DOCUMENT RESUME

ED 319 532 PS 018 833

AUTHOR Klein, Jeanne; Fitch, Marguerite
TITLE First Grade Children's Comprehension and Recall of "Noodle Doodle Box." A Final Report.
PUB DATE Jun 90
NOTE 168p.; Photographs will not reproduce clearly.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC07 Plus Postage.
DESCRIPTORS Aesthetic Education; Audience Response; Cognitive Ability; Cognitive Development; Comparative Analysis; *Comprehension; *Drama; *Elementary School Students; Grade 1; *Nonverbal Tests; Primary Education; Questionnaires; *Recall (Psychology); Television Viewing; *Theater Arts
IDENTIFIERS *Theatre for Young People; University of Kansas

ABSTRACT

First grade students (38) viewed a theater production on the theme of friendship in a study designed to determine the degree of the students' dramatic literacy. General objectives of the study were to: (1) compare children's learning from live theater with their learning from television; (2) describe what children knew about the play they saw and heard and the ways in which they recognized, perceived, and interpreted the verbal, aural, visual, and psychological features of theater in their efforts to comprehend dramatic content; (3) determine the contribution of visual, verbal, and aural aspects of theater to children's process of conceptualization; (4) describe the extent to which comprehension is a function of children's cognitive development and a function of the form and content of plays; (5) compare children's comprehension of a play with the theater artists' intentions; (6) explore and develop new nonverbal means of testing young children on an audiovisual theatrical event; and (7) evaluate University of Kansas Theatre for Young People productions for accountability in arts education. Results are discussed. Appendices provide the questionnaire, materials used in the interviews, a description of behavioral reactions of audiences at performances, data coding guidelines, tables, and results of teacher evaluations of the learning experience. A total of 57 references are cited. (RH)

FIRST GRADE CHILDREN'S COMPREHENSION AND RECALL OF NOODLE DOODLE BOX

Dr. Jeanne Klein

Director of KU Theatre for Young People

Department of Theatre and Film

Marguerite Fitch

Department of Human Development

University of Kansas

Lawrence, KS 66045

A Final Report
June, 1990

Abstract

Thirty-eight first grade children were individually interviewed about a theatre production of Noodle Doodle Box to determine their "dramatic literacy" based on objectives in the National Drama/Theatre Curriculum. Over three-quarters of the children reported that other first graders would enjoy this production "a lot," and 89% found this unfamiliar play "easy" to understand. Like third and fifth graders in two previous studies (Klein 1987; Klein and Fitch 1989), they preferred theatre about 3 to 1 over television, primarily for its visual features, though they had difficulty identifying the conventional differences between these two media.

When asked to retell the story of this episodic, "Theatre of the Absurd" text, over half of the children recalled the plot's linear, cause-and-effect, central actions located in the second half of the performance text. Playing with analogous toys assisted free recall of central scenes in sequence.

Almost three-quarters recognized friendship as the play's main idea or theme when asked to choose from three orally described photographs, but only 39% inferred this same theme spontaneously. Of those who inferred friendship as a main idea, more were likely to choose the friendship photo and to cite "sharing" as the play's resolution in free recall. Girls were more likely than boys to base their main idea inferences on their own and characters' emotions. When asked whether they learned anything from the play, 47% learned something about friendship--

girls more likely than boys--while 37% reported learning nothing. Nearly all children (97%) correctly identified a character's negative emotion at one of three specific moments in the play. However, for the other two moments, emotion labels varied somewhat from the actors' reports of their feelings, suggesting the difficulty of recalling and labeling dynamic emotions for children and adults alike.

Dramatic actions, or what characters did visually on stage, were recounted far more frequently than characters' dialogue or their internal thought processes. The more children used such visual cues in free recall and in making inferences, the more they also tended to use verbal/aural cues. Cognitive processing, or the use and integration of modal cues, related to children's general comprehension of the play as measured by their main idea inferences, reports of what they learned, and free recall of central scenes in sequence.

As found in television studies, these results confirm the visual superiority of action as the foundation of drama (text) and theatre (play production). By supplying critical actions and visual cues which reinforce dialogue and textual information, theatre directors can promote children's inferential cognitive processing and their aesthetic appreciation of plays in performance.

Acknowledgments

Many people are to be thanked for their invaluable assistance and support of this study. Special thanks goes to the entire production staff, crew and cast of Noodle Doodle Box for creating this special theatrical experience for young audiences; and to Jack Wright, Director of Kansas University Theatre, for his mentorship.

Gratitude is extended to our research staff: Kelly Hamilton and Kaye Miller, our interview assistants; Tim Rebman, theatre photographer; and to Aletha Huston, John Wright, and the entire staff of the Center for Research on the Influence of Television on Children (CRITC) for their continual advice, support, and assistance in this research.

Finally, we wish to express our deep appreciation to Robert Taylor, assistant superintendent of Lawrence USD #497; Lewis Tilford, director of fine arts; Gary Haworth, Ernest Coleman, and Bob Arevalo, principals of Grant, Wakarusa Valley and Centennial Elementary Schools; and, Jan Dicker, Judy Kettle, and Linda Stidham, teachers of these participating schools. Most of all, we are deeply indebted to the children who, with the permission of their parents, made this study possible and rewarding in many ways.

This investigation was supported by University of Kansas New Faculty General Research allocation #3933-X0-0038.

