DOCUMENT RESUME

ED 113 024 PS 008 047

AUTHOR Collins, W. Andrew; Westby, Sally Driscoll
TITLE Children's Processing of Social Information from Televised Dramatic Programs.
SPONS AGENCY National Inst. of Mental Health (DHEW), Bethesda, Md.
PUB DATE 11 Apr 75
NOTE 13p.; Paper presented at the Biennial Meeting of the Society for Research in Child Development (Denver, Colorado, April 11, 1975)

EDRS PRICE MF-$0.76 HC-$1.58 Plus Postage.
DESCRIPTORS Age Differences; *Children; Complexity Level; *Comprehension Development; Elementary School Students; Grade 2; Grade 8; *Recall (Psychological); *Social Influences; Television Research; *Television Viewing

ABSTRACT

This study examined how children of different ages process social information from dramatic television programs. Second and eighth graders were shown edited versions of a television program that differed in complexity and the difficulty of inferring causal connections between the scenes. In addition, the scenes in half of the showings were kept in the original narrative sequence while in the other half they were randomly ordered. After watching one of the four versions of the program, each child was asked to answer multiple choice questions about discrete scenes in the show and the causal relationships among scenes. The results showed that second graders were poorer at answering inference questions than eighth graders. However, second graders who had watched one of the simple versions of the program did better than those who had seen a complex version, regardless of whether the simple version was ordered or jumbled. Eighth graders did best when the scenes in the program were ordered, regardless of the amount of information in the program. It was concluded that with increased age, there is an increased "straining for meaning" in television viewing. (Author/JMB)

Children's Processing of Social Information From Televised Dramatic Programs*

W. Andrew Collins and Sally Driscoll Westby[1]
Institute of Child Development, University of Minnesota

The work I'm going to talk about today is part of an ongoing program of research at Minnesota on children's comprehension of naturalistic social events, such as those they might see on television, and the mediating role that this comprehension may play for their own later social behavior. Our basic premise has been that television portrayals provide not only models of social behavior, but also cues for the evaluation of those models. The difficulty is that these cues, like the cues in real-life social interactions, are often difficult to understand: They are frequently subtle, inexplicit, intermixed with a confusing tangle of other cues, relevant and irrelevant, and separated by time and extraneous information. Our question has been: How do children make sense of the often complicated welter of cues associated with, say, a violent attack or killing? Our working hypothesis has been that for much of typical television content, the answer depends on the age of the child; and one implication of our concern has been that these age differences in comprehension and judgment of the social events they see on television might well help explain the variation in television effects on viewers of different ages.

Unfortunately, we have only sparse knowledge of the psychological processes involved in making sometimes difficult inference-based judgments of televised acts and actors. For one thing, we know little about children's typical patterns of receiving and making sense of audiovisually presented information. What few suggestive findings we have come not from cognitive psychologists, but from researchers studying children's understanding of television and film plots. Our own previous work has shown that children as old as third graders often do poorly at recalling the central events in an ongoing action sequence, but

*Presented at the biennial meeting of the Society for Research in Child Development, Denver, Colorado, April 11, 1975.

performance improves with age; comprehension of the relationships between crucial scenes in certain dramatic programs follows much the same age-related pattern (Collins 1970; Collins, Berndt & Hess 1974; Flapan 1968; Leifer & Roberts 1972). For example, we found that children up to about second grade typically recalled the aggressive scene from a program they had watched but apparently missed the reasons for the aggression and, often, its consequences; older children appreciated the aggression as a part of a causal sequence (Collins, et al., 1974).

What is not clear is the reason that younger subjects perform more poorly than older subjects in these studies. One obvious suggestion is that younger children cannot cope with the amount of information needed to understand the causal sequences, whereas the older ones have more available processing space. Or it may be that the basic information is there for both older and younger children, but the younger children have not organized it meaningfully, or have organized it differently than older children and adults do.

We, along with Allen Keniston and Henry Wellman, are presently involved in a study designed to gather more suggestive data about the various ways in which children of different ages may differ in their handling of social information from television programs. We have been showing second and eighth graders edited versions of a television program that differ in their complexity and the difficulty of inferring causal connections between scenes. In one version, the Simple version, an unsuccessful young man murders an elderly panhandler who has inadvertently come upon the scene when the young man is committing a robbery. The police tie the killer to a series of forged checks written with a check protector stolen in the robbery and eventually track him down. The second, Complex version of the program, contains this same plot, but in addition intermingles it with an extraneous subplot from the original show. And then the third and fourth versions are Jumbled renderings, in which the scenes from the Simple and Complex versions are randomly ordered rather than appearing in the original narrative sequence.

