
INTERPERSONAL RELATIONS AND GROUP PROCESSES

What You Say and How You Say It: The Contribution of Speech Content and Voice Quality to Judgments of Others

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In three studies, judgments based on separated channels (speech content, voice quality, face alone and body alone) were correlated with judgments based on combined channels (speech, face+speech, and face+body+speech). The judges observed spontaneous behavior in two different types of interview situations and rated various aspects of the behavior. Correlations between separated and combined channels varied significantly depending on the kind of behavior judged, the attribute rated, and whether other channels of information were available.

What happens when one person judges the personality or emotional state of another person? Is the judge most influenced by the information derived from the face (Mehrabian & Ferris, 1967), the body, speech content (Krauss, Apple, Morency, Wenzel, & Winton, 1981), or vocal quality (Zuckerman, Amidon, Bishop, & Pomerantz, 1982)? Many paradigms have been used to answer these questions. Most popular has been the use of multiple regression procedures to estimate the relative contributions of verbal and nonverbal channels to criterion judgments based on the ratings of a group of judges who saw and heard the combined verbal and nonverbal channels on videotape or film. In this paradigm, other groups of judges rate the same stimulus persons after viewing only their faces or only their bodies, or hearing their voices or reading a typescript of their speech. The judgments based on these separated channels

are then correlated with the combined channels criterion judgments.

In a series of studies using this design, we (Ekman, Friesen, O'Sullivan, & Scherer, 1980) found that the separated channel judgments that correlated most highly with criterion judgments varied as a function of the particular attribute being rated as well as with the truthfulness of the person whose behavior was judged. This last factor produced particularly striking results. When stimulus persons honestly described their positive feelings, judgments based on verbal and nonverbal channels contributed equally to multiple regression equations predicting the criterion judgments. When the stimulus persons were deceptive about their negative feelings, however, different multiple regression patterns resulted. Whatever the attribute, judgments based on speech were most highly correlated with the combined-channels criteria.

The purpose of the present study was to determine which speech component—content or voice quality—correlated more with impressions formed on the basis of the total speech, face+speech, or face+body+speech, and whether these correlations varied, as was found earlier, with the attribute rated and the truthfulness and affect state of the stimulus persons.

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Method

Stimulus Materials

Black and white videotapes and audiotapes were obtained in a laboratory situation developed to study deception (Ekman & Friesen, 1974). Fifteen female student nurses (the stimulus persons) were recorded in two standardized interviews. In both interviews, the stimulus persons watched a short film and answered an interviewer's questions concerning their feelings about it. In the honest interview, the stimulus persons were in a relatively un-stressful situation. Nature films designed to elicit pleasant feelings were shown, and stimulus persons were instructed to describe their feelings frankly. In the deception interview, stimulus persons viewed a film showing amputations and burns, intended to elicit strong unpleasant affect. They were instructed to conceal negative feelings and to convince the interviewer that they had seen another pleasant film. Thus, in the deception condition, the stimulus persons viewed a highly stressful film and had the additional stress of deceiving the interviewer. A variety of data from other studies of comparable stimulus persons in this experimental paradigm (Ekman & Friesen, 1974; Ekman, Friesen, & Scherer, 1976) suggested that the stimulus persons were highly motivated to succeed in this deception and that strong emotional states were elicited in the deception interviews. The stimulus persons were not informed that they had been videotaped until the experiment was finished. These interviews provided behavior samples from two interpersonal situations that differed both in affect experienced and in frankness of expression. Although an exact description of these two situations is *positive affect described honestly* and *negative affect described dishonestly*, for ease of reading they are referred to as *honest* and *deception*.

One-minute segments from the start of each honest and each deception interview were edited in a randomized order onto two videotapes in such a way that each stimulus person was represented in only one situation (honest or deception) on each videotape. Each tape contained 15 interviews, about half of which were honest and the other half, deceptive. (Each experimental tape was preceded by two practice interviews of stimulus persons who were not used in the experiment.) The videotape showed a head-on view of the stimulus person seated in a chair, with the entire face and body (including the feet) visible.

Channel separation was achieved as follows: The *voice-quality* channel was produced by subjecting an audio recording of the same interview segments in the same order to a content-filtering procedure. A Krohn-Hite Model 3341 filter was used to low-pass filter the speech signal at around 400 Hz. The exact cut-off was determined independently for each speaker because the fundamental frequency of the voice determines the intelligibility of speech depending on the cut-off level. (Voices with a lower fundamental frequency have to be filtered at a lower cut-off level to make them unintelligible.) As with all the materials used in this study, two practice interviews preceded the actual rating session. No subject reported understanding the content of the filtered speech.