Table of Contents

List of Tables

Introduction

The National Endowment for the Arts' report on arts education, Toward Civilization, recommends standardized testing in the arts, despite the fact that, "There is a sev.re lack of research about how young people learn about the arts and what they can be expected to learn at what ages" (1988, 29). Theatre practitioners have theorized about children's "dramatic literacy" and drafted expectancies regarding theatre attendance with no basis in empirical research other than anecdotal, practical experience with child audiences (P. Collins 1985; Rosenblatt 1984; National Model Drama/Theatre Curriculum 1987). Therefore, few, if any, studies have fully described and assessed the specific ways in which children recognize, perceive, and interpret the aural, visual and kinesthetic features of theatre, beyond quantifying responses into such general categories as "knowledge" or "inferences" and developmental stages (Goldberg 1983; Saldaña 1987, 1989; Landy 1977). In addition, few testing methods have been developed beyond verbal (written or oral) means to assess more fairly children's aural and visual understanding of theatre (Klein 19[illegible]).

Live theatre has shaped our culture's oral storytelling traditions for over 2,000 years, yet television, with its emphasis on visual communication, dominates children's entertainment today. While the forms of television have been shown to influence story comprehension, theatre for young audiences has been virtually ignored by cognitive psychologists

in comparative media research (e.g., Brown 1986). Because theatre and television share numerous audio-visual dramatic elements (Esslin 1987), theatre researchers may adapt television studies conducted with children in order to create a cognitive developmental theory regarding theatre for young audiences.

Whether or not specific theatre productions enhance children's story comprehension and aesthetic appreciation remains speculative with each production. With little empirical research to serve as a foundation, researchers must rely upon exploratory descriptive studies. Interviewing small groups of children individually directly after performances may help to describe and evaluate more closely the success or failure of each production in engaging children's minds and feelings while isolating critical variables for future empirical or naturalistic inquiries. Theatre artists can then write, stage, perform, and design their productions accordingly to enhance appreciation of aesthetic messages. In the end, both educators and theatre producers can ultimately develop children's arts education and promote theatre's effectiveness with meaningful entertainment through more viable means of assessment.

Review of Literature

There exists one comprehensive theatre study which explored the memory of the young theatre audience regarding 26 theatre productions over a 17-year period in France (Deldime and Pigeon, 1989). After interviewing 541 audience members from elementary school age through adulthood, audiences freely recalled

characters most strongly and frequently, with scenery, themes, objects, text and staging, and music as weaker aspects in descending order. Cued recall produced an order of characters, scenery, objects, sound/music, and themes; with themes having the same impact on older audiences as scenery and sound effects. Linear plots appeared to increase recall of character over fragmentary, episodic plot structures. Recall of plots, particularly open-ended resolutions, diminished considerably over time. Both elementary and high school students recalled more strongly the literal reality of scenic elements over its symbolic meaning. High school students recalled themes more strongly than elementary students, particularly when themes were relevant to audiences' psychological and social interests and when "messages" were made explicit and clear in the staging. Elementary students tended to describe concrete actions and figurative images which they perceived and understood, while older students tended to analyze and interpret these mnemonic images. Rural students and those who attended less plays recalled productions better than urban audiences and those who attended theatre regularly. Student and teacher motivation and preparations before and after theatre attendance also affected the qualitative nature of recall in positive ways. Essentially, the researchers found that, "the further the phenomenon is removed from reality, the stronger the audience member's recollection" (5).

Comparative media studies conducted by cognitive psychologists have shown that children understand audio-visual

stories differently at various ages and developmental levels. Story schemas, or children's expectations of how stories proceed, aid comprehension and recall regardless of medium across all age groups (e.g., Beagles-Roos and Gat 1983). Linear, cause and effect stories provide the best organizing principle upon which to integrate temporal content, process overall meaning, and increase attentional "inertia" (Wright, et al. 1984). Younger children most frequently remember incidental or peripheral plot events, while older children connect character actions to intentions, motives and consequences to retain more central, plot-relevant events (W. Collins 1983).

Because dramatic action is the foundation of all drama, children from preschool through 5th grade recall story actions over dialogue in audio-visual media (e.g. Meringoff 1980; Gibbons, et al. 1986; Klein 1987; Klein and Fitch 1989); though "action" has usually been loosely defined as "physical movement," rather than as "dramatic action" in which characters do or try to do something which moves the plot forward. Children attend to dialogue which discusses immediate and observable events over dialogue which refers to information in another time and place (Anderson, et al. 1979). Explicit audio-visual information of dynamic action increases story comprehension for younger children, while the ability to make critical inferences from implied information increases with age as children grow better able to integrate verbal information into visual modes (Meringoff, et al. 1983).

Beginning around the age of 8 or 9 years, children begin to infer the mental states of characters--their thoughts, feelings, intentions and motives (Shantz 1983, 499). Characters' intentions, causes of behavior, and feelings are usually attributed to situational factors based upon perceived wants and attainments (Stein and Jewett 1986). Young children also rely on facial expressions when inferring a character's affective state, dependent upon situation, cue strength or emotional intensity, and the live or recorded nature of the stimulus (Camras 1986; Dorr 1985; Kase, et al. 1978).