The children watch one or another of the four versions in pairs with the experimenters in a room in their school. After the program, we ask them to answer multiple-choice questions about discrete scenes in the show and about the causal relationships that exist among scenes. In constructing these tests of Central content and Inferences, we asked a sample of college undergraduates to view the program and select scenes which were crucial to understanding the plot and answer questions about various events, their causes and consequences. We did the same thing in an extensive series of pilot tests with children of various ages. Their answers are the basis for the questions and alternative answers we now ask our subjects to respond to. Let me give you an example of the information we try to get. After killing the panhandler, our villain in the program meets another panhandler who reminds him of the one he killed. Suffering from guilt, he gives the second panhandler forty dollars. To check for recall of this discrete central scene, we asked the children to complete the following statement: "One night the robber is walking along when he meets an old man. When this happens, the robber . . . ." They then have a choice of three answers, the correct being "gives him forty dollars." But we are also interested in whether the children inferred the cause of the young man's behavior, a task that involves knowledge of several discrete scenes and the relationships between them. So we ask them to complete the statement: "The robber gives an old man forty dollars because . . . .", the correct answer being, "because he reminded him of the old man he hurt."[2] In this way, we find out whether children know the basic events in the program and also whether they go beyond them to infer causal connections among them.

Our results show that second grade children not only know less about the main occurrences of the plot, but also that they show less tendency to try to "make sense" out of what they see--and typically make alarmingly little sense of it. Let me show you the data. (SLIDE #1) The first graph shows the mean number of correct answers to questions about essential plot information--central

happenings, contained within one scene each in the show. Eighth graders did considerably better than second graders, $F(1,94) = 33.68$, $p < .001$, regardless of the difficulty of the version they watched. That is, the two age groups did equally well or equally poorly whether the program they watched was simple or complex, jumbled or ordered. However, there were no condition effects or age X condition interactions. This replicates other findings (Collins 1970; Leifer & Roberts 1972) of age differences in recall of central scenes, but also clarifies them somewhat by suggesting that age differences in recall hold even when the complexity of the material varies.

When we went beyond this particular information from scenes to ask the children about the important information that falls between and among scenes, however, we not only found substantial age differences, $F(1,94) = 65.34$, $p < .001$, but also the striking interaction of age and condition that we expected, $F(3,94) = 2.48$, $p < .07$.[3] (SLIDE #2) As you can see from the slide, second graders were generally poorer at answering the Inference questions than eighth graders were, but the second graders who had watched one of the Simple versions of the program did better than those who saw the Complex versions of the program. It made no difference whether the Simple version was ordered or jumbled; less information seemed to make it more likely that second graders could answer some of the Inference questions, regardless of how much sense the program made objectively. Eighth graders, however, did best when the scenes in the program were ordered, regardless of the amount of information in the program. Both of the jumbled versions, Simple and Complex, confused them; they complained that they didn't make any sense, while the second graders were not at all disturbed by the confused ordering of the scenes. Incidentally, all of these effects hold for both boys and girls; there were no sex differences in our data, and no interactions involving sex.

When you try to explain the Inference data, you have to deal with two obvious possibilities. One is that the second graders may do poorly because

there is simply too much information for them to handle efficiently; the evidence for this is that they do even more poorly when the amount of information increases. That explanation doesn't account for the eighth-grade findings, however, since these older subjects did equally poorly on the two Jumbled versions and equally well on the two Ordered versions, regardless of the different information loads involved. Instead, it seems that their difficulty has to do with the task of organizing and comprehending information that is presented to them in a disorganized and incomprehensible fashion.