The *speech-content*¹ channel was produced by typing verbatim typescripts of the interviews contained on the videotape. The remarks of both the stimulus person and

the interviewer were given. Speech disfluencies such as *uhs* and excessive *you knows* as well as slips of the tongue and throat clearings were eliminated. Each stimulus person's interview was typed, double-spaced, on a single page. The typescripts varied in length from 5 to 14 lines.

The total-speech channel was produced by turning on the audio and darkening the video screen. The body channel was produced by blocking the face on the video monitor, and the face channel, by blocking the body. In the face+speech condition, the body was blocked and the audio turned on. In the face+body+speech condition, the entire video screen was visible and the audio was turned on.

Rating Scales

Fourteen 7-point bipolar adjective scales were used (see Table 1). An attempt was made to include scales relevant to personality (e.g., outgoing-inhibited) and emotion (e.g., calm-agitated) as well as to the interview conditions (e.g., honest-dishonest). The scales in Table 1 are grouped on the basis of factor analyses performed in a previous study (Ekman et al., 1976). Each of the first three groups of scales represents a stable factor; the last four scales do not load consistently on a group factor.

Judges and Procedures

Fourteen groups of judges were used, two for each of the seven conditions (face, body, speech, face+speech, face+body+speech, content, and voice). No judge heard or saw a stimulus person in both her honest and deception interviews. Data from the judge groups for the first five conditions were reported previously (Ekman et al., 1980); the data from the other four groups of judges and the relationships among these variables are new. The judge groups, undergraduates in psychology classes at the University of San Francisco, ranged in size from 11 to 22. They participated in the experiment in return for credit toward their class grade. All judges were native-born Americans. Although most were Caucasian—Afroamericans, Hispanics, and Asians were also represented; about 60% were female. The judges were not told that deception was involved in the interviews. Each stimulus person was rated on all 14 scales immediately after each one-minute interview segment.

Our earlier studies (Ekman et al., 1980) reported multiple correlations between criterion ratings of combined channels and predictor ratings based on separated channels. This methodology gives the relative weights among a set of predictor variables, but it does so at the cost of concealing the complexity of the relationships among the variables involved. For instance, a variable significantly correlated with a criterion may not qualify for inclusion in a regression equation because its variance is already represented by another predictor variable.

¹ The term *content* is used to describe this channel because it is familiar and has been used before. It is not an ideal description because the typescript contains information such as grammatical usage, word choice, verbosity, and the like, which are not synonymous with content.

Table 1
Correlations Between Speech Judgments and Judgments Based on Speech Content or Voice Quality

Judgment	Condition			
	Honest		Deception	
	Content	Voice	Content	Voice
Outgoing-inhibited	-082	707**	743**	663**
Expressive-unexpressive	300	760**	910**	435
Sociable-withdrawn	063	653**	808**	575*
Calm-agitated	-482	322	820**	584*
Natural-awkward	-272	753**	644**	529*
Stable-unstable	-174	645**	515*	471
Relaxed-tense	-123	653**	745**	566*
Honest-dishonest	-320	616*	450	209
Sincere-insincere	-342	389	626*	165
Trustworthy-untrustworthy	-143	308	801**	175
Dominant-submissive	533*	682**	334	693**
Likeable-unlikeable	-102	730**	796**	521*
Felt pleasant-felt unpleasant	-265	478	752**	524*
Acted pleasant-acted unpleasant	-282	584*	771**	500
Median <i>r</i>	-13	63**	75**	53*

Note. Decimal points have been omitted.

* $p < .05$. ** $p < .01$. Two-tailed test, $df = 13$.

Correlations, rather than multiple correlations, are reported in the present study, so that the separate relationships between each channel and the criteria may be more easily observed.

All analyses used the mean of each group of judges' ratings of each stimulus person on each scale. Pearson r s were determined by correlating the mean ratings of judges shown a combined-channels condition (criterion) with the mean ratings of judges exposed to a separated-channel condition. The correlations between the separated-channel and the combined-channels judgments were determined scale by scale over the 15 stimulus persons.