In order to empathize or feel with characters, children must first comprehend the emotions which characters are feeling. Yet their understanding of characters' emotions may also be impinged by methodological approaches. Young children have difficulty attaching verbal labels to depicted emotions (Brody and Harrison 1987), but they are able to recognize emotions accurately when first given diagrammatic representations (Harrigan 1984). Depending on the task given, young children also have some difficulty discriminating between such negative emotions as anger and sadness and identifying multiple emotions, especially in ambiguous situations (e.g., Meerum Terwogt, et al. 1986; Gnepp, et al. 1987; Donaldson and Westerman 1986; cf. Harris 1989).

While these studies combined offer theatre researchers a starting point for creating a cognitive developmental theory in regard to theatre, several methodological differences prevent an accurate comparison of critical variables between theatre and

television. Most television studies have relied on short, 10-minute, animated films in laboratory settings which do not represent the average 45- to 60-minute time length of children's theatre with live actors under actual ecological conditions. Young theatre audiences are challenged to integrate more information over a longer period of time in a holistic manner in order to understand plays fully. In addition, many media studies have seldom provided a detailed content analysis of the stimulus in order to compare children's responses against the particular television program in question. Without indepth, semiotic analyses of verbal, aural, and visual dramatic signs in space and time (Kowzan 1968), many researchers have neglected to consider the numerous variables of what each story and its medium brings to the child audience. As Shantz (1983, 500) confirms, social cognitive psychologists have used different filmic stories with no systematic sampling of filmed social behavior, and children's accuracy in comprehension has been confounded with the central importance of information. Essentially, data which is intrinsic to one particular film in each study has been interpreted as normative on children's comprehension accuracy and generalized to the whole population.

With the notable exception of the Children's Television Workshop which seeks primarily to educate children in academic skills, entertainment television and film producers are not directly involved in media studies. Theatre researchers, on the other hand, may call upon directors, performers, and designers in

order to determine artists' intentions and to inform the content analysis of a given stimulus. Artists' perceived intentions and the communicated result, then, become the standard against which children's comprehension can be measured for "accuracy" only as it pertains to each individual production. By exploring these particulars with many theatre productions and audiences over time, theatre researchers may begin to move toward a more universal understanding of children's comprehension of the theatre medium as a whole. In this way, the balance between what the child audience brings to the medium and what the medium brings to the child audience may be achieved to a greater extent.

Adapting some of the methods employed in television research, two theatre studies were conducted to examine children's "dramatic literacy" and the modal sources for their inferences. Thirty-two fifth graders were interviewed in regard to Don Quixote of La Mancha (Klein 1987), and forty-five third graders were interviewed over Monkey, Monkey (Klein and Fitch 1989). Results showed that the forms of dramatic structure and the staging of plays in production determine the nature of attention, comprehension and recall. Whether or not key abstract ideas are presented implicitly or explicitly, aurally and/or visually, largely controls children's developing ability to draw inferences about characters and their dramatic situations. For example, when characters only talk about performing an action, but are never shown actually doing it, or when offstage events are merely discussed, but never dramatized, children tend to lose

or ignore this vital information. Thus, most 5th graders could not identify an offstage character, while 3rd graders recalled a non-verbal action scene over the same scene's conversational dialogue.

Most 5th graders rated Don Quixote "hard" to understand, and they used visual cues more than verbal/aural or psychological cues in their inferences. By contrast, most 3rd graders rated Monkey "easy," and they used the three types of cues almost equally. In both studies, children recalled visualized dramatic actions better than dialogue, and the more they used visual cues (primarily dramatic actions) as bases for inferences, the more they tended to use verbal/aural cues and psychological cues. Moreover, the more children used verbal/aural cues, the easier they rated their understanding of the plays and the higher their level of general comprehension.

Artists intend quality children's plays to communicate meaningful, universal themes about the human condition through aesthetic metaphors to be recognized and interpreted by child audiences. When children are able to infer information beyond explicit dialogue or actions, they comprehend universal messages at much deeper levels of learning. Yet the current findings suggest that children are most likely to recall only what they see and hear at a literal level. Few children (fifth 31%; third 25%) spontaneously infer the metaphoric connections between fictional characters and the world at large, in part, because literal, visualized dramatizations may induce them to understand

stories solely from within a production's explicit confines. The wording of questions, an inability to integrate and reduce an hour-long story to one central, universal theme, and children's misunderstanding of the term "main idea" may also hamper results. Yet third graders' limited comprehension of their play's theme or main idea correlated significantly with their aural recall of a line of dialogue (also the explicit main idea) and what they reported learning from the play as a whole. Over half of these children reported learning such abstract concepts as trusting oneself or good moral behaviors (e.g., don't steal). Therefore, asking the same question in several ways may increase children's ability to infer themes and recognize metaphoric connections.

While television researchers find that children watch an average of three to four hours of television per day, both groups of children in these studies stated that they preferred theatre three to one over television, primarily because they recognized the "more real," live values of theatre.

These studies combined do not constitute a "developmental overview" of children's dramatic literacy in the strictest sense because too many variables are confounded among different productions and audiences. Therefore, the proposed study seeks to describe children's understanding of a given play production, and in no way is meant to be generalized to larger populations. Another production of the same play with different directors, performers, and designers would produce different results with other child audiences of the same age. Only through repeated

descriptive studies of various plays, productions, and audiences may theatre researchers discover the underlying critical variables which influence children's comprehension of theatre.

