changes and a sign that those changes are happening.

Although some have argued that the use of the term *expression* might imply that the focus is only on internal states, ignoring the impact of expressions on others who perceive them, that is not necessarily so. Facial expressions do communicate information, but we have to be careful, because the word *communication* may seem to imply that expressions are made intentionally to send a message. Although people can make facial movements deliberately to send a message, facial expressions of emotion are not so made. Darwin noted that emotional expressions are involuntary but he noted that "such movements may be voluntarily and consciously employed as a means of communication. Even infants, if carefully attended to, find out at a very early age that their screaming brings relief, and they soon voluntarily practice it" (1872/1955, p. 355). Darwin was not comfortable with making this distinction, however. A page later he wrote, "In the course of the foregoing remarks and throughout this volume, I have often felt much difficulty about the proper application of the terms, will, consciousness and intention" (p. 356).

Although Darwin correctly recognized the importance of distinguishing facial movements made deliberately to communicate from involuntary emotional expressions, it is understandable that he found this distinction difficult. So too do most ethologists today. Most of those who currently study animal communication simply do not consider whether the animals make a signal intentionally to communicate or not. No doubt it is often difficult to know which is which when dealing with animals that you cannot ask and that do not speak when they also show expressions.

VOLUNTARY VERSUS INVOLUNTARY

Just because it is difficult does not mean we should not consider it. Such thinking would return us to the worst days of behaviorism when many psychologists would not consider that people think because there was no way to observe thoughts directly! The question of what generates emotional expressions—are they intentionally made to send a message or unintentional signs of what is happening?—is fundamental to our under-

standing of expression and of emotion. Although it has become fashionable (Hinde, 1985a; Zivin, 1985) to avoid dichotomies such as voluntary–involuntary, or intentional–unintentional, nature may not avoid them. Clearly there are actions that are totally involuntary, such as the startle reflex, and actions that are totally voluntary, such as my decision to use the word *decision* in writing this sentence.

I propose that all facial expressions of emotion are involuntary; they are never voluntarily or deliberately made. Note, I say all *facial expression of emotion*, not all facial movements; facial expressions of emotion are a subset of facial movements, as I will explain shortly.

When an emotion occurs, impulses are always sent to the facial muscles. There is no choice about that. We can choose to try to interfere with the appearance of that expression, we may be able to interrupt the action of the facial muscles or dampen them so that nothing is visible, but we cannot choose to prevent the impulses from being sent to the facial nerve. We can also choose to make a set of facial movements that resemble a facial expression of emotion, but it will differ detectably from an emotional expression.

My claim that all facial expressions of emotion are involuntary is controversial. Many would argue that they are voluntary or that it does not matter if they are voluntary or involuntary, intentionally made to communicate or not. Perhaps it is because part of my own research focuses on lies (Ekman, 1985/1992) that I find it so important to make this distinction. Sometimes the liar's emotional expressions betray the lie, despite the liar's intention to mislead. That is because that expression is involuntary. And lies sometimes succeed because the liar *has* managed to fabricate something that closely resembles an emotional expression and it is believed. The liar has managed voluntarily to produce something that looks as if it is an involuntary expression.

It is not just when dealing with humans and more specifically with their lies that it is necessary to consider whether expressions are involuntary or not. A central argument today about the nature of signaling among all animals is whether their signals are reliable or serve to manipulate and exploit those who see them.

FOUR MISTAKEN BELIEFS ABOUT FACIAL EXPRESSIONS

There are four reasons why so many of those who study human and animal communication believe it is *not* important to consider intentionality and the issue of whether expressions are involuntary. It is a result, I think, of four mistaken beliefs, which I will explain: (a) if I get a message someone must have intentionally sent it; (b) if expression is ever absent when emotion is present then expression must be deliberate; (c) if some facial movements are voluntary, and all facial expressions are facial movements, then facial expressions of emotion must be voluntary; and (d) everything that happens, including expressions, when people converse is done to send messages.

Mistake 1

We are informed by many actions a person performs that are not intended to send a message to us. Suppose we see someone fall over dead from a heart attack. The last look on that person's face as they feel acute pain, the death rattle, the slump to the ground—these ghastly actions and sounds provide us with very important messages. We are informed by them, but that does not mean the person made that expression, slumped to the ground, and groaned to send us the message "I am dead." These signs are not made to send a message to us, even though we get the message.

