

A Test of Symbolic Interactionist Predictions About Emotions in Imagined Situations

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Abstract

In symbolic interactionism, inner experiences — including emotions — are shaped culturally as individuals formulate events in words, and individual experiences are shaped socially as others contribute to the verbal formulation of one's experiences. Understanding cultural shaping and social negotiation of emotions requires understanding how emotion attributions arise from linguistic framings of events, and Affect Control Theory (ACT) offers a model of emotions that addresses this issue. We report tests of ACT predictions of emotions in 128 events against self-reported emotions of respondents imagining themselves in the happenings. ACT predictions are found to correlate with self-reported emotions. Thus empirical results validate ACT's postulate that emotions emerge from the person impression that is generated in an event, along with the difference between that impression and the person's identity. In the Conclusion, we discuss how the ACT formulation can enlighten interpretations of social negotiations regarding emotions.

Symbolic interactionism (e.g., Mead, 1934; Blumer, 1969; Stryker, 1980), treats language as an interpersonal and intrapersonal medium by which culture, socially structured situations, interpersonal relationships, and social identities are created and maintained in individuals' minds. In symbolic interactionism, "the mind is not a spatial, material structure identified with the central nervous system, but a functional process relating individual and environment, with language providing the field for this process" (MacKinnon, 1994, p. 69). Symbolic interactionism's axiomatic treatment of language leads to a unique perspective on emotion: whatever the original source of an emotion, the emotional experience soon becomes a minded and interpersonal activity mediated linguistically. Thus one cannot understand emotional processes without understanding how emotions are categorized, processed in verbal interpretations of situations, and discussed interpersonally.

Individuals incorporate their culture's framing of reality via word meanings that span individual minds and extend beyond a particular moment. A word's meaning involves a cognitive aspect — its denotation and logical linkages to other concepts — and etymological dictionaries show persistence of this cognitive aspect of meaning over centuries. The cognitive aspect of meaning fosters classifications in accord with denotations, and deductive thinking wherein we trace implications from more concrete concepts to more abstract concepts. Words also have connotative, affective meanings that continue over years (Heise, 1966). Affective meanings foster creative thought and abductive inferences that seem plausible even though they are without empirical or logical foundation. An instance of this is

that very negative attitudes toward people foster believing that those people engage in multiple kinds of evil acts — e.g., that environmental polluters also bribe legislators.

Linguistic rendering of perceptions and of personal sensations, feelings, and desires turns them into materials for conversations with self and others. In talking, people share their takes on situations, actions, and private sensations and dispositions. Each utterance is a broadcast to others, though a broadcast model of communication misses the point that people do not simply register someone's remarks and then say something new. Rather, people shape each other's remarks to their own satisfaction in the course of a conversation. Examples: "Here comes the mayor!" "Hi neighbor." (the second speaker offers an alternative definition of identities); "That's enough heat." "No, the paint has to bubble." (the second speaker perfects the rule for applying an instrument); "Beautiful sunset." "Dramatic, yes." (the second speaker adds potency and liveliness to the experience they are shaping collaboratively). Utterances, by revealing a speaker's mind, enable others to pursue mind adjustments. The back and forth continues until consensus emerges regarding meanings that are applicable in the circumstances.

Emotions

Emotions have been viewed by psychologists as archetypical private experiences bubbling up from non-verbal levels of the psyche (e.g., Parkinson & Manstead, 1993), but the symbolic interactionist perspective offers a more complex perspective on emotions that pursues the implications of emotions being observable and of emotions being construed as meaningful (Shott, 1979; Hochschild, 1983; Denzin, 1985; MacKinnon, 1994). First, emotions are part of a culture's defined reality, and consequently emotions have denotative and connotative meanings that imply their appropriateness in various situations. Second, emotions emerge as ongoing events confirm or disconfirm usual meanings of the self, the other, and the situation. In particular emotions reflect how the meaning of the self fares in encounters with others. Third, emotions to a large extent are molded and negotiated through talk: "human emotional experiences are sociocultural objects constructed, modified, and discarded as persons use their talk to negotiate the social reality of their lives" (Staske, 1996, p. 114).

The cognitive meaning of an emotion term affects the application of that emotion term in different kinds of social situations. Psychological analyses of emotion semantics (Ortony, Clore, & Foss, 1987) and appraisal (e.g., Smith & Lazarus, 1993; Smith, Haynes, Lazarus, & Pope, 1993; Scherer, 1993; Roseman, Antoniou, & Jose, 1996) specify the denotations and logical associations of emotion words and thereby define the cognitive conditions under which people employ one emotion identifier rather than another. Kemper's (1978; 1991) sociological theory also can be viewed as an appraisal theory focusing on emotional responses to perceived changes in the relative status and power of self and other. For example, Kemper's theory includes propositions like: "Elevation of the other's power will lead to *fear/anxiety*, as will a decline in one's own power" (Kemper, 1990, p. 222).

Emotion terms also have connotative meanings that relate them to subjective dimensions of experience — pleasantness, activation, and dominance (e.g., Russell, 1980; Morgan & Heise, 1988; MacKinnon & Keating, 1989). Affect control theory (outlined in the next section) posits that verbally framed social experiences foster certain impressions of self on these dimensions, and predictions about emotions can be derived from the impressions produced by an event. For example, being kissed by a lover makes a sweetheart feel good and somewhat potent and lively, and thereby prone to emotions like contented, touched, pleased; whereas being neglected by a lover makes a sweetheart feel weak and somewhat bad and deactivated, and thereby prone to emotions like afraid, deflated, self-pitying.

Conversation analyses have demonstrated how others control the verbalization of a person's feelings. Wowk (1988) analyzed talk between counsellors and medical patients and observed that counsellors influence a patient's experience of emotion by requesting particular kinds of details about the experience and by suggesting how the patient feels.

The process of un glossing what the patient means when she describes her situation as 'horrible' and she was bothered by the 'deeper implications' of that situation is as we have seen a detailed sequential interactively-managed process The candidate-ungloss can be seen, for example, as a device for ascribing emotion or at least for elaborating and particularizing emotions which have been avowed by the patient in a prior gloss. ... [The patient] in turn may act to accept or reject this proposed emotion-state ascription. (Wowk, 1988, p. 49)

Staske (1996; 1998) studied partners in a close relationship as they discussed an emotionally important issue in their relationship. Staske found that people use several devices — such as upgrading, downgrading, circumventing, and alterations of situational detail — to influence the emotions that are allowed into a relationship. For instance, an emotion that initially was described by one partner using the phrase "I was ready to hit you" got downgraded as a result of the other's laughter and rephrasing to "mad", then "frustrated", then "irritated", and ended finally as only a fleeting feeling. What one feels can change dramatically as the labeling of feelings and the "objective" facts of the situation are reconstructed interpersonally.