Purpose of Study

Based on the above findings, the following study sought to replicate previous theatre studies (Klein 1987; Klein and Fitch 1989) using younger children, a different theatre production, and non-verbal testing devices. As in previous research, the design of this study was guided by the following basic objectives:

a. General Objectives

1. To compare children's learning from theatre with what is known about their learning from television.

2. To describe what children know about the play they saw and heard, and how they recognize, perceive and interpret the verbal, aural, visual, and psychological features of theatre to comprenend dramatic content (P. Collins 1985; Rosenblatt 1984).

3. To determine how visual and verbal/aural aspects of theatre contribute to children's process of conceptualization (cf., Davis 1961).

4. To describe the extent to which comprehension is a function of children's cognitive development and the form and content of plays in production.

5. To compare children's comprehension of a play with the theatre artists' intentions.

6. To explore and develop new non-verbal means of testing

younger children with less verbal abilities on an audio-visual theatrical event.

7. To evaluate and assess KU Theatre for Young People productions with area public schools (Lawrence USD 497) for arts education accountability.

b. Theatre Expectancies and Hypotheses

The National Theatre Education Curriculum (1987) categorizes specific skills, attitudes, and understandings for children and youth, grades K through 12, in both drama (process) and theatre (product). While many goals overlap intrinsically, the objectives for each area are intended as sequential, developmental steps rather than prescribed expectancies for specific grade levels. For example, first grade children may be capable of understanding theatre at levels expected for older children.

One of the overall theatre goals in this national curriculum is "to form aesthetic judgments" (1987, 61-70). Four theatre objectives that comprise this goal include the ability to 1) identify or discuss such Aristotelian dramatic elements as plot, character (actions, motivations, emotions), theme, dialogue, spectacle, and mood; 2) respond to live theatre by expressing personal reactions, sharing perceptions, and recognizing emotions evoked by performances; 3) explore relationships between theatre and other media (in this study, television); and, 4) recognize and respond to the unique qualities of theatre. Each of these four objectives, which serve as hypotheses, are tested directly

or indirectly in various ways in the present study. Questions and hypotheses tested in this study are introduced after each objective. Primary grade levels (P) refer to expectancies for grades 1 through 3, and intermediate grade levels (I) refer to those objectives expected of 4th through 6th graders:

> Objectives 1.4 - (Dialogue) Create spontaneous dialogue to express ideas and feelings (when creating drama or verbalizing responses to theatre) (P); 2.1 - Express personal reactions (P) and share perceptions of theatrical experiences (I); 4.1 - Discover through observation and experience the immediacy of live performance, that theatre imitates or fantasizes human experience, that theatre is a communal experience, and that theatre allows one to feel kinship with others (P).

Questions and Hypotheses: What types of cues (i.e., visual, verbal/aural, psychological) do first graders perceive and use to process plays in performance? While freely verbalizing their responses to a play, young children are expected to rely primarily upon visual cues (dramatic actions, physical gestures, movement, design elements, etc.) more than verbal/aural cues, unless the staging of a play reinforces dialogue in explicit ways. Reliance upon concrete visual and verbal cues will be more likely because young children are just beginning to make inferences from implicit cues at this cognitive developmental stage.

Objectives 1.3 - (Character) Recognize that some aspects of characters' personalities are considered "good" or "bad" (P); Recognize that characters have different goals and feelings (I); 2.3 - Describe the actions and appearance of characters (P); 2.4 - Identify the who, what, and where in theatre experiences (P); Perceive subtleties in theatre experiences such as voice and movement variance (I); 2.5 - Give reasons for choices characters made in performance (P); Infer motivation for actions taken by the characters (I).

Questions and Hypotheses: How do first graders describe characters, and do they remember visualized dramatic actions and dialogue equally? In television studies, children of all ages tend to best remember the perceptual salience of characters for their visualized dramatic actions more than dialogue, though live characters and the proximity of actors to audiences may increase attention to dialogue and aural comprehension. Again, young children are not expected to infer characters' motivations until later in development when they learn to make more inferences regarding a person's psychological thoughts.

Objective 2.2 - Recognize emotions evoked by performance (P).

Questions and Hypotheses: How do first graders use facial expressions and other situational cues to recognize and infer appropriate character emotions when viewing a play without close-up, visual details? Young children are able to recognize another's emotions from both facial expressions and situational

context, though they tend to rely on what emotions are displayed more than on how people would be expected to feel in given situations. Discrimination among negative emotions and multiple emotions will depend on the intensity of the character emotion displayed in each particular context and the extent to which children are able to infer an emotion given their physical promixity to the actors on stage.

> Objective 1.1 - (Plot) Recognize the beginning, middle, and end of plays (P); 1.5 - (Spectacle) Use pictures, costumes, and props to enlarge concepts of environment and character (regarding P drama).

Questions and Hypotheses: To what extent do first graders retell the central dramatic actions from a plot in chronological sequence? The degree of linear, cause and effect sequencing of dramatic actions in a plot and the degree to which a plot structure meets schematic expectations will influence the extent and order of central action recall (van den Broek, et al. 1989; W. Collins 1983). Given episodic plot structures, children are expected to recall more incidental actions which reveal character relationships over central actions which move the plot forward.

How does the use of photographs and toys assist first graders in retelling a play's plot? Because young children use drama naturally in their pretend play, first graders are expected to use toys and photographs as visual prompts to assist mnemonic retrieval processes. The more such toys reflect the actual

characters and setting of a play, the more recall may be assisted.