Consider a less extreme example. If someone burps, we are informed about their gastrointestinal activity, and perhaps also about their manners. In Western cultures "polite" adults do not burp to send a message "my stomach is upset" or "I ate too fast" or "I really enjoyed that morsel." That does not mean that burping cannot be so performed. Children often burp intentionally, but that does not mean it is *always* done intentionally. And in some cultures burps are required comments on how satisfactory the meal was. Incidentally, I expect that a student of burps would be able to detect the difference between those that are performed to send a message and those that escape the person's attempt to inhibit them.

Facial expressions of emotion are highly *informative*, but they are not

intended by the person making them to be so. They may have been shaped and preserved by evolution because they are informative, but that refers to their origin, not to how and why they occur in our current lives. Other types of facial movements that I will describe shortly are not simply informative; they are intended by the expresser to communicate a message to the receiver.

Mistake 2

Having dismissed then the first false belief—if I get a message someone must have intentionally sent it—let us consider the next one: If expression is ever absent when emotion is present then expression must be deliberate. That logic presumes that facial expressions of emotion are either like reflexes or like words. They are neither. If facial expressions of emotion were reflexes, such as the startle, it would be nearly impossible to interfere with them and totally suppress their appearance. That is not so for facial expressions of emotion. It is possible for most people to inhibit, through deliberate choice of the moment or overlearned habit, their involuntary facial expressions of emotion. Not always, not everyone, but sometimes. It is well known that the facial nucleus, the staging point for impulses that travel to the muscles to produce the contractions that we see as a visible change in facial appearance, receives impulses from many different parts of the brain.

We all know that we can voluntarily make many (but not all) facial movements. My own research (Ekman, Roper, & Hager, 1980) identified which are the easiest and hardest to make and how early in life it is possible to voluntarily perform them. We also know that we can, to some extent, inhibit facial expressions of emotion; but there is no parallel research that documents just how well this can be done for every emotional expression, at varying levels of intensity, at different ages. Although my work on this (Ekman, O'Sullivan, Friesen, & Scherer, 1991) is much more limited we did find that individuals differ in their ability to inhibit involuntary facial movement.

The fact that an emotional expression can be inhibited does not mean that when an expression does occur, when it is not inhibited, it is made

deliberately to send a message. For most people inhibition is not easy when an emotion begins abruptly and is strong. That is because the involuntary impulses to make the expression travel quickly to the facial nucleus to produce large contractions of the muscles when an emotion is intense. Some people will be able, some of the time, to block or dampen those impulses. If measurements were made, I believe evidence would be found of the impulses to make the expression and the impulses that attempt to squelch it.

Individuals differ not only in how easily they can inhibit expressions, but also in whether they typically do so or not. Thus we know that some people are "poker faced" and others nearly always reveal exactly how they feel even when they do not want to. There are not only these individual differences, but cultural groups differ also in when they call for the management of facial expressions. It is worth digressing a bit to explain these cultural differences in the management of expression, because the failure to recognize these differences has led to much miscommunication between members of different cultures. For example, Americans act more friendly than they really are; Japanese smile even when they disagree or do not like what is occurring; and so forth.

Ekman and Friesen (1969) coined the phrase *display rules* to designate attempts to manage involuntary expressions of emotion that include attenuating, amplifying, inhibiting, or covering the involuntary expression with the sign of another emotion. Display rules specify not only what type of management is required, but when, in what social situation. For example, when the winner is announced in a beauty contest and the final contestants stand on stage, all those who find out that they have lost follow the display rule of inhibiting any sign of disappointment or anger. Instead they mask those feelings with a smiling sign of happiness about the winnèr's success. The only one who cries when the announcement is made is the winner. She is the only one who no longer has to follow the display rule that the loser does not cry. The distress she was anticipating if she lost emerges.