Topics in conversation are generated, developed, and shifted through the actions of both interactants and, as these examples illustrate, when the developed topic is a person's emotional experience, the result is the *collaborative* or *interactive* construction of that experience. Both partners, therefore, contribute to the meaning of the emotional experiences being instantiated in the conversation and to the role those experiences will then play in interactants' individual and relational lives. (Staske, 1996, p. 119)

In summary, symbolic interactionism focuses on conscious minds that process symbolic representations of reality and that interpenetrate one another through communications. This framework posits that private emotional feelings get rapidly incorporated into cultural framings and interpersonally shared understandings and that the feelings change as a result of this socialization. Viewed this way, a "spontaneous expression" of emotional feeling (Wagner, Buck, & Winterbotham, 1991) is essentially a trial balloon in an interpersonal situation, whereas socially processed emotions are what are sustained in personal and collective memory. Since recognizing, reasoning about, socially sharing, and socially controlling emotions all are conducted through the use of words, understanding emotion processes requires understanding linguistic representations of emotionality.

Affect Control Theory (ACT)

Affect control theory (Heise, 1977, 1979; Smith-Lovin & Heise, 1988; MacKinnon, 1994) is a formulation within symbolic interactionism concerned with how affect regulates social life. The theory models the formation of behavioral expectations, the redefinition of people as a result of their actions, and the emergence of emotions during social interaction.

ACT begins with the assumption that self, other, and actions all can be categorized in words. In turn, words carry connotative, affective meanings based on evaluation, potency, and activity. These meanings are called "sentiments" or "fundamental" connotations in ACT because they capture basic cultural attitudes toward types of people and actions viewed separately, out of context. For example, the sentiment attached to an identity suggests the social character of those who adopt the identity: their *status* (how worthy or unworthy such a person is), *power* (how potent or impotent such a person is), and *expressiveness* (how spontaneous or reserved such a person is) — a mother is good, powerful, and somewhat lively; a child is good, powerless, and very lively.

Evaluation, Potency, and Activity correspond to three universal dimensions of affective meaning measured with semantic differentials (Osgood, Suci, & Tannenbaum, 1957; Osgood, May, & Miron, 1975). A typical semantic differential scale measuring Evaluation displays "Good, nice" at one end, "Bad, awful" at the other end, and a series of check positions in between. The middle position, labeled "neutral," is coded as 0.0. Positions moving outward are labeled "slightly," "quite," "extremely," "infinitely" and are coded 1.0, 2.0, 3.0, 4.3 respectively — positive on the good side, negative on the bad side (Heise, 1978). Potency is measured on a similar scale anchored with the adjectives "Powerful, big" on the positive side and "Powerless, little" on the negative side. Positive anchors for an Activity scale are "Fast, noisy, young" versus the negative anchors "Slow, quiet, old."

When person A behaves toward person B, this ongoing event can sometimes modify A's and B's apparent worthiness, potency, and spontaneity. Little modification occurs if the affective meaning of A's behavior toward B is consistent with A's and B's identities in the situation. Greater modification occurs if, for example, the affective meaning of A's behavior is inconsistent with A's identity (e.g., a mother hits her child). Impression-formation equations have been developed to describe the changes in apparent worthiness, potency, and spontaneity that result from events (Heise, 1979; Smith-Lovin, 1987; Smith, Matsuno, & Umino, 1994).

Interpersonal actions produce impressions of the interactants, and these impressions may differ from the social characters connoted by the interactants' identities. Thus at any moment an interactant has two criteria defining his or her situational presence: the fundamental sentiment connoted by the word for the person's identity, and the transient impression generated by the interactant's participation in social events.

ACT's basic motivational axiom is that people seek experiences in which the impressions generated by events confirm sentiments. This implies that each person will act so as to produce impressions that confirm the fundamental connotations of self and others' identities. An insight emerging from ACT is that choosing actions to confirm the sentiment attached to one's identity effectuates the social role associated with that identity. For example, a physician's role includes listening to, cautioning, and medicating a patient, while the patient role includes observing and submitting to the physician. These role behaviors on the part of physician and patient produce impressions that match sentiments about the physician and patient identities (Heise, 1978; 1979).

Faced with disturbing events that seem to disconfirm sentiments, people work to achieve confirmation. First, people try to re-interpret ongoing actions in a way that will yield impressions matching sentiments. If that fails, they try to construct subsequent events that restore congruence between sentiments and immediate impressions. Failing that, they redefine the situation, changing the characters of interactants through attributions and labelings, so that the impressions being produced in the circumstances match a new framing of the situation.

Emotions

ACT posits that emotions embellish ongoing activity in a way that transforms a person with a given identity into the person who is evidenced in an ongoing event. That is, a person's emotion combined with the person's identity, creates a manifest persona that corresponds to the impression of the person being produced through actions. Emotion makes a person in a given role feel and look the way events have made that person seem.

For example, the agitation of a physician losing an emergency-room patient is an emotional state that adjusts the physician's ordinary high status, power, and reserve so that he or she personally manifests the unworthiness, inadequacy, and activation of failing to prevent a terrible misfortune. By embellishing role activity with the emotion of agitation, the physician creates an impression of self that matches the impression of a physician losing an emergency-room patient. This construction of emotion (whether automatic or calculated), demonstrates that the physician understands what is happening and shares cultural meanings about physicians, patients, and failing to save a life.

The ACT emotion model derives from empirically estimated equations describing the impressions that result from combining modifiers and identities (Averett & Heise, 1987; Heise & Thomas, 1989). The equations show that the impression produced by a modifier-identity combination, like "angry father," is influenced by the meanings of both the identity and the emotion modifier. Solving these modifier-identity equations for the emotion variables creates emotion-attribution equations that imply what kind of emotion is needed to modify a given identity in order to match a given impression. The predicted emotion reflects the transient impression of the person arising in the immediate circumstances, and it also reflects how the transient impression of the person compares to the person's ideal identity presence. The equations predict emotion in terms of pleasure-displeasure, dominance-vulnerability and activation-quiescence — an EPA profile that can be used to search for an emotion word with a similar profile. In this way the ACT emotion model answers the question of what emotion should be felt, given a specific identity and a specific impression created by events.