Objective 1.2 - (Theme) Recognize (P) or discuss (I) central ideas in plays.

Questions and Hypotheses: How do first graders recognize and learn the main ideas or "lessons" in plays? Younger children have greater difficulty integrating dramatic information and inferring global abstract ideas from lengthy plays than their older counterparts. The more explicit the visual and verbal cues are regarding a play's central idea, and the more visual cues (dramatic actions in particular) reinforce dialogue and vocal inflections, the more younger children will recognize and comprehend the overall theme of a play.

How do first graders make metaphoric connections from the play to their personal lives? Children will probably not infer metaphoric connections spontaneously, unless asked to do so directly, because audio-visual representations may induce concrete conceptualizations within the fictive world of the play, and because young children are just beginning to conceptualize, classify and analyze themes in stories as taught in school. The more abstract and less representative a play is to their own personal lives, the less children will recognize, comprehend and make metaphoric connections.

Objective 3.1 - Recognize that there is a difference between live theatre and television (P); 3.2 - Demonstrate awareness

that there are similarities and differences between theatre and television (P).

Questions and Hypotheses: Given the opportunity to watch a given play again, do first graders prefer theatre or television, and why? Children are expected to prefer theatre over television primarily for its live, "more real" experience of viewing dramatic stories, especially if this is their first theatrical experience. Children may have difficulty separating fictional characters from live performers in their zestful willingness to "suspend disbelief" in a drama's fictive world.

In addition to these specific hypotheses, do first grade children perceive a given production to be "easy" or "hard?" First graders are expected to find Noodle Doodle Box at least "sort of easy" because the play's actions are quite understandable and the vocabulary is simple. On the other hand, because this may be the first theatre experience for many of these children, first graders may find the experience itself more difficult.

Again, because children invest more mental effort when told to watch a story for testing purposes (Salomon and Leigh 1984), children were not told that they would be interviewed in advance of theatre attendance. In addition, teachers were requested not to use the KU study guide before seeing the play, so as not to influence or train children's responses.

Though this study seeks to replicate the two previous studies with third and fifth graders by asking many identical

questions (e.g., main idea), it will not be altogether possible to compare results among these age groups because three completely different plays and productions are involved. Therefore, this study is limited to a description of first graders' responses to a particular play and its theatrical treatment based on the questions and tasks posed. Comparisons to other age groups will be made when appropriate or feasible.

Method

Subjects

Thirty-eight 1st grade children from classrooms in three schools within one school district were selected from middle-class, urban and rural neighborhoods based upon the willingness of interested principals and teachers. The majority of the children were Caucasian (2-Black; 1-East Indian; 1-Native American). There were 16 girls and 22 boys whose ages ranged from 6:7 to 7:8 with an average age of 7:1. None were seriously learning-disabled or visual- or hearing-impaired.

Theatre Production

The production, Noodle Doodle Box, as staged by the University of Kansas Theatre for Young People (1989), was chosen for its artistic standards and its abstract "nonsensical" nature for young audiences. This West German play by Paul Maar is adapted and translated by Anita and Alex Page (1979). It was edited slightly by the director to stay within a one-hour time limit for school bus schedules. The play was also unfamiliar enough to this age group, so that reports of dramatic elements could only result from exposure to the production. Artistically, the production was performed and designed by undergraduate college students under the direct supervision of faculty members. It ran approximately 55 minutes without intermission.

a. Synopsis of the Text

Zacharias and Pepper live in two different sized boxes. Zacharias is tall, neat and clean. Pepper is short, messy and

loud. Pepper calls Zacharias "Zacky," and this makes him angry. Zacharias calls Pepper "a big mouth," and this makes her cry. When he gives her his handkerchief to dry her tears, it is full of holes--on both sides. Pepper says it's because "Everything looks from behind exactly the way it looks from in front." But when they turn Zacharias' green box around, it is red! Pepper wants to play in Zacharias' box, but he won't let her. So, she starts to find another friend. She says she is just kidding, but it's not funny.

When they play "fountain" with Pepper's water bottle, Zacharias teases Pepper by spraying water in her face. Again, Pepper says she's through being his friend, so she plays airplane by herself in her box. When she sticks her arms out of the side holes, one arm is big and the other arm is small! Zacharias wants to play in Pepper's box, but she won't let him.

Just then, a Drum Major marches in playing a big drum. Zacharias and Pepper want to march and drum very much, but they argue over who has the better box to see who gets to march in front first. The Drum Major lets Zacharias march away with the drum first. While he is gone, the Drum Major tells Pepper that they should hide Zacharias' box to teach him a lesson about being nice to people. So, they hide his box in Pepper's box.

Then Pepper practices marching with the drum. While she is gone, Zacharias sees his box is missing. The Drum Major tells him they should take Pepper's box to teach her a lesson. They push Pepper's box offstage.

When Pepper comes back, she finds her box missing. The Drum Major leaves them both to go "investigate," but really, he is leaving in his truck and stealing both their boxes.

Zacharias and Pepper feel sorry for turning against one another and for not sticking together as true friends. They have both learned their lessons. Sadly, Zacharias plays with his shoebox like a truck--and it makes noises! When he pushes it around a wall several times, it becomes a bigger and bigger box! Zacharias wants the new huge box all for himself. This time Pepper really leaves him to go find another friend.