We have some other evidence that suggests that both second and eighth graders' difficulties involve a sort of inferential deficit, rather than (or, in the case of the second graders, in addition to) a processing-space problem. First, when we analyzed the protocols of those who made errors on the Inference questions, we found that, in seventy-eight percent of the cases, second grade subjects knew the discrete pieces of information needed to answer the Inference questions, but they apparently had not inferred the relationships among these. For the smaller number of eighth graders who made errors, ninety-two percent knew the basic pieces of information, but failed to make correct inferences. Second, for some of the children in each condition, we interrupted the program at one of two predetermined "turning points" in the plot. That is, we chose, on the basis of interviews with children and adults, points after which some major event or major change in events should be expected. Then we stopped the tape and asked each child to recount for the experimenter, who had been occupied with other tasks, what had happened up to that point. We also asked the child to predict what would happen next in the show. As you can see from Slide 3, when we looked at these responses, we found that eighth graders appeared to be organizing, integrating and actively inferring relationships among the scenes as the program progressed. Second graders, at best, knew discrete scenes, but had not tried to relate them to each other. The eighth graders' higher level of inferential activity paid off, in the sense that they

made more logical, sensible predictions about what would happen next in the program than the second graders did. Even when you allow for the fact that eighth graders probably have stronger expectations than the younger children about what goes on in certain social sequences, you still have to note that the second graders showed no evidence of seeing meaningful sequences in the program in the first place.

In fact, the picture these data give is that televised social portrayals are probably far less meaningful experiences for younger viewers than they are for older ones. This conclusion is very congruent with--and in fact extends--the comprehension studies done in recent years by cognitive psychologists like John Bransford (e.g., Bransford & Frank 1971) and Scott Paris (Paris 1975), to name two. The stimulus materials we have used, in the name of television research, are infinitely more complex and permit less clear inferences than theirs. But our results support both the general principle that meaning is formed in the interstices of discrete presentation units and the idea of developmental progress toward tendencies to operate in this fashion. What is more, this work goes beyond the work with sentences and static pictures to suggest that as children grow older, there is actually an increased straining for meaning beyond that which is given.

Variation like this has usually intrigued those interested in cognitive, rather than social, development, but it potentially affects our estimates of the impact of socializing influences like television, too. For one thing, failure to comprehend the relatedness between relevant social cues and behavioral models has often been shown to modify the effect of the depiction. For example, when the relationship of motives and consequences scenes to aggression is not understood, the likelihood of viewers' subsequent aggression is altered (Collins 1973). For another thing, age differences in organizing and using information from shows may lead to different interpretations of inter-scene relationships than adults would have themselves or would expect of children. For instance,

we found that our second graders, when they didn't know the correct answer to an Inference question, often chose an answer that represented a stereotyped response, but one which had no basis in fact in the show. Eighth graders' errors were slightly more likely to be confusions from within the program. Either way, the possibility of error-based evaluations of what children see on television is obvious. A distorted impression of a character or his/her social role might result from a failure, for example, to make the inferences necessary to reconcile the discrepancies in a portrayal of a double-dealer (e.g., a crooked cop, a soft-hearted gangster, an honest Chicano framed for murder) (Collins & Zimmermann, in press). Such errors exacerbate already inadequate social role portrayals on television (Leifer, Gordon & Graves 1974).

The fact that "straining toward meaning" in television viewing increases with age is a tantalizing fact--and a hopeful one. It suggests that, for the child, there is progress toward a more orderly social world, when the alternative is, by all accounts, deleterious to personal and social welfare.

References

Bransford, J., & Franks, J. The abstraction of linguistic ideas. Cognitive Psychology, 1971, 2, 331-350.

Collins, W. A. Effect of temporal separation between motivation, aggression, and consequences: A developmental study. Developmental Psychology, 1973, 8(2), 215-221.

Collins, W. A. Learning of media content: A developmental study. Child Development, 1970, 41, 1133-1142.

Collins, W. A., Berndt, T. J., & Hess, V. L. Observational learning of motives and consequences for television aggression: A developmental study. Child Development, 1974, 45, 799-802.

Collins, W. A., & Zimmermann, S., Convergent and divergent social cues: Effects of televised aggression on children. Communication Research, in press.

Flapan, D. Children's understanding of social interaction. New York: Teacher's College Press, Columbia University, 1968.

Leifer, A., Gordon, N., & Graves, S. Children's television: More than mere entertainment. Harvard Educational Review, 1974, 44, 213-245.

Leifer, A., & Roberts, D. Children's responses to television violence. In Murray, J., Rubinstein, E., & Comstock, G. (Eds.), Television and social behavior, Vol. 2. Washington: U. S. Government Printing Office, 1972.

Paris, S. Integration and inference in children's comprehension and memory. In Restle, F., Shiffrin, R., Castellan, J., Lindman, H., & Pisoni, D. (Eds.), Cognitive theory, Vol. 1, Potomac, Maryland: Earlbaum & Associates, 1975.