Consider as an example the case of a physician losing a patient in an emergency room. The EPA profile for physician (rated by males) is 1.90, 1.85, -0.36. The impression of a physician in this particular event¹ is 0.07, 0.55, -0.08. Substituting these values in the equation for pleasantness-unpleasantness of the consequent emotion yields -1.06. This is the same as the evaluation rating of the emotion "agitated." Values of the predicted emotion's potency and activity also are close to the potency and activity ratings of "agitated." So according to the ACT emotion model, the physician's emotion in this scene could be described as agitated.

Studies of how emotions influence outcomes in hypothetical legal cases (Smith Lovin & Tsoudis, 1993; Robinson *et al*, 1994) validate ACT's emotion model. The studies show that desired prison sentences for convicted defendants are more punitive when the defendants display inappropriate emotions like calmness or

happiness over illegal deeds, implying that they are real criminals, instead of showing remorse and guilt as would a normal person whose deviant behavior was a mistake. This finding fits a derivation from ACT's emotion model (Heise, 1989) indicating that stigmatization may result from inappropriate emoting — either feeling good about wicked deeds, or feeling bad about admirable deeds. The derivation formalizes one component of the symbolic interactionist position that emotions influence the construction of identities and relationships — that "claiming a particular emotion in a particular situation serves to define both self and self's relationship to others" (Staske, 1996, p. 123).

Another possible test of ACT's emotion model would compare ACT predictions of emotions with the emotions that people report when they imagine themselves in various scenes. Such a study follows from the symbolic interactionist approach because it tests whether ACT accounts for inferences that people make about emotion in verbalized experiences. Success in such a test would allow us to understand how verbal definition of a situation is linked to attributions of specific emotions. Thereby we would understand more about what is involved in negotiating situations in order to account for felt emotions or in negotiating emotions in order to establish desired relationships.

Testing the ACT Emotion Model

In this section we report a study testing whether ACT's predictions about emotions in various situations accord with the predictions of people who imagine themselves in those situations. Dealing with imagined situations allows testing ACT predictions in a systematic sample of encounters representing diverse social scenes. Dealing with people's conjectures about their emotions in response to verbally described situations allows testing whether ACT models the way cultural meanings of identities and behaviors translate into beliefs about appropriate feelings. While forgoing consideration of many aspects of emotion, our study does focus on the matter of interpreted emotion — "symbolic objectifications of emotional experiences the subject has felt or will feel in the future" (Denzin, 1985, p. 230), which is the aspect of emotion that is of central interest in ACT. This verbal approach to emotion also accords with Averill's (1982: 329) point that "any theory of emotion must in the end relate to the kinds of phenomena, no matter how complex, that are recognized as emotions in ordinary language."

In our study, each respondent read a brief description of an event and identified the emotion he or she felt while imagining that circumstance. Each event had the respondent involved in a social action with another person, with the respondent being either the agent or object of the action. Respondents reported their emotions by choosing from 25 options, including about one fourth of the emotion words in English.

The choices made by respondents are compared to theoretical predictions obtained with the ACT emotion model. To obtain the predictions, we used "I, myself" as the respondent's identity in each event. EPA profiles for "I, myself", for the named identity of the other person in the event, and for the action word were drawn from the results of past research (Smith-Lovin & Heise, 1988) and used to compute the EPA profile for the respondent's predicted emotion in each event. Then emotions were ordered according to how close their EPA profiles were to ACT's prediction. Since a social happening usually evokes a diffuse emotion that is named differently by different people (Russell, 1989; Heise & Calhan, 1995), the general hypothesis is that each respondent will choose one of the closer emotions, and emotions that are farthest from predictions rarely will be chosen by respondents.

Part one of this study uses data on emotional reactions reported by Heise & Calhan (1995), and additional details on selection of stimuli and on instrumentation can be found in that article. Part two of this study focuses on four stimuli selected from part one, with greatly enlarged samples of respondents.

Stimuli

Each stimulus described the respondent as engaged with an alter named by a social identity, and either the respondent or alter was performing a social behavior on the other. In half of the 128 social situations, the respondent was the actor, in the rest the respondent was the object of action by an alter. For example, "Imagine a flight attendant is assisting you. How do you feel at that moment?" or "Imagine you're rescuing a hero. How do you feel at that moment?" (Slightly different phrasing was used with nine instances of insinuated behaviors — e.g., "You realize your landlord is evading you. How do you feel at that moment?")

Stimulus events systematically combined eight basic EPA configurations for behavior and eight basic EPA configurations for the alter identity. The institutional affiliation of alter (academic, business, justice, medicine, religion, laity, family, or intimacy) also was varied systematically in an 8x8 Graeco Latin square design. The eight-by-eight design yielded 64 event sentences, and two replications were generated for each cell for a total of 128 event sentences to serve as stimuli.

The 128 events studied are identified in Tables A1 and A2 of the Appendix, and modal choices of emotions for these events are given in Heise & Calhan (1995).

The 128 stimuli were distributed into two questionnaires, such that no identity-behavior combination appeared more than once in a form, and respondent-as-object and respondent-as-actor were represented equally in each form.

Gender comparisons are based on the sex of the respondents, determined through an item on the questionnaires.

Instrumentation

Respondents chose emotions from 24 options configured graphically as a spiral: annoyed, ashamed, at-ease, bitter, calm, contented, depressed, disgusted, embarrassed, excited, flustered, furious, happy, impatient, joyless, mad, nervous, outraged, overjoyed, pleased, proud, scared, thrilled, and unhappy. The spiral reproduced the circumplex relationships among emotions (Russell, 1980; Morgan & Heise, 1988; MacKinnon & Keating, 1989). Pleasant feelings appeared at the top of the spiral, activated feelings at the right, and overlapping sectors of the spiral showed vulnerable feelings on the inside and dominant feelings on the outside. The spiral organized the list of emotions in such a way that respondents were able to select specific emotional states rapidly. Additionally, check boxes allowed respondents to record emotional intensity and to select "no emotion" as an answer.

Figure A1 in the Appendix shows a typical questionnaire page employing the emotion spiral. A picture of the instruction page and some details on the instrument's usage by respondents are provided by Heise & Calhan (1995).

Data Collection

To obtain data for part one of the study, questionnaires were distributed in two sociology classes. Of the 132 respondents who returned questionnaires, 125, or about 62 respondents for each of the two forms, provided usable data by circling one emotion for each scenario. Data for part two of the study were obtained in eight other sociology classes; 617 respondents returned questionnaires, and 610 circled one emotion on two or more stimuli.

