2

Sentiments

If you are like many Americans, you feel that doctors are helpful, powerful, and reserved. That's your sentiment about doctors, the way you feel in general about them even though you might have different feelings in particular circumstances.

For many Americans, the general sentiment about children is quite different: children are good, weak, and noisy. Gangsters provoke still another sentiment: bad, powerful, and active.

2.1 Evaluation, Potency, and Activity (EPA)

Sentiments have three aspects. Evaluation concerns goodness versus badness, Potency concerns powerfulness versus powerlessness, and Activity concerns liveliness versus quietness. The three aspects are abbreviated EPA.

Each aspect, or dimension, of sentiments can be characterized by a variety of contrasts.

Some words characterizing the positive side of the Evaluation dimension are: nice, sweet, heavenly, good, mild, happy, fine, clean. Corresponding words for the negative side are: awful, sour, hellish, bad, harsh, sad, course, dirty.

Characterizations of the positive side of the Potency dimension include: big, powerful, deep, strong, high, long, full, many. The corresponding words for the negative side are: little, powerless, shallow, weak, low, short, empty, few.

Words characterizing the positive side of the Activity dimension include: fast, noisy, young, alive, known, burning, active, light. Corresponding negative words are: slow, quiet, old, dead, unknown, freezing, inactive, dark.

Characterizations within each dimension are correlated. For example, something judged sweet is likely to be judged clean also.

Characterizations across dimensions are uncorrelated. For example, sensing that something is powerful provides no clue as to whether it is good or bad.

Table 2-1. Example identities and behaviors having various configurations of evaluation, potency and activity (EPA)

EPA Configuration	Identities	Behaviors
Good, Potent, Active	champion, friend, lover	entertain, surprise, make love to
Good, Potent, Inactive	grandparent, priest, scientist	pray for, massage, console
Good, Impotent, Active	baby, child, youngster	ask about something, beckon to
Good, Impotent, Inactive	old-timer, patient, librarian	obey, observe, follow
Bad, Potent, Active	devil, bully, gangster	slay, rape, beat up
Bad, Potent, Inactive	executioner, scrooge, disciplinarian	execute, imprison, flunk
Bad, Impotent, Active	delinquent, junkie, quack	laugh at, ridicule, pester
Bad, Impotent, Inactive	loafer, has-been, bore	submit to, beg, ignore

Various kinds of people have different positions on the EPA dimensions. Table 2-1 shows some examples of kinds of people representing each configuration of EPA. Individuals' social behaviors also vary on the EPA dimensions, and Table 2-1 also shows some examples of social behaviors representing each EPA configuration.

The three aspects of sentiments—Evaluation, Potency, and Activity—are matters of degree. Each aspect can be greater or less, in either a positive or negative direction. For example, some things are slightly good, others are quite good, still others are extremely good.

You can picture the three dimensions by imagining that sentiments are floating around the room you're in.

- Things that are very good are up near the ceiling, things that are very bad are near the floor.
- Things that are powerful are near the wall in front of you, weak things are near the wall behind you.
- Lively things are on your right, and quiet things are on your left.
- Things that are neither good nor bad, powerful nor powerless, lively nor quiet hang around the center of the room.

So to see a grandparent you glance upward to your left at the good, powerful, quiet corner. To see a child you turn your head and look up over your right shoulder at the good, powerless, lively corner. To see a gangster you look down to your right at the bad, powerful, lively corner.

Ways of acting are in the room, too. Look up in front of you to your right, and there's making love to someone. Now drop your eyes to the floor along that same corner of the room, and you see raping someone. Look down behind you on the left; there's ignoring someone. Look up, forward to your left to see consoling someone.

The room represents EPA space, where sentiments about all kinds of things float inside like stars in the cosmos. EPA space also is affective space, since it is where your feelings about things are positioned.
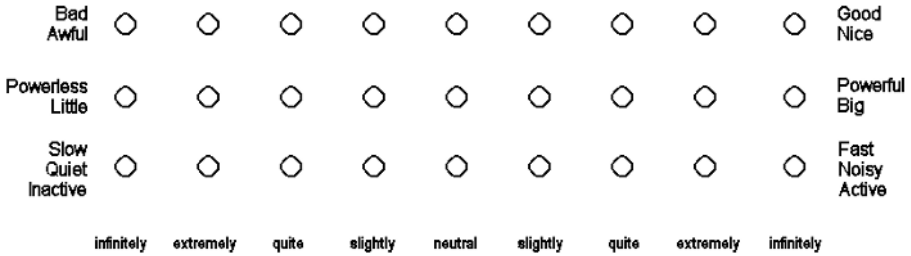
Fig. 2-1. Rating scales for measuring EPA—a "semantic differential."