Display rules are learned, should vary across cultures, and may differ among distinct social groups within a culture. Our study of display rules (Ekman, 1972) found that Japanese more than Americans attempted to

conceal negative emotional expressions in the presence of an authority figure, using a masking smile. In this very same study we found no difference in the facial expressions of Japanese and Americans when they watched unpleasant and pleasant films when they were alone. We had predicted that when we brought a scientist into the room to watch the films with them, they would show different facial activity. In response to a respected person, Japanese would follow the display rule to mask negative emotion with a polite smile. No one has yet delineated all of the display rules within any culture, although there has been considerable research about how and when young children learn display rules (Saarni, 1979). It is worth noting two studies in progress that further support this logic regarding display rules. Kupperbusch (1996) repeated part of our Japanese–American display rule study, but whereas we had studied males in both cultures, she is studying just females in the United States. When watching unpleasant films, there was a decrease in their negative facial expressions when an authority figure was present. Tsai (1996) in her doctoral dissertation examined couples in which both members were Chinese–American and couples in which both were Caucasian–American, when they attempted to resolve a conflict. Only the Chinese–American couples showed less autonomic nervous system activity when an authority figure was present.

A display rule may be such an overlearned habit that it operates automatically without the person considering what to do or even being aware of managing the expression. Or the display rule may have been performed so rarely that it is not an automatic habit but an ideal to follow. In the latter case the person will be more likely to be aware of trying to manage the expression when it operates and could readily choose not to do so.

It is not certain how often people in any culture show facial expressions that are not managed by display rules. I expect that some display rules are so well established that some people may follow them even when they are alone. And some people when alone may imagine the reactions of others, and then follow the appropriate display rule, as if the others were present. And finally, there may be display rules that specify the management of expression not just with others but when alone.

The fact that expressions may often be managed by display rules, and that sometimes this management is voluntary, does not mean that the facial expressions of emotion that are being managed are also voluntary. If they were voluntary there would be no need to manage them. It is precisely because facial expressions of emotion are involuntary that we learn to manage these expressions, sometimes succeeding in totally inhibiting their visible appearance. The capability to inhibit an expression of emotion or modify it does not contradict my claim that the impulse for the expression is itself involuntary.

Mistake 3

We have now dealt with two of the mistaken beliefs about facial expressions of emotion that have led many scientists to ignore the question of whether signals are intended to send a message and whether emotional expressions in particular are involuntary or voluntary. First, we disposed of the belief that if you get a message someone must have intentionally sent it. We can be highly informed by actions that were not made for the purpose of informing us. Then we examined the idea that if an expression is ever absent when emotion is present, then expression must be deliberate. The fact that we can sometimes choose to inhibit or otherwise manage our emotional expressions does not mean that the emotional expressions are also voluntary actions that we can choose to make or not. Now let us consider the third mistaken belief: If some facial movements are voluntary, then emotional expressions must be voluntary.

There is no question that there are many voluntary facial movements, and shortly I will describe some of them. But that does not mean that facial expressions of emotion are also voluntary. The facial muscles are not dedicated just to the display of emotional expressions, they are deployed for many different kinds of actions. It is a mistake to not recognize that the face is a multisignal system—to not grasp that there are a number of voluntary, intentional facial signals, in addition to the involuntary emotional expressions. The tricky part is that some of these voluntary facial movements are intended to resemble an emotional expression.

Facial movements occur to accomplish various activities such as kiss-

ing, eating, speaking, spitting, and so forth. Facial movements may also be deployed to symbolically communicate in the same way that hand gestures can send a message. The wink is such an example. These facial movements—the symbolic gestures or what Friesen and I have called *emblems* (Ekman & Friesen, 1969) are as deliberate as the choice of a word and as easy to *not* make as it is to choose not to speak or not say a particular word.

Another related set of facial movements is what I have called *conversational signals* (Ekman, 1979). Here a facial movement is used much as the hands can be to illustrate speech as it is spoken. Facial movements, typically the eyebrows, accent, underline, or provide syntax for the speech as it is spoken. Although these conversational signals may be deliberately made, they often occur involuntarily, just as a momentary increase in the loudness of the voice to emphasize a word, or rising intonation contour at the end of a sentence to mark a question, occurs without deliberate choice.

The fact that these conversational signals are usually involuntary may seem confusing, for so are facial expressions of emotion. But conversational signals and facial expressions of emotion differ in three ways. Most important, the conversational signals are part of the structure of the conversation, part of the flow of talk, and governed by the rules that govern the production of speech. Although 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.