The questionnaire administrator orally interpreted the instruction sheet attached to the questionnaire (which included an informed-consent statement), and respondents completed the questionnaire in class. The group administration took about 25 minutes for part-one questionnaires and about 10 minutes for part-two questionnaires.

Results

ACT provides a ranking of the 25 emotion states for each stimulus event in terms of how close the emotions' EPA profiles are to the EPA profile for the emotion that is predicted for ego in that event. For example, ACT predicts that "a library assistant is neglecting you" produces an emotion for females that measures -0.39 on evaluation, -1.49 on potency, and 0.04 on activity. On the average, females rate "proud" as 1.55 , 1.01 , 1.19 on evaluation, potency, and activity, and females rate "embarrassed" as -0.89 , -0.92 , 0.13 . Therefore the Euclidean distance² from the predicted state to proud is 3.37 and to embarrassed is 0.76 . Embarrassed ranks closer to the prediction than does proud.

Data collection provides another ranking of the emotion states in terms of how many respondents selected each state to describe how they felt when imagining the circumstance. This ranking should correlate with the distance ranking if ACT's emotion model predicts ego's emotion. That is, emotions close to ACT's prediction should be chosen often, and emotions far from ACT's prediction should be chosen rarely. The test correlation for each event should be negative, indicating that small distances predicted large proportions and large distances predicted low proportions³.

Our null hypothesis is that the theoretical and empirical rankings are independent — i.e., the correlation between the two is zero for every event. In fact, the median Spearman rank-order correlation coefficient (Rho) is -0.32 for females and -0.29 for males. The female and male correlations for each separate event are given in Tables A1 and A2 in the Appendix. Table 1 summarizes the results over all 128 events.

Table 1 about here

The first row of Table 1 shows that negative Rhos occurred in more than 80 percent of the events considered, for both females and males. Only 50 percent of the Rhos would be negative if the average correlation between theoretical and empirical orderings were zero, as stated in the null hypothesis. The binomial probabilities of these results are far beyond what would be expected in the null hypothesis. Using a conventional criterion, both the female and the male percentages are significant at the 0.05 level.

The second row of the table shows the percent of events in which Rho reached or exceeded a negative value of -0.34 . This is the value of Rho which is significant at the 0.05 level in a one-tail test, when computed over the 25 emotion states considered in a single event. Significant Rhos were obtained in 49 percent of the events for females and in 44 percent of the events for males. These percentages are far greater than the five percent that would be expected with a .05 significance level, were there no relation between predictions and data.

The statistics in Table 1 and statistical tests using standard criteria of significance indicate unequivocally that emotions derived from ACT's emotion model are predictive of the emotions that people report feeling in imagined events.

We examined scatter plots of distances versus frequencies and found that the distributions typically fit the following generalizations.

1. The emotion that a person reports feeling in an event usually is close to the theoretical emotion predicted by ACT.
2. People rarely report feeling an emotion in an event that is far from the theoretical emotion predicted by ACT.
3. However, some emotions that are close to ACT's predicted emotion rarely are chosen by anyone.

The first two propositions describe a correlation involving high proportions of choice for small distances, and low proportions of choice for large distances. However, the third proposition indicates that low proportions of choice also can occur with small distances. Thus the relation between proportions of choice and distances from the predicted emotion is heteroscedastic. That is, there is more variance in the predicted variable when predicting from small distances than when predicting from large distances.

Guttman's Mu2 coefficient (Shye 1978, Appendix) is more appropriate for a heteroscedastic distribution than the rank order correlation, so we repeated the analyses using Mu2 instead of Rho as a measure of relation between proportions and distances. The top rows of Table 2 summarize these results. Using Mu2 as a criterion, the correlation again validates ACT predictions for more than 80 percent of the events, for both females and males. The median values of Mu2 are -0.61 for females and -0.62 for males. (These are about twice as large as the median values of Rho: -0.32 for females and -0.29 for males.)

Table 2 about here

Subsequent rows of Table 2 present results just for events in which the respondent was the *agent* of action, or in which the respondent was the *object* of action. The table shows that the ACT emotion model predicts actor emotions and object-person emotions well for both sexes. However, the theory does a slightly better job of predicting object-person emotions than actor emotions, and of predicting the emotions of females than of males.

Large-Sample Results

The above analyses deal with interpersonal emotions in a wide range of events. However, only small samples of respondents provided data for each event so the estimates of proportions selecting each emotion are imprecise. This could lead to understating the strength of relations between predictions and data, because correlations based on imprecise measures are closer to zero than correlations based on more precise measures. Moreover, the smaller sample of males would have yielded especially imprecise estimates of proportions. This would cause the correlations to be closer to zero for males than for females, so the sex difference in our results could be merely a methodological artifact.

Our second round of data collection obtained relatively large samples of respondents for four events in order to examine the impact of sample size on results. In this part of our study we take a closer look at: (1) an event which yielded typically successful results in the first phase of the study; (2) an event which generated successful results for females but ambiguous results for males; (3) an event that generated ambiguous results for both males and females; and (4) an event for which results were contrary to predictions for both males and females.

Table 3 gives an overview of results involving the large samples, and also shows parallel information from the small-sample analyses for the sake of comparison.

Table 3 about here

The first event, *A library assistant is neglecting you*, is a case in which the coefficients of association obtained with small samples are close to the median values across all events. The left side of the table shows the Rho's and Mu2's for this event as obtained with small samples, along with the sizes of the female and male samples. Rho's and Mu2's obtained with samples about ten times bigger, are given on the right side of the table.

Even with larger samples, the absolute magnitude of Mu2 continues to be substantially bigger than the absolute magnitude of Rho, suggesting that heteroscedasticity is not due to a floor effect on frequencies when the probability of choice is low. Indeed, one of the predicted emotions, annoyed, is chosen very frequently (60% females, 40% males), whereas other predicted emotions (e.g., joyless, embarrassed, nervous, unhappy, scared) are chosen infrequently. Meanwhile, emotions that are predicted to be irrelevant (e.g., proud, overjoyed, happy, excited) are chosen infrequently, by both females and males.

Absolute magnitudes of Mu2 increased in the larger samples, as would happen if the coefficients obtained with small samples are attenuated due to small-sample error in estimating proportions. However, the increases in magnitude are modest for this event: 0.05 for females and 0.07 for males.