Zacharias doesn't like playing all alone with the box by himself. When Pepper comes back to get her water bottle, he decides they should share the box together because two people can play games better than one. Even when the Drum Major comes back in a disguise, they tell him to leave. They like to play in one big box--together as real friends.

b. Textual Content Analysis

Theatre is a metaphoric representation of human behavior which reveals universal human nature in symbolic ways. Symbols are signs that represent or stand for something else through associations of things that are the same (comparisons) or different (contrasts). This nonsensical or "absurdist" play, in particular, has endless symbolic "meanings" with many possible "answers" regarding the theme of friendship, dependent upon individual "readings" or interpretations of the text.

The basic elements of drama are the acts and actions within a text using words as the raw materials (Langer 1953). Dramatic action may be defined as "the clash of forces in a play--the continuous conflict between characters" which moves the plot forward (Hodge 1982, 30). Dramatic action is not synonomous with physical movement, though an actor's stage activity illustrates dramatic action. Dialogue, intended to be heard and not read, functions as the subtextual vehicle of action. As agents of the play, characters act or try to act out objectives implied or explicitly stated in the text (Hodge 1982, 26-31).

Therefore, even within an "absurdist" text such as this one, key central dramatic actions drive characters toward their future destinies. This play contains two protagonists, Zacharias and Pepper, with the Drum Major (or outside authority figure) serving as a catalyst, rather than an antagonist. The dramatic actions of this particular plot are more concerned with revealing character relationships and extending the theme of the play than with linear, sequential causality. The circular plot structure of this text may be broken down into the following major units of dramatic action and character objectives:

Unit 1 (pp. 5-11): To play daily ritualistic games. To antagonize and compete for fun. To discover whether or not "Everything looks from behind exactly the way it looks from in front." To explore spatial and social perspectives.

Zacharias wants to dominate Pepper, to prove his intellectual superiority over her, to call her animal names, and

to take advantage of her weaknesses. Pepper wants to tease Zacharias over his long name, to serve and please him, to play games and have fun, and to prove him wrong about her intellectual abilities. From these opposing interpersonal perspectives, they discover that spatial perspectives are the same for Zacharias' handkerchief full of holes and Pepper's box, but not for Zacharias' box.

Unit 2 (pp. 11-15): To trade or play in the other's box. To change perspectives. To trick and tease one another in today's fountain game. To threaten the dissolution of the friendship.

When Zacharias' box changes color, Pepper wants to play in it, but Zacharias refuses to allow her. As a tactic to change his mind, Pepper threatens to leave him to find another friend for the first time. When this fails, she suggests they stop arguing and play a fountain game together. Zacharias still wants to make her the butt of his jokes, so he sprays water in her face twice, even after she tries to get revenge after the first time. She threatens to leave to find another friend for a second time.

Unit 3 (pp. 15-20): To trade or play in the other's box. To change or invert previous perspectives.

Pepper seeks solace in her box and entertains herself by playing airplane. When her arms change spatial perspectives, Zacharias wants to get in her box, but she adamantly refuses. She seeks revenge by forcing Zacharias to serve her needs. This

action rises to a crisis as they argue over whose personal perspective and game plan will win.

Unit 4 (pp. 20-24): To learn how to march to a different drummer. To determine which box or spatial perspective is best. To march and play the drum first. To test friendships.

The Drum Major interrupts this fight by entering and exiting three times and playing a spectacular drum. [From this point on, the plot takes on a cause and effect structure in a more linear way.] Zacharias and Pepper both want to march and play the drum very much as soon as possible. First, the Drum Major insists that they learn the rules for marching, and Zacharias and Pepper continue to have difficulty determining the proper spatial perspective. They argue over who gets to march first by urging the Drum Major to decide who has the best box. The Drum Major hatches a plot to test their friendship by separating them so he can have both boxes. (In other words, if they can't play nicely with their boxes, then he will take them both away.)

Unit 5 (pp. 24-29): To teach lessons about friendship. To feign friendship and to divide friends. To "hide" or steal boxes. To face the world alone without boxes or friends. To make a get-away.

After Zacharias marches offstage first, the Drum Major convinces Pepper to hide Zacharias' box inside her box to teach Zacharias a lesson. After Pepper marches off with the drum, the Drum Major convinces Zacharias to "hide" Pepper's box in his

truck offstage to punish Pepper for taking his box. Pepper returns to discover her box missing and to face the world alone for a few critical moments. Soon thereafter, the Drum Major and Zacharias return. The Drum Major encourages them to practice marching so that he can "investigate the missing boxes" and make his get-away in his truck. Zacharias still has trouble determining spatial perspectives by confusing his left from his right foot. Zacharias and Pepper realize too late that the Drum Major has stolen their boxes and feigned friendship.

Unit 6 (pp. 29-31): To confess one's transgressions. To begin to see and understand opposite perspectives.

Zacharias and Pepper admit their faults and confess their guilt in helping the Drum Major to steal one another's boxes by revealing truths about the nature of their friendship. They realize that by not staying united as friends, they allowed a fake friend to divide them. One must look beneath external appearances and listen to subtext in order to discover the truth. Together, they discover and create one new huge box when Zacharias seeks another perspective behind the wall. When he still refuses to share this box, Pepper carries out her earlier threat for the third time by leaving him to find another friend.

Unit 7 (pp. 31-33): To face the world alone with a box but no friend. To understand an opposite perspective. To share and stick together as true friends.