Study 1

The first study examined the correlations of the separated channels of speech content (presented in a typescript) and voice quality (presented through filtering the audiotape) with the combined criterion channel of total speech. This criterion channel of speech without any view of face or body is a common one in social life, occurring in telephone conversations and in listening to the radio. The aims of the first study were to determine (a) the relative importance of content and voice in judging total speech and (b) whether the correlations between content and voice and total speech varied with the attribute

rated or the affect and truthfulness of the person judged.

Results

Table 1 shows that what people say (content) and how they say it (voice) correlate quite differently with total speech. Furthermore, the relationships among speech-content, voice-quality, and total-speech judgments vary as a function of the truthfulness and the affect of the persons judged. When stimulus persons are honest about their positive feelings, ratings based on their voice are positively correlated with speech, whereas most of the ratings based on speech content are negative. A Median Test analysis (Guilford & Fruchter, 1973, p. 218) of the difference between the two groups of correlations (treating each correlation as an ordinal value) indicated that this difference is significant. (The top section of Table 2 gives all the Median Test results for Study 1.) This finding, that judgments based on voice quality are positively correlated with judgments based on total speech, although judgments based on speech content are not, suggests that in judging honest speech,

how it sounds is more important than what is said. Note, however, that for one scale—dominant-submissive—speech-content judgments are positively correlated with total-speech judgments. (There is a significant difference between the positive correlation for dominance and the median correlation for all of the scales ($z = 2.49, p < .05$).

Ratings of the stimulus persons when they are dishonest about their negative feelings results in a different pattern of correlations. Although the correlations between voice and total speech remain essentially the same as in the honest condition (Median Test, *ns*; see Table 2), many of the ratings based on deceptive speech content are significantly, *positively* correlated with judgments based on total speech (median $r = +.75, p < .001$). This change in the direction of correlation between content and criterion ratings in judging honest

and deception behavior is a significant one. (The top of Table 2 shows that a Median Test comparing the correlations between content and total-speech ratings in the honest and deception conditions is significant beyond the .01 level.) Table 2 also shows that the channel that correlated most highly with the criterion judgments differed, significantly, depending on whether honest or deception behavior was heard. Voice is more highly correlated with honest speech; content is more highly correlated with deceptive speech.

These findings clearly replicate our earlier results (Ekman et al., 1980) when we compared face, body, and speech and found that the correlation of these channels with criterion ratings depended on the affect and truthfulness of the persons who were rated. Now, dissecting the speech channel into content and voice, we found that speech content is

Table 2
Summary Table of Median Test Results Across Channels and Across Conditions

Criterion and channel	Channels								
	Content		Voice		Face		Body		
	H	D	H	D	H	D	H	D	
Study 1									
Speech									
Content-honest		**	**	**					
Content-deception			**	*					
Voice-honest				<i>ns</i>					
Study 2									
Face + speech									
Content-honest		**	<i>ns</i>	*	**	**			
Content-deception			**	*	<i>ns</i>	<i>ns</i>			
Voice-honest				*	*	**			
Voice-deception					*	**			
Face-honest						<i>ns</i>			
Study 3									
Face + body + speech									
Content-honest		**	*	<i>ns</i>	**	**	**	<i>ns</i>	
Content-deception				**	**	<i>ns</i>	<i>ns</i>	**	
Voice-honest				<i>ns</i>	*	**	*	<i>ns</i>	
Voice-deception					**	**	**	**	
Face-honest						<i>ns</i>	<i>ns</i>	**	
Face-deception							<i>ns</i>	**	
Body-honest								**	

Note. This table contains the results of Median Test analyses for all three studies. *H* = honest condition; *D* = deception condition. *ns* = nonsignificant.

* $p < .05$. ** $p < .01$.

relatively unimportant in judging others when they are honest about positive feelings, but it is highly correlated when they are deceptive about negative feelings.

Study 2

In Study 1, the criterion judgments were based on a task similar to listening on the telephone. Study 2 used a criterion similar to TV watching, in which one can see the face in addition to hearing the person speak. Study 2 examined the correlations between speech content and voice quality with criterion judgments based on a more complete set of behavioral clues—face+speech—rather than speech alone.

Results

Table 3 shows four results from Study 1 that were replicated in Study 2:

1. When honest behavior is rated, speech-content judgments are uncorrelated with criterion judgments.

2. When deceptive behavior is rated, speech-content judgments are positively correlated with criterion judgments.

3. When deceptive behavior is rated, voice-quality judgments are positively correlated with criterion judgments.

4. When deceptive behavior is rated, speech-content judgments are more highly correlated with criterion judgments than are voice-quality judgments. (Median Test results are given in Table 2.)