The second event, *A handicapped person is helping you*, yielded typically successful results for the small sample of females but not for the small sample of males. Table 3 shows that, with large samples, the female and male results become alike, successful predictions being made for both sexes. This suggests that the superiority of predictions for females arose at least partly from imperfect estimation of male proportions as a result of smaller samples of males.

Rho's and Mu2's both are moderately negative in the large sample results for this event, suggesting that heteroscedasticity is less pronounced. In this particular event, emotions closest to the theoretical predictions (at ease, contented, calm, pleased) all have moderate proportions of females and males choosing them, so Rho achieves a larger magnitude than usual.

Once again, the absolute magnitudes of Mu2 increased in the larger samples, suggesting that the coefficients based on small samples are attenuated due to error in estimating proportions. The increases in magnitude are substantial for this event: 0.24 for females and 0.86 for males.

The third event, *You're silencing an expert*, is predicted with modest success with the small sample of females, while the results from the small sample of males show no relation between predictions and the proportions of respondents selecting various emotions.

Table 3 shows that a large sample produces substantial increases in the magnitude of correlation coefficients for females: 0.47 for Rho and 0.34 for Mu2. The large sample of males also increased magnitudes of coefficients, but in the direction of more positivity. That is, with this event, large samples lead to stronger validation of model predictions in the case of females and to invalidation in the case of males. Examining detailed results reveals that the ACT model underestimated the emotional pleasure of this event for males, so a higher proportion of males choose proud than was expected. The results in this case suggest that ACT might predict female emotions better than male emotions for a few events, mainly where the respondent is the agent of action.

The fourth event, *You're seducing an innocent*, is a case in which the ACT emotion model predicted emotions erroneously when samples of respondents were small. Table 3 shows that large samples yielded the same result. Examining the proportions of respondents who chose each emotion reveals that many successful predictions actually were obtained, in that a fair number of respondents chose predicted emotions like nervous or excited and few chose low ranking emotions like depressed or unhappy. However, the correlation goes in the wrong direction because of an outlier — the emotion ashamed — being chosen by 31 percent of the females and 16 percent of the males. Shame should not be felt according to ACT predictions. An explanation of this result is offered in the Discussion.

Overall, correlations between proportions of respondents selecting emotions and distances of emotions from ACT predictions continued to be negative with large samples if they were negative with small samples, and the correlations grew in magnitude when proportions were measured better. The size of Spearman rank order correlations increased by 0.20 on the average, and Guttman Mu2 coefficients increased by 0.18 on the average. Therefore the large-sample results suggest that median correlations computed from the small-sample data may understate the strength of the relation between ACT predictions and outcomes.

Discussion

The emotions that people feel in an imagined social event generally are among those predicted by ACT, and people rarely feel emotions that ACT identifies as unlikely. Additionally, though, some emotions that ACT identifies as relatively likely are rarely chosen by people. In other words, ACT predicts the emotions people will *not* feel more specifically than the emotions that they *will* feel. This pattern of results suggests that the connotative meaning system modelled by ACT defines the boundaries of appropriate feeling, whereas considerations of cognitive meaning and momentary focus are involved in settling on one particular emotion (Hochschild, 1983, Appendix B). To illustrate, ACT predicts that a person will not feel proud, overjoyed, happy, thrilled, excited, or pleased as a result of being neglected by a library assistant, and indeed displaying any one of these emotions would seem bizarre and emotionally deviant (Thoits, 1985). On the other hand, ACT offers several emotions as appropriate in the situation: flustered, joyless, disgusted, embarrassed, nervous, unhappy, annoyed. Many respondents report feeling annoyed, which perhaps is the emotion that is most readily rationalized when the focus is on another's poor role performance stymieing an immediate want. Adopting one of the other affectively appropriate emotions would require more elaborate reasoning to rationalize the feeling as normal (Staske, 1998).

The connotative meaning system modeled by ACT relates to what Goffman (1967, p. 9) called the expressive order.

By entering a situation in which he is given a face to maintain, a person takes on the responsibility of standing guard over the flow of events as they pass before him. He must ensure that a particular *expressive order* is sustained — an order that regulates the flow of events, large or small, so that anything that appears to be expressed by them will be consistent with his face.

Good face is lost in any kind of negative happening — incompetence, uncaringness, victimization, etc., and such happenings all must be avoided by a person maintaining a good face. Participating in events that support face also sustains expressive order, but there are alternative ways of doing this. For example, a person can affirm a good face through humor, achievement, or nurturing others. Selecting one kind of affirmation over others cannot be predicted by a theory of expressive order like ACT because any such affirmation is expressively appropriate. This reasoning applies to emotions, too. Inappropriate emotions all must be

avoided to maintain the expressive order. However, a variety of emotions are expressively appropriate, and cognitive considerations determine the emotion that is felt and displayed in the particular circumstances.

Making predictions about emotions in this study required the assumption that each respondent shared cultural sentiments of other undergraduates. The presumption is that these highly literate middle-class young adults do share a fairly homogeneous culture. For example, to predict the likely emotions of a female respondent while a handicapped person is helping her, we assumed her sentiments to be the same as those assessed among other female undergraduates: that she herself is extremely nice, fairly potent, and quite lively (this being the average female profile for "I, myself"); that a handicapped person is slightly good, slightly powerless, and slightly inactive; and that helping someone is quite good, fairly potent, and neither active nor inactive⁴. Results show that the shared-culture assumption was justified in that we were able to predict respondents' emotions in most situations from assessments of affective meanings obtained more than a decade beforehand at a different geographic location in the U.S.

Nevertheless, the shared-culture assumption surely is a source of errors in predicting emotions. Affective meanings of some social identities and behaviors vary across sub-cultures and structurally-defined aggregates (Thomas & Heise, 1995). Therefore assuming that everyone has the same sentiments has to produce errors when predicting the emotions of some individuals. Subcultural variation in sentiments is the most likely explanation of why ACT predictions missed the mark when respondents imagined the act of seducing an innocent. Apparently the act of seducing is interpreted as courting by some respondents who report they feel excitement or nervousness — the responses that ACT predicted. However, other respondents apparently interpret seducing as a form of humiliating⁵, which leads them to feel ashamed at the thought of engaging in such an act. Thus, sentiments regarding seduction vary too extremely to allow predictions of emotions from a single set of sentiment measures. Each respondent would have to be linked to a specific subculture, and data would have to be obtained from that group, in order to make more accurate predictions.