Alone with his treasured box, Zacharias realizes that a box without a friend is lonely and frightening. When Pepper returns

to retrieve her water bottle, he apologizes and agrees to share the box with her. From his new interpersonal perspective, he can see how two people can play together more happily, even in only one box. When the Drum Major returns in a fake disguise and tries to separate them again (to test their friendship further), they stick together steadfastly and send him off, preferring to play games cooperatively rather than competitively.

c. The Director's Intentions and Conceptual Approach

The director chose one line of dialogue in the play to serve as the guiding conceptual approach to this production. When Pepper says, "Everything looks from behind exactly the way it looks from in front" (9), she reveals an inability to see the world beyond her egocentric perspective. The same problem holds true for Zacharias who fails to consider Pepper's point of view in his almost cruel treatment of her. This central conflict between the two characters is exemplified by various objects and conceptual ideas which do or do not appear the same from in front and behind. The inverted irony is that, though Zacharias wants to prove that things look different from in front and behind, he is the antagonist who fails to grasp Pepper's perspective. Because these characters can consider ideas only from one limited perspective, they fail to recognize the Drum Major's subtextual intentions from his outward appearance alone.

The text contains many inverted images and ideas in opposition to reinforce this central dramatic tension. Zacharias is taller, formal, stuffy, meticulous, analytical, cold-hearted,

and he lives in a smaller, more limited, box. In contrast, Pepper is shorter, peppy, loud, messy, intuitive, overly sensitive, and she lives in a bigger box with greater freedom. (In keeping with opposite contrasts, a 6'3" actor was cast in the role of Zacharias, and a 5'6" actress was cast as Pepper.) Zacharias owns two opposite-colored pairs of shoes, and Pepper's arms in her box are two opposite sizes. Pepper can't read or sing but she can "listen loud." She doesn't know what the word "curious" means, but later, she uses the word "phenomenal," while Zacharias constantly repeats "fantastomatic." Jokes which are funny to Zacharias are not humorous to Pepper and vice versa. Pepper prefers a friend without a box, and Zacharias values a box over a friend. He learns that a box without a friend is lonely, while Pepper experiences aloneness with neither box nor friend.

Between these two extremes lies the "two-faced" Drum Major who is mysterious, authoritarian, abrupt, deceitful, and perhaps androgynous. He plays a drum which is more spectacular than both boxes, but it is impossible to tell whether he is a friend or foe by external appearances alone. (The Drum Major was performed by a 6' Native American whose eloquent, resonant voice sounded at once gentle and threatening.) Essentially, dramatic actions in this play often contradict language in opposite ways to signify that truth and reality are relative or "absurd."

Boxes, then, serve as physical symbols of limited egocentric perspectives. Like children, Zacharias and Pepper are limited by the boxes they live in and their developmental experiences. From

a young child's perspective, the world is full of unfamiliar people, places and things. When children box themselves into the same, comfortable, recognizable world, they lose sight of other possible perspectives different from their own. By exploring their worlds through dramatic play with wide-eyed curiosity, children are able to transform familiar objects into new fictive worlds and gain entirely new perspectives.

Because the play is not limited by realism in its form and content, its fantasy allows an exploration of this fictive world from several different perspectives. Though the play's fictive world may be unrealistic to audiences, to Zacharias and Pepper, these boxes are their familiar homes which continually surprise them to no end. Like children, Zacharias and Pepper gradually lose their egocentric perspectives by exploring their boxes and their world from different angles in new ways through dramatic play. By exploring a dramatic idea together, they create and discover one large new box, a new world, a new cooperative friendship built on shared mutual interests.

This theme of spatial and social perspectives also reveals itself in images and concepts about space and time. Numerous textual references to modes of transportation (e.g., rental car, airplane, truck, steamboat, motorcycle, racing car, etc.) reinforce the idea that, in order to take on a new perspective, one must move physically through space, transport oneself, and look at the world from different angles and physical spaces through time (or life experiences). These boxes could even be

considered boxcars on a train journeying to new destinations, perspectives, and higher levels of mature friendship. The original German title of the play, Kikerikiste, may be translated literally as "Cock-a-Doodle Box"--"kiste" means "box," and "kikeri" is the noise German children make for roosters. Because the play takes place during one morning, the title also suggests that children must wake up to a new day and new perspectives and stop "doodling" with friendships.

On a simple, literal level, this play is a story about friendship or sibling rivalry between two clowns. Zacharias' and Pepper's behavior toward one another accurately reflects the nature of friendships among young five- to eight-year-old children. According to social cognitive psychologists (e.g., Berndt 1983; Shantz 1983), children of this age group think of friends as playmates who share toys, act nice, and are fun to be with--until the moment they hurt one another. From their egocentric perspectives, they expect friends to help, share, and do things for them. Yet they often fail to see their responsibility to help their friends in return, because they cannot grasp two perspectives simultaneously. Friends know the rules for playing, and arguments usually erupt over specific toys. When rules are broken, friendships end momentarily until the players resume friendly actions. When children refuse to play, conflicts may be settled by primitive rules of fairness: "First we'll do what you want and then we'll do what I want." Competitive feelings arise as they try to test and assert their

growing independence by proving their superiority over one another.

In this play, the Drum Major disrupts this immature friendship by thwarting expectations about true friends. Egocentric attitudes begin to break down when Zacharias discovers a new perspective behind the wall, proving that everything does not look exactly the same from behind and in front. When Pepper leaves to assert her independence, Zacharias feels the loneliness and tension which comes with selfish behavior. Only when he understands his friend's perspective does he realize the value of true friendship.

