Connotative Meaning of Concepts Related to Cleft Lip and Palate

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From a variety of points of view, we are all concerned with understanding and helping the cleft lip and cleft palate child. In terms of his psychological development, most of us are certain that having a cleft lip or palate has a tremendous impact on the functioning of the child. In one sense, we have yet to demonstrate that this is indeed the case; in another, it is difficult for us to conceive that clefts do not influence behavior in some way.

One dimension of such impact may be the meanings that children attribute to their symptoms (or disorders) as a function of their experiences with them. In general, the meaning that cleft lip and palate has for persons with such disorders has never been explored. Other concept areas associated with cleft lip and palate also need exploration. Such concepts would include those concerned with the self as well as those concerned with body parts. We are particularly interested in the latter, since they are associated with the body image these children might have. Since these children are born with their disorders, it would be of considerable interest to see how they would react to other symptoms, such as asthma or amputation. Children with clefts may be expected to react differentially to their own health problems as a function of their familiarity with them.

Previous work with orthopedically handicapped children (*2*), and with subgroups of asthmatic children (*1*), has demonstrated the feasibility of measuring the meanings of concepts associated with symptoms. Through the use of a semantic differential, a test used to measure meaning, it is possible to examine concepts related to specific symptom groups. This study is an attempt to investigate the cognitive structures of cleft lip and palate children.

The need to construct a semantic differential so that concepts could be compared along continua of intensity and contrast has been pointed out previously. For example, if cleft palate is compared to concepts of health, illness, and death, where would it be perceived by cleft palate youngsters? We might draw one set of conclusions if cleft palate is

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seen as closer to health than to illness, and another set if it is seen as closer to the concept of death. In a similar fashion, if the concept is compared to headache, flu, and cancer, where would it be placed by this clinical population? If cleft palate is seen as comparable to cancer, we are likely to imply that experience with this symptom has had a considerable impact on the cognitive structures of these children.

Procedure

SUBJECTS. Cleft lip and palate children or those with cleft palate only served as subjects. All were attending a summer speech rehabilitation camp at Duke University and were housed in dormitories. The semantic differential was administered approximately mid-way through their stay.

Twenty subjects (12 boys and 8 girls) were used for the study. The children ranged in age from eight through 17 years with a mean age of 12.54 years. IQ measures (Kuhlman-Anderson) averaged 102.68 with a range of 89 through 128. Six of the subjects had cleft palate only, the remaining subjects had cleft lip and palate. All had difficulty with speech.

COGNITIVE MEASURE. The semantic differential employed was based on the work of Osgood (*3*) and was called a 'Word Meaning Test' for purposes of discussion with the children. This test contained 32 concepts which were rated on nine scales to obtain three factor scores: evaluative (good-bad, clean-dirty, nice-awful); potency (hard-soft, strong-weak, large-small); and activity (still-moving, dull-sharp, slow-fast). This study will report on 21 of the concepts.

The children were seen in a group. The semantic differential format, consisting of the listing of a concept at the top of each page and the nine adjective pairs separated by a seven point scale, was explained to them. An illustrative concept, *summer,* was first used to make sure the children understood the test. (An example is shown in Figure 1.)

The concepts which were used were selected on *a priori* basis to reflect areas that might be associated with cleft lip and palate. The 21 concepts used for study and the system for classifying them are shown in Figure 2. The concepts *headache, flu,* and *cancer,* and the concepts *health, illness,* and *death* were chosen to provide continua of intensity. Concepts associated with other clinical groupings were chosen to provide contrast.

Results

The method of analysis of the semantic differential first involves averaging the three scale values for each of the three factors to obtain mean factor scores (evaluative, potency, and activity) for each concept. The higher the score, the more positive, potent, or active the concept is rated. Scores of four are considered to be 'neutral'. Factor scores were obtained for the concepts and are presented in Table 1.