Table 3 also shows a new result: Most judgments based on voice quality of honest speech are uncorrelated with the face+speech criterion ratings. Voice is significantly less correlated with face+speech (the criterion in Study 2) than it was with speech (the criterion in Study 1; Median Test, $p < .01$; see Table 2). A few of the scales (outgoing-inhibited, expressive-unexpressive, and dominant-submissive) do not show this change. They continue to be positively correlated with the criterion judgments.

Tables 2 and 3 also show that judgments based on the new channel—face—are signif-

Table 3
Correlations Between Face + Speech Judgments and Judgments Based on Speech Content, Voice, or Face

Judgment	Condition					
	Honest			Deception		
	Content	Voice	Face	Content	Voice	Face
Outgoing-inhibited	-.007	.536*	.802**	.747**	.735**	.884**
Expressive-unexpressive	.414	.554*	.728**	.786**	.361	.754**
Sociable-withdrawn	.048	.387	.671**	.740**	.638*	.771**
Calm-agitated	.436	-.452	.142	.755**	.274	.313
Natural-awkward	.105	.210	.579*	.822**	.372	.652**
Stable-unstable	-.424	-.078	-.078	.168	.622*	.517*
Relaxed-tense	.226	-.122	.591*	.710**	.562*	.425
Honest-dishonest	.123	-.288	.604*	.402	.022	.386
Sincere-insincere	-.033	.047	.107	.439	-.064	.525*
Trustworthy-untrustworthy	-.225	-.495	.008	.467	.279	.269
Dominant-submissive	.567*	.720**	.779**	.492	.674**	.677**
Likeable-unlikeable	.010	-.111	.268	.557*	.513	.805**
Felt pleasant-felt unpleasant	.333	-.212	.165	.619*	.318	.621**
Acted pleasant-acted unpleasant	.399	-.119	.680**	.815**	.122	.820**
Median <i>r</i>	.11	-.02	.59*	.67**	.37	.65**

Note. Decimal points have been omitted.
* $p < .05$. ** $p < .01$. Two-tailed test. $df = 13$.

icantly more highly correlated with the criterion than are either speech content or voice quality when honest behavior is judged. However, there is no significant difference between the correlations with criterion for content and face judgments when deceptive behavior is judged.

Study 3

In Study 3, a complete set of behavioral clues—face+body+speech—was the basis of the criterion judgments. This allowed us to examine the relationship of voice and speech-content judgments to judgments based on the most usual kind of social information.

Results

Table 4 shows many of the results from Studies 1 and 2 that were replicated:

1. When honest behavior is rated, speech content judgments are uncorrelated with criterion judgments of face+body+speech as they were uncorrelated with the criteria of speech and face+speech.

2. When deceptive behavior is rated, speech content judgments are positively correlated with the criterion as they were in Studies 1 and 2.

3. When deceptive behavior is rated, speech content judgments are significantly more highly correlated with criterion judgments than are judgments of voice.

A number of findings from Study 2, relevant to the face channel, were replicated in Study 3:

1. With both honest and deceptive behavior, judgments based on the face alone are positively correlated with criterion judgments for both face+speech and face+body+speech.

2. When honest behavior is rated, neither speech content nor voice judgments correlate as robustly with the criterion as do face judgments (see Table 2).

3. When deceptive behavior is rated, face and content judgments correlate equally with criterion judgments, whether the criterion is face+speech or face+body+speech.

Some results replicated findings in Study 2, but not Study 1. As in Study 2, there are

Table 4
Correlations Between Single-Channel and Face + Body + Speech Judgments

Judgment	Condition							
	Honest				Deception			
	Content	Voice	Face	Body	Content	Voice	Face	Body
Outgoing-inhibited	113	559*	640**	760**	646**	640*	859**	538*
Expressive-unexpressive	609*	505	543*	526*	791**	402	811**	557*
Sociable-withdrawn	016	576*	761**	650**	614*	510	811**	486
Calm-agitated	178	022	288	538*	720**	230	184	-284
Natural-awkward	295	321	616*	679**	590*	306	877**	183
Stable-unstable	-016	089	618*	447	670**	110	411	-313
Relaxed-tense	253	324	603*	744**	602*	479	711**	385
Honest-dishonest	143	232	599*	533*	550*	121	-240	442
Sincere-insincere	-084	435	547*	451	654**	253	099	295
Trustworthy-untrustworthy	-126	405	424	725**	608**	141	-114	080
Dominant-submissive	498	578*	672**	571*	500	659**	561*	543*
Likeable-unlikeable	-177	472	705**	520*	713**	507	549*	053
Felt pleasant-felt unpleasant	088	101	451	414	615**	122	738**	159
Acted pleasant-acted unpleasant	140	291	665**	367	627**	-052	820**	080
Median <i>r</i>	13	36	61*	53*	61*	28	59*	24

Note. Decimal points have been omitted.