The second way to distinguish conversational signals from facial expressions of emotion is by the scope of the facial movements deployed. Conversational signals are almost without exception limited to a single facial movement in one region of the face—most often an eyebrow raise or lower, sometimes a raised upper eyelid or tightened lower eyelid, or pressed lips. The facial expressions of emotion usually involve activity across the face, although attempts to manage an expression may result in a more limited display. A third difference is that conversational signals typically utilize easy-to-make facial movements, whereas some of the

movements involved in facial expressions of emotion are hard to perform deliberately.

There are two other types of facial movement that are most often confused with facial expressions of emotion. *False expressions* are intended to be so confused, resembling as closely as is possible the expression they resemble. The person who makes a false expression intends to create the impression in the perceiver that an emotion is actually being felt when it is not. My research, and the research of many other investigators, has found it possible to distinguish false from true expressions of enjoyment (Ekman, 1992a). I believe it would be possible also to distinguish false from emotional expressions for the other emotions. The signs that distinguish facial expressions of enjoyment from false facial expressions of enjoyment are subtle. They are detectable by careful, precise measurement. They can be spotted as they occur by those who know what to look for, but most people miss those signs and are misled by false expressions (Ekman, Friesen, & O'Sullivan, 1988).

The other type of facial movement that resembles a facial expression of emotion is intended not to be confused with it. These are what I have called *referential expressions* (Ekman, 1979). These typically occur during conversation, when the speaker refers to an emotion not being felt now but that was felt in the past or might be felt in the future. 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.

Such referential expressions are transformations of emotional expressions, typically changing the time course and the scope of the expression. In my example, just the mouth movement not the changes in the eye and brow area is used to refer to fear not felt now, and it would be likely to be made very quickly, much more quickly then the actual expression of emotion would be. Time is often stretched out in mock referential expressions, in which the reference is not just to emotion not felt now but adds a humorous note as well to a reference to not feeling the emotion.

An example is holding a smile much too long on the face to state that enjoyment was not felt.

Referential expressions must differ from the true emotional expression for two reasons. If they resemble the actual expression of emotion the perceiver might be confused and think the expresser feels that emotion now. And if the full expressions were to be made, there is a possibility that the person will begin to reexperience the emotion. My research (Ekman, 1992a) has shown that assembling on one's face all of the movements found universally for an emotional expression often produces distinctive changes in both the autonomic nervous system and the central nervous system, changes that occur when the emotion is brought about by more usual means.

Referential expressions may be either voluntary, chosen deliberately at the moment with awareness of the choice, or involuntary, occurring by habit, or much like the words spoken, emitted without awareness of the processes by which the words are chosen. In this way they differ also from facial expressions of emotion, which I propose can never be voluntary. They also differ from facial expressions of emotion, as I described, in terms of the scope of facial movement, which is more limited, and the duration, which is shorter or longer than the usual expression of emotion.

The psychologist–psychoanalyst Rainer Krause (1995, personal communication) in response to a lecture I gave about these distinctions suggested another type of facial movements that resemble but are not emotional expressions, which he has often observed in psychotherapy sessions. The patient in giving an account of another person's actions and emotions enacts that person's emotions. These *emotional role-playing* actions may be referential, referring to the emotions the other person was manifesting. Or, the person who is giving the account may actually not simply put on a facade, but in his or her actions may "become" for a few moments that other person. When that happens I expect the person would not show referential expressions but actual emotional expressions. The person is then not talking about the other person's emotions, but actually experiencing the other person's emotions as they depict that person.

Mistake 4

The last mistaken belief that may have led to the failure to recognize the involuntary nature of facial expressions of emotion is based on the belief that because expressions often occur when people talk to each other they must simply be another kind of signaling language. Because people choose to converse, and at least some of what they say is deliberately chosen, the logic of this mistaken belief presumes that emotional expressions must also be chosen to send a message to the receiver. The mistake is not to recognize that emotional expressions are involuntary reactions to what is transpiring in the conversation.

The most extreme version of this mistaken view was forwarded by Kraut and Johnston (1979) and later resurrected by Fridlund (1991). Both sets of research noted that some facial expressions of emotion occur more often when people are with others than when they are alone or not being observed by another person. Inexplicably they then argued that these emotional expressions cannot be emotional, for if they were they would occur only when people are alone, not just when they are with others. These expressions do not have anything to do with emotions, these psychologists maintain, they instead should be considered as signals of what the person is going to do next.