CLEFT LIP

hard	1	2	3	4	5	6	7	soft
dirty	1	2	3	4	5	6	7	clean
still	1	2	3	4	5	6	7	moving
good	1	2	3	4	5	6	7	bad
strong	1	2	3	4	5	6	7	weak
awful	1	2	3	4	5	6	7	nice
fast	1	2	3	4	5	6	7	slow
small	1	2	3	4	5	6	7	large
dull	1	2	3	4	5	6	7	sharp

FIGURE 1. An illustrative page from the 'Word Meaning Test' for the concept *cleft lip*. Similar pages were presented for each of the other 20 concepts to be rated.

personal concepts	*symptom concepts*	*body part concepts*
me	cleft lip	mouth
mother	cleft palate	nose
father	asthma	face
boy	amputation	arm
girl	cripple	leg

health continuum concepts	*illness continuum concepts*
health	headache
illness	flu
death	cancer

FIGURE 2. Classification of the 21 concepts which were rated for study.

Since, with rare exception, differences between the sexes were negligible, ratings were combined for all concepts with the exception of the *boy* and *girl* personal concepts. Personal concepts, in general, are more highly valued than symptoms. Among the symptoms, it is interesting to note that both *cleft palate* and *cleft lip* are relatively neutral in evaluative ratings, but the other symptom concepts are negatively rated.

Cleft palate is rated differently for these children. First of all, they view it slightly more positively than *cleft lip*. Compared to *cleft lip, cleft palate* is considerably more active and at about the same level of potency. These children clearly make a distinction between their own symptoms and those of others. *Asthma, amputation* and *cripple* are negatively valued. These concepts tend to be somewhat less active, although all seem to be relatively neutral in potency.

It is of considerable interest to note that the concepts regarding

TABLE 1. Mean ratings for evaluative, potency, and activity for each of 21 concepts. A seven point rating scale was used, with one being *least*, and seven, *most*.

Concepts	*Mean ratings*		
	evaluative	*potency*	*activity*
Personal			
Me	5.90	5.15	5.86
Mother	6.88	4.21	5.94
Father	6.35	5.39	5.95
Boy (boys)	6.00	5.00	6.22
(girls)	4.54	5.17	5.79
(total)	5.33	5.07	6.05
Girl (boys)	6.56	2.83	4.86
(girls)	6.92	3.62	4.87
(total)	6.65	3.15	4.86
Symptom			
Cleft lip	3.61	4.12	3.84
Cleft palate	4.40	3.93	5.59
Asthma	2.45	4.65	4.63
Amputation	2.41	4.00	3.32
Cripple	2.53	4.17	3.25
Body parts			
Mouth	5.86	4.45	4.96
Nose	5.81	4.08	4.42
Face	5.86	4.27	4.95
Arm	6.45	5.67	5.92
Leg	6.46	5.53	5.50
Health and Illness			
Health	6.52	5.01	5.44
Illness	2.49	4.67	3.98
Death	2.56	3.69	2.88
Headache	2.69	5.10	4.06
Flu	2.40	4.88	4.30
Cancer	1.85	5.48	4.35

structures in close proximity to cleft lip and palate, such as *mouth, nose* and *face,* are less positively valued than the more distal parts. These are also consistently less potent and less active than *arm* and *leg.*

The relationship among selected concepts can be demonstrated graphically, as in Figure 3.

That graph illustrates the separation of *cleft lip* and *cleft palate* for this group of children with cleft lip and palate. For this group, *cleft lip* and *palate* fall between the concepts of *illness* and *health.*

The concepts of *headache, flu,* and *cancer* were then substituted for *illness.* (See Figure 4.) In general, they occupy space in the same vicinity where the concept of illness was in the previous analysis. The concepts of *asthma, amputation,* and *cripple* seem to fall somewhere between *illness* and *death.* The separation of *cleft palate,* and, to some degree, *cleft lip,* from the other symptom concepts is indicated in this analysis.

