ABSTRACT
            In order to gain further information about the
emerging metaphoric capacity of preadolescents, a training study was
devised in which subjects were seen repeatedly over a period of
several months. Thirteen fifth grade students from a
lower-middle-class background were randomly selected to compose a
training group and 18 matched subjects formed a control group. All
subjects were given a pretest which consisted of 10 unfinished
vignettes whose completion required a simile (an explicit metaphor).
The completion task consisted of two parts: subjects first created
their own endings for each item and then chose an ending from several
which were presented to them. The study clearly documented the fact
that fifth graders in this population could produce and appreciate
figurative language. Metaphoric endings were preferred by all
subjects by the third week of the study; metaphoric endings were
routinely produced by all of the subjects by the sixth week of the
study. Although individual rates of progress varied widely, the
stages through which subjects passed in acquiring metaphoric
understanding were remarkably similar. (RB)

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A Training Study

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Introduction: Little is known about pre-adolescents' ability to use and explain figurative language. It has been shown that pre-schoolers often utter metaphors in their spontaneous speech (Chukovsky 1968) and are able to make metaphoric matches across modalities although they cannot explain them (Gardner 1973). Moreover, a study by Asch and Nerlove (1960) reported that by 11 years of age the child firmly understands that certain words may have a psychological connotation as well as a concrete denotation. And yet, when pre-adolescents are presented with a story completion task which requires a comparison, they adopt a conventional and non-metaphoric approach (contribution #4, this symposium, 1975). Because of these conflicting claims it is important to determine whether children of this age are cognitively unable to complete the comparison metaphorically, or whether a small amount of training and familiarity with appropriate models will significantly improve their performance. Moreover, if pre-adolescents can advance, with training, from a conventional to a metaphoric use of language, the steps through which they progress must be delineated. In order to gain further information about the emerging metaphoric capacity of pre-adolescents, a training study was devised in which subjects were seen repeatedly over a period of several months.

Methods: Because of the intensive nature of the study, a small group of children were chosen to participate. Thirteen 5th grade students (6 females and 7 males) of a lower-middle class background were randomly selected to compose a training group, and 18 matched subjects formed a control group. All subjects were given a pre-test which consisted of 10 unfinished vignettes whose completion required a simile (an explicit metaphor).

The completion task consisted of 2 parts: subjects created their own endings for each item, and then chose an ending from several which were presented to them. Four kinds of endings were presented in the multiple choice: conventional, literal, mataphorically appropriate, and inappropriate. (For examples, see contribution #4, this Symposium) Subjects were probed for their reasons in both tasks.

After the pre-test, each child in the training group was seen once a week for one-half hour for eight weeks, during which time explicit training in metaphor was given. The children were trained to make comparisons between sensory modalities and also between the psychological and physical domains. After the training period, all subjects received a post-test consisting of the 10 items on the pre-test plus 10 additional ones.

Results: The study clearly documented that fifth graders in this population could produce and appreciate figurative language. Metaphoric endings were preferred by all subjects by the third week of the study; metaphoric endings were routinely produced by all of the subjects by the sixth week of the study. Moreover, though individual rates of progress varied widely, the stages through which subjects passed en route to metaphoric understanding were remarkably similar across children. What follows is a brief account of the typical stages of progression.

Microgenetic Stages during Training: Six basic stages were revealed as the subjects advanced from a conventional to a metaphoric use of language.

1) Children's Untrained Metaphoric Output: Before training, the children's endings were overwhelmingly conventional. Metaphoric endings were infrequent, and when they occurred, the reasons cited often revealed that the child was not thinking metaphorically. Before training, children abided closely to the precise, familiar and concrete meanings of words.

Terms which have a double role as both psychological and physical were
understood only in their physical sense. Subjects did not display any
spontaneous tendency to play with words, or to imaginatively stretch their
definitions.

2) The <u>Embellishment</u> <u>of</u> <u>the</u> <u>Conventional</u>: The first attempt at
originality entailed the embellishment of a basically conventional response;
subjects thus sought to give it a certain individual flair. "Dark as night"
gave way to "dark as a midnight without stars or moon."

3) The <u>Appeal</u> <u>of</u> <u>the</u> <u>Inappropriate</u>: When it was realized that the
elaboration of a conventional response did not make it original, and that
a comparison between two different domains was called for, an increased
tendency to produce inappropriate endings was observed. In the attempt
to be original, at first <u>anything</u> would do. Unusual endings which made
sense were not differentiated from those which did not.(e.g., "The noise
was as loud as a table.")

4) <u>Less</u> <u>Primitive</u> <u>Attempts</u> <u>to</u> <u>Cross</u> <u>Categories</u> <u>Fail</u>: Other attempts
to compare two things from different domains during the early weeks of
training, while less primitive, were still unsuccessful. The child kept
two categories abstractly in mind, but was unable to perceive a metaphoric
connection between them. When asked to compare the color red to a sound,
the child suggested "a juicy sound, like when you eat a tomato." Here the
sound shares no metaphoric similarity with the color: it's only link with
red is that it is produced by a red object. Sometimes the inability to
perceive a similarity between two disparate domains that the child wanted
to link led to the engulfment of one domain by the other.(e.g., "The sun
was as warm as a mother's hug, because when she hugs you, you get warm,
because she rubs you.")

5) The Incomplete Metaphor: Once the concept of crossing categories was fully understood, another mistake often occurred. A metaphoric connection was conceptualized but inadequately expressed (e.g., "Hair as tangled as the friendship of the boy who just moved here "). The ending required the following elaboration for it to make sense: "The boy could be tangled with his old and new friends." It was difficult for the children to recognize the need to verbalize the ending more clearly; they assumed, in an egocentric manner, that the experimenter understood what they meant.

6) The Metaphoric Ending: By the sixth week of training, appropriate metaphoric endings had become the rule, In general these clearly expressed comparisons across two disparate domains.(e.g., "Her voice was as thundering as the smell of gasoline.")

Preferences: The multiple choice task proved to be much easier than that of production. Within three weeks, the metaphoric ending was most frequently chosen, and cogent metaphoric reasons were offered. Stages similar to those revealed in the production task were documented.

Conclusions: This study documents a clear series of microgenetic stages as the child learns to use language metaphorically. The same stages that can be observed in children's metaphoric productions can also be discerned, in abbreviated forms, in the children's preferences for various figurative endings. A cross-sectional study has recently been undertaken of the development of sensitivity to figurative language, in which children will be asked to explicate metaphors. Ontogenetic stages will thus be compared to microgenetic stages. It is anticipated that the results of this study will also be reported in this symposium.

Asch, S., and Nerlove,H. "The development of double-function terms in children, Perspectives in psychological theory, (ed. B. Kaplan and S. Wapner) New York: International Universities Press, Inc., 1960, pp. 47-60.

Chukovsky, K. From Two to Five. University of California Press, 1971.

Gardner, H. Metaphors and modalities: how children project polar adjectives
 onto diverse domains, Child Development, 1974, 45, 84-91.