mining these numbers for succeeding sets they are treated exactly as if they were coefficients of other a's.

After the value of the last a has been obtained, at least one equation in each of the preceding sets is solved successively. More may be solved if the computer wishes to have an idea of the amount of inaccuracy produced by the method of computing.

After these weights have been computed it is an easy matter to determine the multiple correlation from the equation:

$$r_{0.123\ \ldots\ n} = [a_1 r_{01} + a_2 r_{02} + \ldots\ldots a_n r_{0n}]^{1/2}$$

This last form may be obtained very easily from the equation:

$$r_{z_0 \bar{z}_0} = \frac{\Sigma z_0 \bar{z}_0}{N \sigma_{z_0} \sigma_{\bar{z}_0}}$$

in which σ_{z_0} is equal to 1, and by remembering that the multiple correlation coefficient is equal to $\sigma_{\bar{z}_0}$ (2, p. 300).

In the given example, it would be necessary simply to multiply into the machine successively the values just preceding the equality by the weights of the respective variables, that is, .3862 by .2098, .4785 by .1289, .4883 by .2751, .4980 by .2533, and .3494 by —.0217. The square root of the number in the machine, .3956, is extracted and the result, .63, is the multiple correlation coefficient.

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A PROBLEM IN MEANING

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This paper proposes to illustrate an interesting phenomenon and to explain it on principles consistent with gestalt theory. It challenges any behavioristic and associationistic explanation.

Below are 25 pairs of English words. Opposite each pair is the corresponding Japanese pair in Hebbon Romanized spelling. The reader may demonstrate for himself the ease with which the correct member of each Japanese pair is assigned to its corresponding member in the English pair simply by trying to get the "feel" of the words and then guessing. To do

1.	(a)	bird	mushi	(muʃɪ)
	(b)	worm	tori	(tɔrɪ)
2.	(a)	red	midori	(midɔri)
	(b)	green	aka	(ʌkʌ)
3.	(a)	peace	heiwa	(he:wʌ)
	(b)	war	tatakai	(tʌtʌkʌi)
4.	(a)	sweet	karai	(kʌrʌi)
	(b)	bitter	amai	(ʌmʌi)
5.	(a)	fast	hayai	(hʌyʌi)
	(b)	slow	osoi	(ɔsɔi)
6.	(a)	white	shiro	(ʃirɔ)
	(b)	black	kuro	(kurɔ)
7.	(a)	square	shikaku	(ʃikʌku)
	(b)	circle	maru	(mʌru)
8.	(a)	good	warui	(wʌrui)
	(b)	evil	yoi	(yɔi)
9.	(a)	praise	kenasu	(kenʌsu)
	(b)	deprecate	homeru	(hɔmeru)
10.	(a)	far	tooi	(tɔ:i)
	(b)	near	chikai	(tʃikʌi)
11.	(a)	soft	katai	(kʌtʌi)
	(b)	hard	yawai	(yʌwʌi)
12.	(a)	smart	riko	(rikɔ:)
	(b)	dull	baka	(bʌkʌ)
13.	(a)	high	hikui	(hikui)
	(b)	low	takai	(tʌkʌi)
14.	(a)	kite	hune	(hune)
	(b)	boat	tako	(tʌkɔ)

15.	(a) old	wakai	(wʌkʌi)
	(b) young	oitaru	(ɔitʌru)
16.	(a) hot	atsui	(ʌzui)
	(b) cold	samui	(sʌmui)
17.	(a) are	nai	(nʌi)
	(b) are not	aru	(ʌru)
18.	(a) blue	ao	(ʌɔ)
	(b) yellow	kii	(ki:)
19.	(a) thick	atsui	(ʌzui)
	(b) thin	usui	(usui)
20.	(a) big	chiisai	(tʃi:sʌi)
	(b) small	ookii	(ɔ:ki:)
21.	(a) clear	nigotta	(nigɔttʌ)
	(b) muddy	sunda	(sundʌ)
22.	(a) enemy	mikata	(mikʌtʌ)
	(b) friend	teki	(teki)
23.	(a) crooked	magatta	(mʌgʌttʌ)
	(b) straight	massugu	(mʌssugu)
24.	(a) right	ayamareru	(ʌyʌmʌreru)
	(b) wrong	tadashii	(tʌdʌʃi:)
25.	(a) sharp	nibui	(nibui)
	(b) dull	togatta	(tɔgʌttʌ)

this successfully it is only necessary to avoid artificial terminological schemes such as associating sounds, letters, length of word, etc. At least 75% of these pairs can be correctly guessed. It is advisable to enunciate the Japanese words as clearly as possible, not to get the sound for purposes of association but because such articulate movements are conditions favorable for the emergence of the corresponding functional organization. The phonetic system is the familiar one of the International Phonetic Association with the exception that *z*=*ts* as in ca*ts* and that *r* is pronounced half-way between the normal English *r* and *d*. The key to the correct pairing is given below the list.

The following letters signify the Japanese words which correspond to the (*a*) words of the English pairs: 1 *b*, 2 *b*, 3 *a*, 4 *b*, 5 *a*, 6 *a*, 7 *a*, 8 *b*, 9 *b*, 10 *a*, 11 *b*, 12 *a*, 13 *b*, 14 *b*, 15 *b*, 16 *a*, 17 *b*, 18 *a*, 19 *a*, 20 *b*, 21 *b*, 22 *b*, 23 *a*, 24 *b*, 25 *b*.

A proposed explanation of the phenomenon follows: The perception of a word which is known to be meaningful but whose meaning is unknown is conditioned by organized processes. Many, if not all, organized processes have specific causal properties of varying degrees of similarities. Now organized processes are also the conditions for the perception of all objects and for the experience of all meanings. Hence, when a word is "selected" to convey a meaning, the perception of that word and the thinking of the meaning will tend to give rise to organizations which have similar causal properties unless some terminological scheme is employed.

This explanation is a specific application of the theory that meanings, psychologically, are properties of natural organized wholes or processes.

The procedure employed in this experiment suggests a method which may be of value for the investigation of meaning and the origin of words and meanings.

Reference

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