2.2 Measuring EPA

You can measure your own sentiments with the three rating scales shown in Figure 2-1. Each rating scale presents adjectives at its end points in order to describe the negative and positive poles of the dimension. Nine marking positions are between the end points, and adverbs at the bottom characterize the meaning of each marking position. You indicate your feelings about something by selecting one position on each scale.

The custom is to use plus units to measure goodness, powerfulness, and liveliness; minus units for bad, powerless, or quiet. Ratings are converted into numbers depending on which position is marked.

infinitely on the left side	=	-4.3
extremely on the left side	=	-3
quite on the left side	=	-2
slightly on the left side	=	-1
neutral	=	0
slightly on the right side	=	+1
quite on the right side	=	+2
extremely on the right side	=	+3
infinitely on the right side	=	+4.3

For example, something that you rate as "quite good, nice" gets coded +2 on Evaluation.

An EPA profile is a list of three such measures: the first number represents Evaluation, the second is Potency, and the third is Activity.

Try using these scales to measure some of your own feelings about things. Write down your ratings in the form of EPA profiles.

These days, sentiments usually are measured on computer-implemented scales that let you move a pointer anywhere on the scale to reflect your feelings. Ratings in-between the choice points shown in Fig. 2-1 get coded as fractions. For example, a rating halfway between "quite" and "extremely" on the good side of the Evaluation scale would be coded +2.5.

Distances between sentiments can be computed from the EPA profiles of the sentiments, using a standard formula. For example, among some American college students:

- The average EPA profile of "enemy" is -2.1, 0.8, 0.2 among males, and -2.5, 0.6, 0.9 among females.
- The average EPA profile of "friend" is 2.8, 1.9, 1.4 among males, and 3.5, 2.5, 2.0 among females.
- The distance between enemy and friend is 5.2 for males, and 6.4 for females.
- Thus sentiments about enemy and friend are further apart for the females than for the males.

This illustrates that numerically-measured sentiments can be analyzed mathematically.

2.3 Universality of EPA

Sentiments of people everywhere vary along the three dimensions of Evaluation, Potency, and Activity. That's not just an assumption. It's an empirical finding from cross-cultural research in dozens of societies, conducted in the following steps.

1. Concepts that exist in every culture—like father, mother, child, water, moon—were assembled into a list.
2. Natives in each culture were asked to respond to each concept on the list with a modifier, and to name the opposite of that modifier. For example, some individuals in the U.S.A. might respond to mother with the word sweet, and give the word sour as the opposite.
3. The modifier opposites were formed into scales, and natives used the scales to rate each concept on the list. Ratings of a concept on a scale were averaged to get a number indicating how raters from that culture typically positioned the concept on the scale.
4. For each culture, a table was created, with a column for each scale, a row for each concept, and average ratings of concepts on scales in the cells. This allowed correlation coefficients to be computed between scales. For example, in the American table, average ratings of concepts on the sweet-sour scale and on the good-bad scale were used to compute a numerical correlation between the two scales. (Correlations near 1.0 indicate similarity; correlations near zero indicate absence of a relation; correlations near -1.0 indicate a reverse relation.)
5. A pan-cultural table also was created, allowing scales in different cultures to be correlated. For example, American average ratings of concepts on the sweet-sour scale and Mexican average ratings on a bueno-malo scale were compared across all concepts in order to define the correlation between those two scales.
6. Statistical analysis of correlations between scales showed that the scales clustered into three major groups—Evaluation, Potency, Activity—and every culture contributed scales to each group. For example, all three scales mentioned above ended up in the Evaluation cluster, indicating that con-

cepts rated as sweet by Americans tended to be rated good by Americans, and bueno by Mexicans.

In this study, the only thing translated from one language to another was the list of universal concepts. The only assumption in the analysis was that people in different cultures have roughly parallel feelings about the universal concepts, even though specific details might differ from one culture to another. (Fig. 3-1 in the next section shows that this assumption does hold cross-culturally for father, mother, and child.) Thus the cross-cultural study provides compelling evidence that sentiments around the world involve the three EPA dimensions, and the EPA dimensions are comparable in every culture.

2.4 Further Readings

Psychologist Charles Osgood with co-authors George Suci and Percy Tannenbaum (1957) instituted semantic differential rating scales in their book, *The Measurement of Meaning*. Osgood (1962) interpreted semantic differential measurements as a way of assessing affective meaning rather than meaning in general in his article, "Studies of the generality of affective meaning systems."

Osgood's book with W. May and M. Miron (1975), *Cross-Cultural Universals of Affective Meaning*, documented the massive cross-cultural project that verified the dimensions of Evaluation, Potency, and Activity as cross-cultural universals.

I reviewed early methodological work on the semantic differential (Heise 1969b). I also described techniques for obtaining EPA data over the Internet (Heise 2001).