ACT predicted emotions of both males and females, and of both actors and objects of action. However, the predictions were somewhat better for females and for objects of action. This was the case even in the large-sample study where estimates of proportions were most accurate — ACT's better predictions of emotions for females disappeared in one event but not in another event; and emotions in the two events involving the respondent as object person continued to be predicted better than emotions in the events where the respondent was actor. We speculate on the reasons by focusing on the event, *You're silencing an expert*.

The most frequently reported emotions of actors silencing an expert were proud, nervous, and excited, in that order, for both males and females. ACT predictions for females correlated with the reported emotions, but not the predictions for males. The predictions differed by sex because the female sentiments about silencing and expert differed from the male sentiments⁶, and thereby, the predicted emotion for females (0.12, 0.45, 1.08) was more pleasureable and less dominant than the predicted emotion for males (-0.23, 1.33, 1.09). A possible interpretation of the results would be that female sentiments are better tuned than male sentiments for anticipating real emotions, because females are more concerned with understanding and communicating about emotional relationships than are males (Tannen, 1990).

Anger was the central emotion predicted for males silencing an expert, and angry feelings also were among the possibilities for females. Such feeling does make sense from the standpoint of an observer — a person who is silencing an expert must be feeling angry, for why else would the person be assailing a respectable other? Yet asked what they themselves feel in the role of actor, many people forgo the observer inference, focus on the accomplishment in such an act, and report that they would feel proud. Britt & Heise (1992) documented a similar phenomenon in a study of self-directed actions: the same action produced different impressions of the actor when respondents imagined someone else doing the act as opposed to when respondents imagined themselves doing it. Perhaps that is why ACT emotion predictions are better for object persons than for actors: the quantitative models used to obtain ACT emotion predictions describe observer rather than agentic processes, and people are more likely to take an observer orientation toward themselves when they are objects of others' actions than when they are acting on others. This would mean that ACT predictions of actor emotions would improve if based on agentic equations describing impression formation. Such equations do not exist yet for interpersonal events, though Britt & Heise's (1992) study indicates that it would be possible to obtain such equations.

Conclusion

ACT's predictions about emotions in various situations match well the predictions of real people who imagine themselves in those situations. Thus ACT captures important aspects of how cultural knowledge about emotionality is carried in cultural sentiments about people and actions. Since cultural knowledge about emotions is used to recall and rehearse imagined emotional scenes and to verbally modulate emotionality in ongoing interactions, ACT can contribute to understanding people's complex and subtle interpersonal negotiations about emotions.

Staske (1996, p. 123) observed that "emotional attributions are particularly powerful resources in the construction of identities and relationships." The ACT approach to emotions offers insights as to why this is the case.

According to the ACT model, emotions correspond to impressions created by events, and this connection to impressions is how emotions imply relationships. For example, an actor who engages in a tender action on a good, weak object person seems very nice, and a nice impression translates to positive emotions, like pride or happiness. Thus actors behaving tenderly and emoting very positively implicitly are according their interaction partners high status, while at the same time insinuating that the partners are submissive. The loss of power is one reason that a partner might downgrade the actor's emotion from, say, pride to satisfaction with a response like farcical aggression (e.g.: stroking his face with pride in her eyes she says "You're so sweet;" whereupon he taps her chin with his fist and says in an altered voice, "Here's looking at you, kid"). Such a maneuver is a sophisticated way of saying, "Downgrade your emotion to a level that shows me esteem but doesn't disempower me."

On the other side, a stupidly bad action directed toward a domineering person can make the object person angry. Accordingly, an object person who shows anger implicitly is claiming dominance, and simultaneously reducing the actor's status and power to the kind of person who did a stupid act with a domineering person. The actor in this event might well resist such a change in the structure of the relationship by downgrading the angry emotion to near neutrality, as Staske (1996, pp. 120-121) found in an actual interaction.

Additionally, the ACT model indicates that emotion reflects not only the impression that is created of a person, but also how the impression compares to the person's identity (Averett & Heise, 1987). For example, events that make a person appear unworthy, impotent, and hyperactive would cause an emotion like fright; but an identical impression would cause greater fright for a physician than for a delinquent because the physician feels *more* unworthy, impotent, and hyperactive relative to the greater status, power, and reserve of the physician identity.

Emotions imply identities through this connection between emotion and the difference between impression and identity — e.g., an actor involved in a wicked action who is displaying emotional pleasure presumably is gratified relative to a negative identity. The intimation of identity through emotion, combined with the principle that emotions "represent interactional postures with rhetorical force" (Schieffelin, 1983) is why a defendant in a courtroom has to show deep remorse over wrongdoings, thereby implying that he or she actually is a good person for whom wrongdoing is an aberration (Smith-Lovin & Tsoudis, 1993; Robinson *et al*, 1994). Similarly people in interactions sometimes debate whether one partner has a sufficiently negative emotion over a bad action to warrant continued high status in the relationship. In the other direction, Staske (1996, case 10R) recorded an interaction where one partner may have underemoted purposely to earn less status than a love relationship entails (Kemper, 1972) so as to terminate the romance, while the other partner tried to upgrade the extent of her partner's negative emotion so as to gain reassurance that he still was taking his sweetheart identity seriously.

Emotions have to be understood within the process of symbolic interaction, and ACT's rigorous approach deepens understanding of the symbolic processing of emotion in several ways.

First, ACT fosters empirical research that addresses specific theoretical issues. For instance, impression-formation studies yield precise specification of how social events modulate affect. Also, studies in which hypotheses are deduced and tested from ACT's formal model, such as the study reported here, directly address questions of whether theory corresponds to what actually goes on in people's minds.

Second, ACT's formal model allows us to survey the implications of some symbolic interactionist formulations about emotion, even though those formulations postulate complex mental processes. For instance, in this study we used the formal model to predict emotions in 128 isolated events. In much the same manner, the model can be used to predict emotions that would arise as interactants proceed through a sequence of actions. The numerous calculations involved in such predictions are performed readily with *Interact*, a computer program that implements ACT's formal model.

Third, ACT offers a framework for reasoning about the subtleties of social interactions because it offers a model of how identities, actions, and emotions are interrelated. ACT and *Interact* offer observers of social interaction new ways to infer the functions of interpersonal actions and emotional expressions, thereby improving understanding of how individual minds link emotions to social scenes and of what people are doing as they construct and control their own and others' emotional experiences.