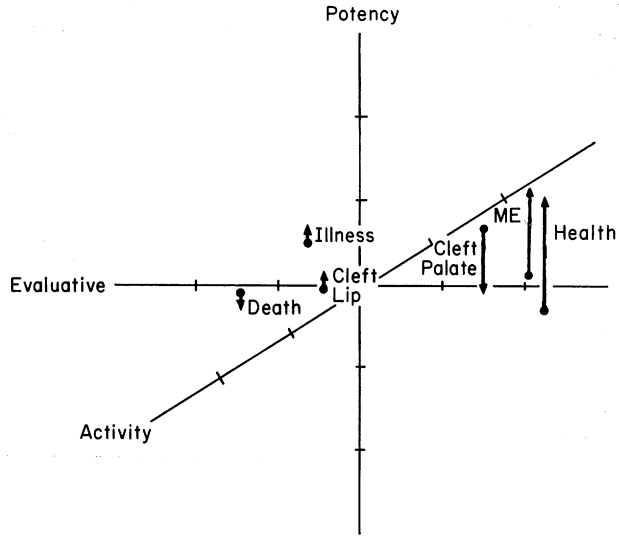

FIGURE 3. Spatial relationships among selected concepts. The three axes represent the three factors of the semantic differential. Progressing right, along the evaluative axis, the concepts are perceived to be more positive. Progressing from the lower left to the upper right, the concepts are perceived to be more active. The dots represent the intersect of these two axes. The line attached to the dot is the referent to the potency axis. The end of the line represents the perceived potency of the concept.

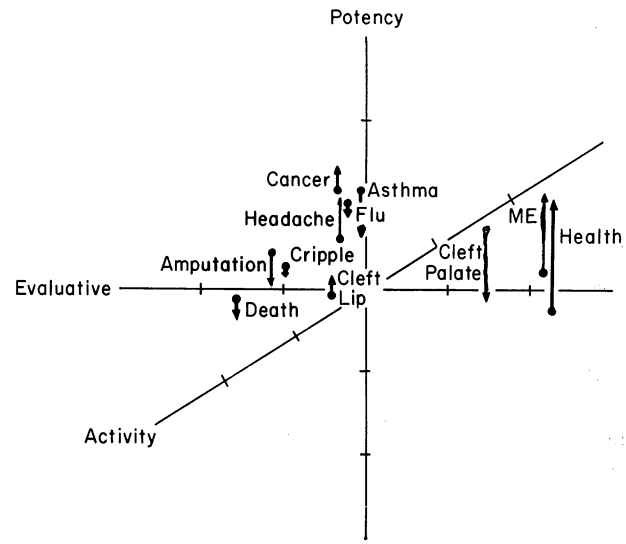

FIGURE 4. Spatial relationships among selected concepts with *headache, flu,* and *cancer* substituted for *illness* (in Figure 3). The figure is to be read in the same way as Figure 3.

The spatial relationship between pairs of concepts can also be expressed numerically, as the D score of Osgood (*3*). Where this D score is zero, the concepts are presumed to be identical; that is, they occupy the same space. The lower the D score, the smaller is the distance

TABLE 2. Semantic distances (D scores) between the concept of self (*me*) and concepts related to illness and symptom. Small values indicate similarity between the two concepts.

concept	*D score*
Health	2.36
Cleft palate	3.97
Headache	4.01
Cleft lip	4.13
Illness	4.56
Asthma	4.72
Flu	4.88
Cripple	4.99
Cancer	5.00
Amputation	5.06
Death	5.26

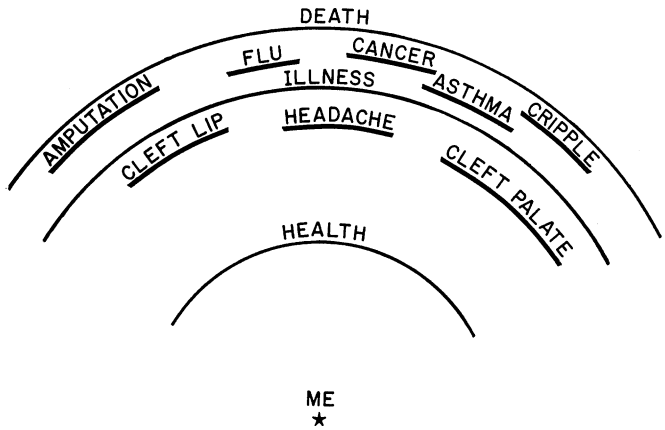

FIGURE 5. Graphic presentation of distances between the concept *me* and other concepts representing health, illness and death. The distance between *me* and each of the other concepts is representative of the size of the D score between the two.

between the concepts compared and the closer in meaning the concepts are presumed to be.