* $p < .05$. ** $p < .01$. Two-tailed test, $df = 13$.

few significant correlations between voice and criterion.

Some new findings from Study 3 emerged due to the inclusion of a body channel. Tables 2 and 4 show that judgments based on the body have a pattern of correlations that is the opposite of that found with speech content in all three studies. When honest behavior is rated, there are many significant, positive correlations between body judgments and criterion judgments. When deceptive behavior is rated, there are few. With speech content, there are few positive correlations when honest behavior is rated, and many when deceptive behavior is rated.

The median correlations between criterion judgments and judgments based on face or body are essentially the same when honest behavior is judged. When deceptive behavior is judged, however, they differ; face judgments continue to be highly correlated with criterion, but body judgments do not. (The exceptions to this finding are the honest-dishonest and trustworthy-untrustworthy scales for which there are positive correlations for body-based judgments and negative correlation for face-based judgments.) Table 2 summarizes the Median Test results comparing body judgments with other channel judgments, across conditions.

Discussion

In the last 20 years, the relative importance of verbal versus nonverbal factors in judging others has received considerable attention. Most researchers have tried to identify the one or two communication channels that are the most important in forming impressions of others. Our findings suggest this is the wrong question. No channel is always most important. The importance of a channel depends on the affect state and truthfulness of the person being judged, as well as the particular attribute being rated and the information channels available.

Speech Content

Judgments based on speech content are particularly susceptible to the affect state and truthfulness of the behavior sampled. When people honestly describe their positive affect, judgments based on their speech content are

uncorrelated with judgments made of them based on face+body+speech. Speech content is unimportant in making such whole-person judgments. Conversely, when people lie about their negative affect states, judges' ratings of them based on the content of their speech are highly positively related to judgments based on the total audiovisual record. What you say is an important source of information about you when you're lying about bad feelings, but not when you're telling the truth about good feelings.

Why did judges attend to speech content in our particular deception situation and ignore it in our honest situation? Our deception manipulation was a powerful one. Stimulus persons experienced strong negative emotions and were able to conceal them effectively. (Earlier studies, Ekman et al., 1976, found that judges could not discriminate the honest and deception interviews at above-chance levels.) In addition to the strong emotions produced by the experimental paradigm, subjects may have experienced emotions related to their attempts to lie, as well as to their success or failure at doing so (Ekman, 1981). Given this complicated phenomenology on the part of the stimulus persons, discrepancies in the various communication channels are likely.

Judges may choose to attend to the speech-content channel because, as Ekman and Friesen (1969) suggested, speakers are more willing to be held accountable for the content of their speech than for their body movements or voice quality. A second explanation for the preference for speech content as the basis of judgment in deceptive situations is that this may be the most internally consistent channel. Judges base decisions on the most reliable channel. A different, though related explanation, is that judges credit the content of speech because it usually best predicts the person's social behavior. Even though people may actually feel and look terrible, if they respond that they are fine to a question about their health, one can expect that they will act as though they were fine. In social exchanges among nonintimates, the verbal response directs the course of the interaction. Only in more intense or intimate relationships are verbal communications about internal events ignored or challenged.

Krauss and his colleagues (1981) also found that judgments based on speech content were significantly correlated with whole-person judgments. This similarity in results is striking because the Krauss studies used very different stimulus materials. The present study used stimuli that varied both in terms of the positivity of the emotions sampled and the truthfulness with which those emotions were discussed. Krauss and his colleagues did not specifically sample these dimensions. (Their materials included videotapes of the Dole-Mondale vice-presidential debates, and college women discussing people they liked and disliked.) Their results are like ours for the deceptive-negative affect condition, but not for the honest-positive affect condition. This suggests that the Krauss materials are either sampling deception, negative affect, or both (O'Sullivan & Ekman, 1982). In any event, the Krauss results and ours challenge the view that nonverbal channels are the most important ones in judging others in all situations.