There are two fatal flaws in such reasoning. First, the investigators fail to recognize that some emotional expressions do occur when people are alone. And display rules that prohibit the expression of some emotions in some social contexts may result in some emotional expressions being shown more often when alone than with another person. Even more serious is their failure to understand what emotion is about, a failure to understand when emotions occur and what they accomplish.

Emotional expressions will often occur during interaction with another person, for our emotions are most often aroused by the actions of others. I believe

> the primary function of emotion is to mobilize the organism to deal quickly with important interpersonal encounters, prepared to do so

> in part, at least, by what types of activity have been adaptive in the past. The past refers in part to what has been adaptive in the past history of our species, and the past refers also to what has been adaptive in our own life history. (Ekman, 1992b)

Given such a view of emotion, there is every reason to expect conversations or more broadly social interactions will be the chief occasion when emotions are aroused and emotional expressions will be manifest. Of course we can and do have emotions when we are neither in the presence of others nor imagining that we are. Emotions occur, for example, in response to nature (thunder, a sunset, a tornado), to other animals (a dog's attack or attachment behavior), to the loss of physical support, auto-erotic activity, and so forth.

Facial expressions of emotion not only occur in response to the actions of others, but they commonly occur in response to what others say or while we are saying something to others. They are not governed, however, by the process of speech itself, by syntax rules for example, but as I noted earlier they occur in response to the meaning of what is said. The contrast between language and emotional expressions is an important one.

Johnson-Laird (1990), introducing a book on communication, wrote,

> All human groups speak a language, and all human languages have a grammar and a lexicon. The lexicon always has words for dealing with space, time and number, words to represent the true and false, and words for communicating logical relations . . . the power of language derives from three principal factors: First the lexicon provides speakers with a large repertoire of individual symbols (words). Second, the grammar enables these symbols to be combined into an unlimited number of distinct symbolic messages (sentences). Third, these messages are not under the immediate control of the local environment. They can be intentionally used to refer to other states of affairs including those that are remote, hypothetical, or imaginary. (pp. 6–7)

In a similar vein George Gaylord Simpson wrote in 1967

> Language is . . . the most diagnostic trait of man; all normal men have language; no other now living organisms do. . . . In any animal societies . . . there must be some kind of communication in the very broadest sense. One animal must receive some kind of information about another animal. That information may be conveyed by specific signals. . . . They reflect the individual's physical, or more frequently, emotional state. They do not, as true language does, name discuss, abstract or symbolize. They are . . . emotion signals not discourse. (p. 32)

Facial expressions of emotion unlike language cannot be performed voluntarily. Expressions of emotion have a much more limited set of referents than language. There is no syntax or grammar, and they are compelled in a sense that speech is not.

RARE OR FREQUENT OCCURRENCE

The last matter to consider, although briefly, is whether or not the universal facial expressions of emotion are common in social life or rarely seen. It has become fashionable of late to argue that even if there are universal expressions, they are not seen often (Cornelius, 1995; Russell, 1995). It is foolish to generalize about social life as if it is made of one cloth. Facial expressions of emotion are frequently seen in highly emotional situations, such as when disturbed couples attempt to resolve conflicts (Gottman, J., personal communication, 1995). Of course in some highly charged emotional situations, people will be highly motivated to conceal their emotions, and some may succeed. And some people will always attempt to conceal their emotions, in any situation. Emotional expressions are infrequent when emotions are not experienced. Unfortunately most of the experiments psychologists have designed to study emotion have been quite arid, not likely to elicit robust emotional reactions, with rarely any verification that emotion has occurred other than self reports that are vulnerable to demand characteristics. We should not draw any conclusions about the

absence of emotional expressions in such studies, other than about the inadequacy of the experimenter's ingenuity.

CONCLUSION

I have suggested that seven different classes of information may be conveyed by a facial expression of emotion: antecedents; thoughts; internal state; a metaphor; what the expresser is likely to do next; what the expresser wants the perceiver to do; or an emotion word. I have also argued that facial expressions of emotion are involuntary, although we can voluntarily try to interfere or disguise these expressions. Emotional expressions do communicate information to conspecifics, and that is important in understanding their evolution, they are not deliberately made in order to communicate. I have challenged the views of those who say we should not call these *expressions* but *communicative signals,* those who argue that they are unrelated to internal state. Instead I have shown these are two sides of the same coin, and that the failure to recognize this is based on four misunderstandings about the nature of expression.

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