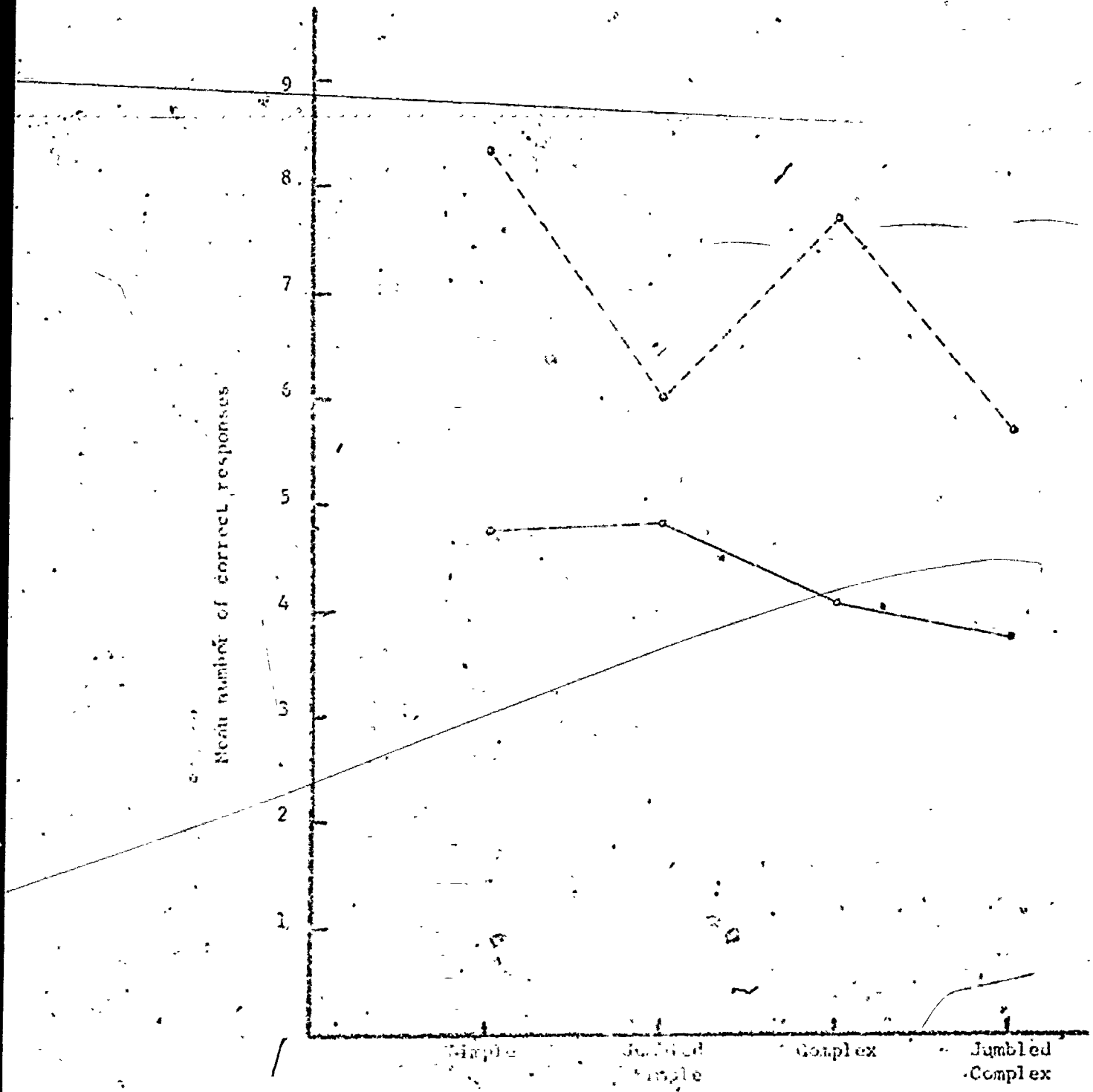
Footnotes

[1]This research was supported by the National Institute of Mental Health Grant No. MH 24197-02 to W. Andrew Collins. The authors are grateful to Allen Keniston, Henry Wellman, and Christine Mack Gordon for their substantive and technical contributions to the work.

[2]The entire instrument consists of seven central-content items and nine inference items.