Presented in Table 2 are D scores for the concept *me* and various health, illness and symptom concepts. In terms of the semantic distance from the concept *me,* these cleft palate children see themselves as closer to health than to any other concept. *Cleft lip* and *cleft palate* are perceived to be in the area of *headache,* indicating a relatively mild or benign conceptualization of their symptoms. Other symptoms, however, are placed between illness and death. Perhaps these children are indicating that what is experienced is worse than the unknown, or that it's better to have what you are familiar with than something different.

These relationships are presented graphically in Figure 5. Each concept is presented in proportion to its distance (the D score value) from

TABLE 3. Semantic distances (D scores) between the concept of self (*me*) and the other four personal concepts, for the 12 boys, eight girls, and for the combined group.

concept	*D score*		
	boys	*girls*	*combined*
Mother	3.06	3.18	3.11
Father	2.28	1.86	2.11
Boy	2.36	3.54	2.83
Girl	3.72	2.13	3.08

the concept of *me*. In addition to the relationships already observed, it is of some interest to note that these children see themselves as closer to *cleft palate,* their dominant symptom.

Finally, the self concept, the concept of *me,* was compared to the other four personal concepts, *mother, father, boy,* and *girl.* The obtained D scores are given in Table 3. A typical sexual stereotype emerges: boys are closer to the concept *boy* and girls are closer to the concept *girl.* Notice, however, the relationship to the concept *father.* Here we no longer have the stereotype, but rather both boys and girls see themselves as closer to *father,* and somewhat further removed from *mother.*

Discussion

At this point, the smallness of the sample should be pointed out. In view of this, and in view of the lack of adequate data for appropriate statistical analysis, the results can be seen only as provocative and suggestive.

It seems appropriate to point out that the results reported here must be interpreted with great caution for several reasons. First, there is not enough information about reliability of the technique to know whether comparable results would be obtained if the same measures were administered again to these or different children. Secondly, interpretation of these results would be facilitated if more information about normal children were available. Lastly, there certainly may be differences in the response made by children with cleft lip and those without cleft lip since the visual impact of the disorder may affect the feelings which the child has. Additional research is needed.

There seems to be at least one clear trend in the data. These children treat *cleft lip* and *cleft palate* differently from other symptoms. One might suppose that this is to be expected, since these are the presenting symptoms of this group of children. What has been demonstrated is that these concepts have, in a sense, become part of cognitive structures of children with clefts and that the meanings they ascribe to these concepts are a function of their experience with it. It remains to be shown whether

other clinical populations will order these concepts differently. If so, the impact of the symptom can be demonstrated.

Perhaps familarity serves to reduce expressed anxiety. It would seem reasonable, therefore, for concepts that lack familiarity to be rated less favorably. Since *amputation* and *cripple* may be more anxiety-arousing for this population, they are perceived to be closer to *death* than they are to *health.* Studies with orthopedic youngsters would seem to be indicated to see whether these cognitions change as a function of presenting symptom.

The finding that these children see themselves as being closer to *father* than to *mother,* is, to say the least, exceedingly provocative. In a previous study with asthmatic youngsters of approximately the same age (*1*), the data were in the opposite direction: girls had a self concept that was closer to *mother* than to *father,* while boys were equally close to *mother* and *father.* It is interesting to speculate about the nature of the care-taking roles that are played by mothers and fathers of asthmatic and of cleft lip and palate youngsters. Does the father of the cleft palate child play a greater role in care-taking from birth onward? Is this relationship reflected in identification patterns that are different for asthmatics than they are for children born with clefts? Is it possible that the onset of the symptom (intrauterine versus extrauterine) makes a significant difference? As might be expected, we have managed to raise more questions than we have answered.

Summary

Twenty subjects (12 boys, 8 girls) attending a speech rehabilitation summer camp served as subjects. The subjects ranged in age from eight through 17 years and included 14 cleft lip and palates and six cleft palate only children. All were given a modified semantic differential. Sex differences were negligible. *Cleft palate* was rated slightly more positively than *cleft lip* and both of these concepts, in turn, were rated more positively than the concepts *asthma, amputation* and *cripple.* Body part concepts, *mouth, nose, face,* were less positively valued, less potent and less active than more distal body part concepts. Conceptually, *cleft palate* and *cleft lip* were seen in the range of mild illness and close to the concept of *headache.* Other symptoms such as *asthma, amputation* and *cripple* were conceptually more severe. The results of the study reliability of the technique.

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