Voice Quality

Although many studies have demonstrated that information can be derived from voice quality, our findings suggest that the judgments people make of others are not based on voice quality when it is heard independent of speech content. Judgments based on face, body, or typescript were all more highly correlated with the criteria judgments than were the judgments based on voice quality. There was only one exception, which occurred when the criterion judgments were based on speech without visual cues. Then, if the persons were being honest, voice-quality judgments correlated with criterion judgments. Even with this more limited criterion, based just on hearing speech, when the people were deceptive, speech content was more highly correlated with it than voice quality.

Voice quality may have so little weight in judging others because people are unfamiliar with it, hearing voice cues only as they are embedded in the words spoken. This does not explain, however, why voice judgments were more correlated than typescript with the speech-criterion judgments in the honest but not in the deception situation. Paradox-

ically, it seems that judges ignore the voice, as they do the body, just when it could be a valuable source of leakage information.

Vocal quality, then, is used in judging others primarily when little else is available (e.g., in judging honest speech). When the behavior is deceptive or other sources of information are available, such as the face, voice quality is unimportant in judging others.

Our findings regarding voice quality, and similar findings by Krauss et al., (1981), are contradicted by a recent study that states "Rater's judgments of the combined audio-visual channels were better predicted from their judgments of tone of voice when the voice was deceptive and from their judgments of the face when the message was honest" (Zuckerman et al., 1982, p. 347). The Zuckerman study differs from ours in several respects: (a) The deception manipulation was weak. The stimulus persons were asked to describe their feelings about another person untruthfully, but there was no evidence that they were motivated to lie well or succeeded in doing so. (b) There was no evidence that the stimulus persons were emotionally aroused either by their deception or the task they were given, so that leakage could occur. (c) Only two different rating scales were used. (d) The raters judged whether the stimulus person liked or disliked the people they were talking about rather than rating trait characteristics of the stimulus persons themselves. (e) There was no speech-content or body channel. (f) The stimulus persons knew they were being videotaped. (g) The same nine judges rated all of the stimulus persons in all of the channel conditions, a total of 300 interview segments. Given these many dissimilarities between the Zuckerman study and the present one, the differences in findings are not reconcilable.

Face

Our findings on the face—that most judgments based on face alone are significantly positively correlated with criterion judgments for both honest and deceptive behavior—are consistent with Ekman and Friesen's (1969, 1974, 1982) theory about the control of facial expression. The face, they said, provides an accurate picture when the person judged is

frank. When the person judged is deceptive, the face provides false messages that are believed, as well as true information that may be overlooked because it is more subtle.

Body

Judgments based on viewing the body alone, like judgments based on speech content, are quite responsive to the kind of behavior being judged, but they are responsive in the opposite direction. Content judgments are uncorrelated with whole-person judgments when honest behavior is sampled, but highly positively correlated for deception behavior about negative affect. Body judgments, on the other hand, are highly correlated with whole-person judgments of honest behavior, but uncorrelated for many scales when deception behavior is sampled. Ekman and Friesen (1969, 1974) proposed that, in deception, the body provides leakage information that is different from that provided by the face or speech. Our findings suggest that most people use information based on the body in judging honest behavior, when that information is consistent with the information from other channels. In the kind of deception situation used in this study, however, information from the body, which might be inconsistent with information from the other channels, is ignored.

Attributes

In judging others, people seem to engage in a complicated process that takes into account not only the kind of behavior the person is exhibiting (honest vs. deceptive, positive vs. negative) and the channel most likely to yield the best behavioral prediction, but also the particular kind of judgment required. For certain judgments, such as how dominant or expressive an individual is, all channels and all behavioral situations lead to the same judgment, across criteria. (All of these ratings are highly, positively correlated.) Other judgments, such as how honest a person is, are influenced by both the channel and the kind of behavior sampled.

Conclusion

In judging other people, both verbal and nonverbal cues are important. When women,

who were unknown to the judges, honestly described their positive feelings, judgments of them based on nonverbal channels were highly correlated with judgments of the whole person, whereas most speech-content judgments were uncorrelated. When these women lied about their negative feelings, their nonverbal behavior had less influence. Instead, judgments based on the content of what they said were most highly correlated with how they were judged. Further research is necessary to determine whether the same pattern of results would be found with men, with familiar persons, and with people who lie about positive feelings or who are frank about negative feelings.

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