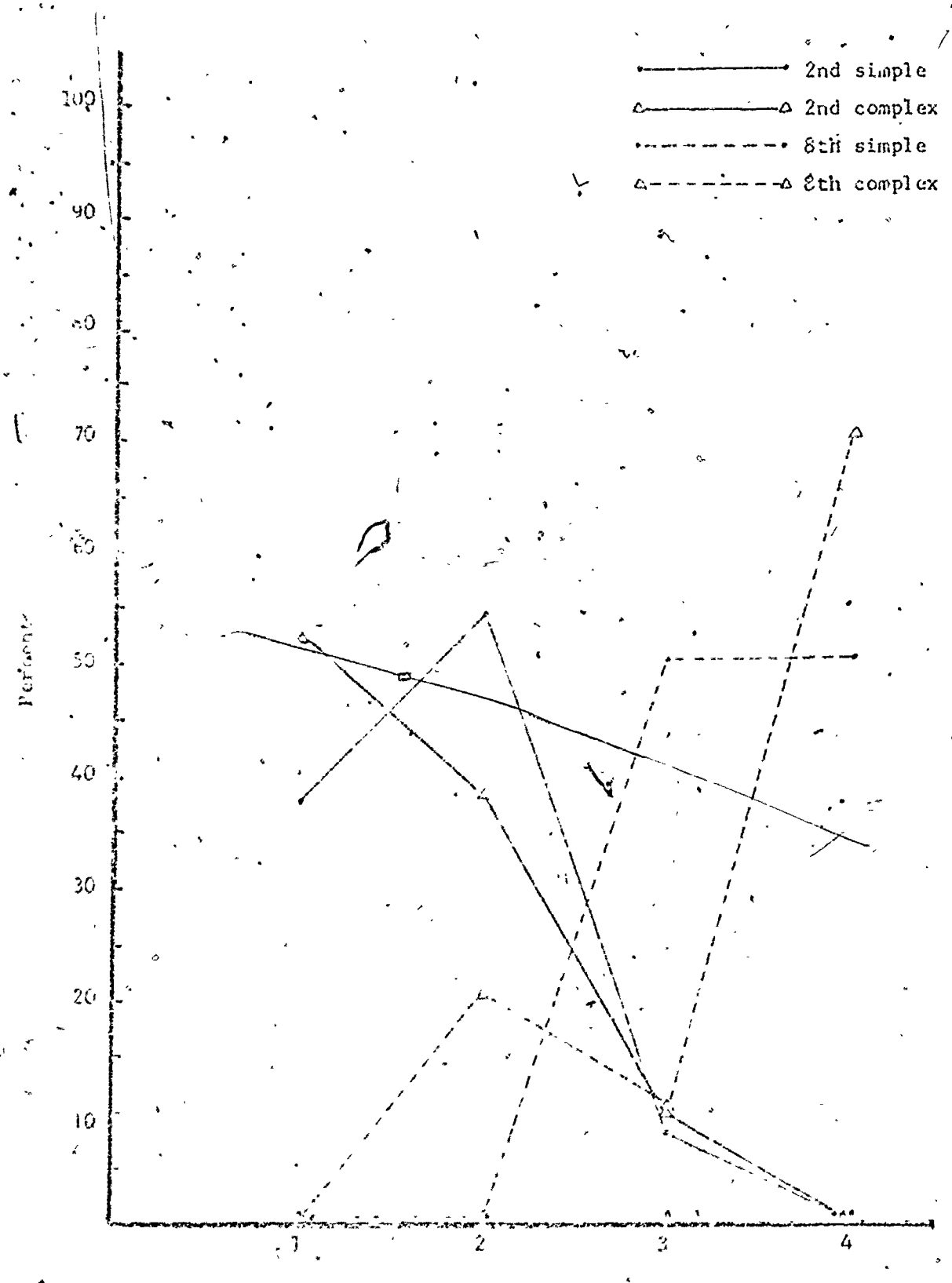
[3]A planned comparison testing the predicted pattern of means was significant, $F(1,94) = 71.83$, $p < .01$. The residual of the between sum of squares was not significant, $F(6,94) = 2.11$. That is, the predicted pattern of means accounted for essentially all of the systematic variance in the data.

8th grade
2nd grade
7
6
5
Simple
Jumbled Simple
Complex
Jumbled Complex
Version of Program
NUMBER OF CORRECT CENTRAL RESPONSES



MEAN NUMBER OF CORRECT INFERENCE RESPONSES

Figure 2



EXTENT OF INFERENCE MAKING IN RETELLING OF PLOT