Notes

- 1. Equations for computing impressions consist of more than 30 terms and are too complicated to present here. All computations were done with a current version of the computer program *Interact* (Heise & Lewis, 1988), which analyzes social interactions from the perspective of affect control theory. The equations and the program are available on the World Wide Web at www.indiana.edu/~socpsy/ACT/Index.html.
- 2. EPA profiles for impressions produced by events and for predicted emotions were computed with program *Interact* (see note 1). The distance of an emotion option from a predicted emotion was computed as an Euclidian distance

$$((E_p - E_e)^2 + (P_p - P_e)^2 + (A_p - A_e)^2)^{1/2}$$

where the p subscript refers to a number in a predicted EPA profile, and the e subscript refers to a number in the average EPA rating for an emotion.

- 3. This test of ACT predictions supposes a monotonic relation between distances and proportions but not necessarily a linear relation. Using rank order correlation allows for a non-linear relation between distances and proportions.
- 4. The actual EPA mean ratings by female undergraduates are: "I, myself" 2.83, 1.57, 1.70; "a handicapped person" 0.77, -0.95, -0.98; and "helping someone" 2.33, 1.49, 0.13.
- 5. Several respondents saw the event so negatively that they refused to answer, writing they would never do it. Some other respondents skipped the item without comment.
- 6. The EPA profiles representing sentiments about silencing are: females, -0.80, 1.11, -0.40; and males, -1.05, 1.79, -0.19. The EPA profiles for expert are: females, 1.79, 2.18, -0.11; and males, 1.40, 1.70, 0.84.

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Table 1.

Percent of 128 Events With a Negative Correlation Between Proportions of Respondents Selecting Emotions and Distances of Emotions From ACT Prediction, by Sex of Respondent.

	Females (N*=41)	Males (N*=22)
Percent with negative Rho	88 †	84 †
Percent significantly negative	49	44

* Some respondents skipped some items so Ns are less for some events.

† Binomial probability less than .05 if probability of a negative correlation is 0.50, one-tail test.

Table 2.

Percent of Events With a Negative Mu2 Coefficient, by Sex of Respondent, and by Agency of Respondent in the Event.

	Females (N*=41)	Males (N*=22)
128 Events		
Percent with negative Mu2	89 †	81 †
Median value of Mu2	-0.61	-0.62
64 Events With Respondent as Agent		
Percent with negative Mu2	81 †	73 †
Median value of Mu2	-0.56	-0.56
64 Events With Respondent as Object		
Percent with negative Mu2	97 †	89 †
Median value of Mu2	-0.66	-0.62

* Some respondents skipped some items so Ns are less for some events.

† Binomial probability less than .05 if probability of a negative correlation is 0.50, one-tail test.

Table 3.
Median Rhos and Mu2s Measuring Association Between Proportions of Respondents Selecting Emotions and Distances of Emotions From ACT Predictions.

	Small Sample						Large Sample					
	Females			Males			Females			Males		
	Rho	Mu2	N	Rho	Mu2	N	Rho	Mu2	N	Rho	Mu2	N
A library assistant is neglecting you	-0.18	-0.67	40	-0.26	-0.67	20	-0.19	-0.72	386	-0.40	-0.74	221
A handicapped person is helping	-0.57	-0.65	39	-0.21	+0.08	17	-0.61	-0.89	385	-0.55	-0.78	221

you

You're silencing an expert	-0.03	-0.29	34	+0.07	0.00	18	-0.50	-0.63	357	+0.15	+0.25	217
You're seducing an innocent	+0.10	+0.39	36	+0.17	+0.12	17	-0.12	+0.36	335	+0.05	+0.01	209

Note. The large samples do not include respondents in the small samples.

Table A1.
Correlations Between Numbers-of-Respondents-Choosing-25-Emotions and Distances-of-Emotions-From-ACT-Prediction,
For 64 Events With Respondents as Actors

Note. Events are ordered by the male-female average of the Rhos.

Alter	Behavior	Rho		Mu2	
		Male	Female	Male	Female
bookkeeper	suspect	-0.60	-0.74	-0.91	-0.93
infant	sing-to	-0.57	-0.77	-0.82	-0.99
surgeon	study	-0.55	-0.72	-0.87	-0.81
genius	revere	-0.72	-0.54	-0.90	-0.78
boss	compliment	-0.58	-0.66	-0.82	-0.92
pupil	caution	-0.67	-0.50	-0.88	-0.58
runaway	save	-0.42	-0.71	-0.71	-0.98
crook	convict	-0.56	-0.56	-0.66	-0.87
hero	rescue	-0.58	-0.52	-0.99	-0.94
blind-date	cuddle	-0.51	-0.59	-0.55	-0.75
co-worker	comfort	-0.61	-0.38	-0.89	-0.85
supervisor	beg	-0.35	-0.59	-0.82	-0.85
shrew	calm	-0.47	-0.44	-0.76	-0.71
fanatic	avoid	-0.52	-0.38	-0.85	-0.74
		-0.23	-0.66	-0.66	-0.78

houseguest	serve	-0.45	-0.43	-0.56	-0.70
professor	flatter	-0.29	-0.59	-0.70	-0.88
tenant	nag	-0.51	-0.35	-0.83	-0.62
cutthroat	underestimate	-0.29	-0.54	-0.65	-0.84
registered-nurse	bawl-out	-0.56	-0.26	-0.77	-0.66
psychopath	rehabilitate	-0.26	-0.52	-0.75	-0.86
patient	reassure	-0.24	-0.46	-0.70	-0.75
quack	deride	-0.35	-0.29	-0.65	-0.19
old-fogy	ignore	-0.40	-0.23	-0.67	-0.24
rival	contemplate	-0.38	-0.24	-0.63	-0.05
rookie-cop	challenge	-0.16	-0.45	-0.47	-0.56
witch	convert	-0.37	-0.24	-0.55	0.00
statetrooper	appeal-to	-0.09	-0.52	-0.12	-0.83
bookworm	outwit	-0.17	-0.43	-0.48	-0.61
Palm-reader	chatter-to	-0.46	-0.12	-0.88	-0.62
servant	monitor	-0.38	-0.12	-0.66	0.43
truant	flunk	0.17	-0.60	0.31	-0.93
apprentice	pamper	-0.14	-0.28	-0.81	-0.72
warden	humble	0.01	-0.39	-0.57	-0.69
nurse-maid	lie-to	-0.04	-0.30	0.21	-0.78
goody	josh	-0.16	-0.18	-0.42	-0.36
child	intimidate	-0.10	-0.21	-0.62	-0.75
chaperon	parody	-0.18	-0.13	0.08	0.19
addict	tempt	-0.06	-0.24	0.09	-0.13
evildoer	pray-for	-0.29	0.11	-0.68	-0.39
killjoy	sit-next-to	0.05	-0.23	-0.64	-0.59
coroner	shun	0.02	-0.20	-0.42	-0.51
grind	pester				

hippie	imitate	0.10	-0.27	0.14	-0.56
firstborn	desert	-0.07	-0.09	-0.67	-0.26
golddigger	flee	-0.12	-0.03	-0.24	-0.43
dimwit	insult	0.08	-0.21	0.19	-0.34
pornostar	nuzzle	0.07	-0.19	0.15	-0.13
virgin	judge	0.01	-0.13	-0.53	-0.56
mourner	abandon	-0.08	-0.03	-0.44	-0.10
street-musican	heckle	0.06	-0.12	0.00	-0.40
thug	enrage	-0.08	0.03	-0.39	0.04
tramp	defend	-0.04	0.03	-0.12	-0.12
expert	silence	0.07	-0.03	0.00	-0.29
invalid	discourage	0.05	0.03	-0.15	0.32
lover	submit-to	0.11	-0.01	0.42	0.03
minister	corrupt	0.18	-0.08	0.20	-0.01
grandparent	hush	-0.14	0.35	-0.12	0.59
beggar	console	-0.03	0.24	0.09	0.33
alcoholic	dress	-0.10	0.35	-0.16	0.39
innocent	seduce	0.17	0.10	0.12	0.39
spy	poison	0.24	0.11	0.25	-0.34
pawnbroker	swindle	0.26	0.16	0.42	-0.12
judge	apologize-to	0.41	0.19	0.87	0.76
orphan	grieve-for	0.26	0.53	0.90	1.00

Table A2.
Correlations Between Numbers-of-Respondents-Choosing-25-Emotions and Distances-of-Emotions-From-ACT-Prediction,
For 64 Events With Respondents as Objects of Action

Note. Events are ordered by the male-female average of the Rhos.

Rho

Mu2

Alter	Behavior	Male	Female	Male	Female
receptionist	accommodate	-0.75	-0.77	-0.98	-0.98
flight-attendant	assist	-0.72	-0.74	-0.99	-0.98
lawyer	trusts	-0.56	-0.70	-0.70	-0.90
scholar	consults	-0.58	-0.66	-0.71	-0.77
proctor	inspects	-0.52	-0.72	-0.91	-0.95
boarder	asks-about	-0.63	-0.59	-0.95	-0.93
teetotaler	watches	-0.50	-0.72	-0.91	-0.95
stepfather	quizzes	-0.77	-0.42	-0.93	-0.66
intern	observes	-0.60	-0.55	-0.79	-0.41
stuffed-shirt	explains	-0.49	-0.65	-0.84	-0.93
stenographer	misunderstands	-0.48	-0.62	-0.85	-0.97
neurotic	admonishes	-0.59	-0.48	-0.97	-0.89
coroner	distress	-0.46	-0.61	-0.83	-0.89
physician	look-at	-0.74	-0.32	-0.76	-0.16
subordinate	debate-with	-0.74	-0.29	-0.92	-0.38
chaperon	observe	-0.57	-0.41	-0.76	-0.56
spinster	laugh-at	-0.39	-0.55	-0.61	-0.81
nightwatchman	question	-0.70	-0.24	-0.83	-0.30
novice	idolize	-0.21	-0.67	0.09	-0.71
pusher	address	-0.28	-0.60	-0.57	-0.81
classmate	nudge	-0.65	-0.22	-0.90	-0.61
funeral-director	shush	-0.28	-0.59	-0.70	-0.82
sinner	taunt	-0.37	-0.47	-0.53	-0.81
maniac	worship	-0.43	-0.40	-0.62	-0.63
grandchild	follow	-0.40	-0.40	-0.32	-0.32
handicapped-person	help	-0.21	-0.57	0.08	-0.65

brat	implores	-0.36	-0.39	-0.60	-0.81
prude	beseches	-0.36	-0.38	-0.70	-0.80
hypochondriac	deludes	-0.36	-0.38	-0.78	-0.78
has-been	congratulates	-0.13	-0.59	0.02	-0.91
clown	hypnotizes	-0.15	-0.55	-0.26	-0.92
puritan	admonishes	-0.32	-0.35	-0.77	-0.82
devil	inspires	-0.34	-0.32	-0.73	-0.61
bouncer	evicts	-0.40	-0.25	-0.62	-0.72
bellhop	disrespects	-0.18	-0.47	-0.54	-0.71
drop-out	manipulates	-0.25	-0.40	-0.64	-0.64
vigilant	sentence	-0.26	-0.37	-0.39	-0.71
critic	ridicule	-0.36	-0.25	-0.64	-0.74
vagrant	idolize	-0.33	-0.27	-0.15	-0.18
church-deacon	study	-0.34	-0.24	-0.48	-0.11
tightwad	agree-with	-0.21	-0.34	-0.82	-0.88
parent	denounce	-0.39	-0.14	-0.71	-0.46
loner	miss	-0.19	-0.32	-0.41	-0.49
disciplinarian	doubt	-0.12	-0.39	-0.37	-0.46
evangelist	condemn	-0.02	-0.49	-0.35	-0.77
desperado	idealize	-0.31	-0.18	-0.77	-0.69
janitor	fine	-0.14	-0.35	-0.16	-0.61
auditor	jest	-0.38	-0.11	-0.80	-0.20
employer	distrust	-0.32	-0.16	-0.36	-0.09
gambler	sweet-talk	-0.26	-0.20	-0.22	-0.46
sibling	govern	-0.25	-0.21	-0.56	-0.33
imbecile	tap	-0.42	-0.03	-0.47	-0.14
library-assistant	neglect	-0.26	-0.18	-0.67	-0.67
landlord	evade	-0.03	-0.39	-0.10	-0.20

girl	rebel-against	-0.40	-0.01	-0.62	-0.19
bisexual	embrace	0.02	-0.35	0.20	-0.61
pickpocket	follow	-0.04	-0.29	-0.11	-0.81
friend	forget	-0.33	0.01	-0.55	0.19
spouse	ogle	-0.14	-0.18	-0.13	-0.24
bailman	exploit	-0.03	-0.24	0.01	-0.28
housekeeper	blackmail	-0.08	-0.04	0.11	-0.24
phony	respect	-0.17	0.07	-0.75	-0.12
bigamist	encourage	0.15	-0.18	-0.22	-0.42
file-clerk	envy	0.14	0.04	0.77	0.44