In summary, the main idea of this play is that, by looking at the world from opposite perspectives (or from another person's point of view) through space and time, true friends may come to share their material possessions and living spaces in a cooperative atmosphere built on mutual happiness and trust. In cliche form, "United we stand, divided we fall."

d. The Designers' Intentions

The scenic and costume designer adapted the visual ideas of Piet Mondrian for the production, because his art and philosophy tie in with the perceptual themes of Noodle Doodle Box. Mondrian's goal was to translate nature and reality from his imaginative perspective into geometric constructions which could be controlled by reason. He strove to reduce the versatility of nature into a "Neo-plastic" expression of definite, concrete relationships by developing a pure abstraction of reality using

only straight lines and limited colors. Through these mathematical means, he searched for harmony and intensity, precision and equilibrium, to discover a balance between discipline and artistic freedom.

In keeping with these themes of opposition, social tension, and spatial perspective, the setting consisted primarily of two main boxes, positioned on the orchestra pit, about 15' from the audience, and an 8' x 10' wall positioned up-center about 2' from the proscenium line. Zacharias' smaller box was 3 1/2' square with red and green argyle designs painted on two sides each. Pepper's larger box was 4' square with multi-colored circles painted on its four sides against a light blue background, and two holes cut out on opposite sides for her arms to stick out.

The wall was designed in a Mondrian style and made to appear as if each geometric box was two-dimensional. To thwart Zacharias' (and the audience's) expectations about spatial perspective, three boxes (small, medium and largest) were pushed out "magically" from the wall to reveal their real three-dimensional nature when Zacharias travelled behind it. To emphasize means of transportation and increasing forms of spatial perspective, each box which Zacharias moved around the wall had a sound effect associated with it. The smallest box sounded like a Mack truck; the medium box sounded like a chugging train complete with its whistle; and the largest box, the grandest mode of transportation, sounded like a jet airplane taking off. This

last box, 4 1/2' square, appeared too large for Zacharias to climb in and play with by himself without Pepper's assistance.

Costumes carried perceptual, geometric concepts further by employing mixed lines, patterns, and colors to wild and crazy extremes. As an "aristocratic or straight-laced" character, Zacharias wore rust, green and ochre-colored, baggy, plaid pants; a green plaid sport coat; a striped, red and green vest; a beige printed shirt; a large red-striped bow tie; a red cumberbun; a white baseball cap; argyle socks; and, white shoes. In complete contrast, Pepper wore parti-colored, baggy, pants with rust circular printing and solid blue colors; a multi-colored-balloon printed, blue shirt; a large, polka-dotted, brown and white vest with two, huge, yellow buttons; a pink ruffle around her neck; pink gloves with the fingers cut off; striped pink and white socks; and, an old, black bowler hat. Both costumes were trimmed in black to tie in with the Mondrian motif. The Drum Major (or The Man with the Drum in the original German version) wore navy slacks with gold trim running down the outer seam; a grey-blue jacket trimmed with navy and gold frogs; black shoes; and, a tall, white diagonally shaped hat with navy trim. To manifest the Drum Major's "two-faced" character, the actor wore a clear, plastic mask on the back of his head at all times and another half-mask worn over his face, which he used later as his disguise attempt.

Other properties used were Zacharias' black shoebox and his black and white shoes; his toothbrush which he kept in his mouth

like a pipe most of the time; his two-belled alarm clock; his handkerchief full of holes; and a newspaper. Pepper's props included her pink, high-top, tennis shoes; her plastic water bottle with attached straw; her two fake arms constructed with identical sleeve fabric; a yellow PVC pipe "periscope" with an "eyeball" inside at the top; and a towel and walkman headset to exercise with in the morning. The Drum Major's white bass drum trimmed in red included a large cymbal and various small horns attached at the top. It was struck with two red and white striped mallets to create the loudest sounds possible.

The lighting designer lit the entire orchestra pit playing area in bright, general lighting for most of the play. When the Drum Major made his auspicious entrances, the lights changed to an uncanny or more eerie green and pink color to indicate a drastic change in mood. As each box was removed from its space, the lights dimmed in that respective area. When Pepper left Zacharias alone with the biggest box, the lights dimmed into a smaller circle around him. When he suggested that Pepper should share the box with him, the lights brightened and enlarged to signify this brighter, happier idea.

In addition to the sound effects mentioned above, the sound of a large Mack truck was heard to imply that the Drum Major was driving away with both boxes. This sound effect was heard again as Pepper and Zacharias improvised their playing airplane in the largest box. This effect was meant to communicate the return of the Drum Major and/or the magical sound created by their airplane

play. The pre- and post-show theme music was Pat Metheny's "Forward March" cut taken from his First Circle album, which signified an odd, unharmonious parade with an incessant drum beat.

Graphic designs for the poster, program, handbill, and ads depicted the shape of a flattened, fold-together box with tabs, using unique lettering for the play's title, placed diagonally against a Mondrian style background. Publicity information was positioned in different boxes in various horizontal, vertical, and diagonal directions. In order to read the square-shaped program, patrons had to turn it in another direction (i.e., change their perspective) with each opening of the folded pages.

Procedure

Five 1st grade children from schools other than those of the formal study were interviewed the day after the third dress rehearsal for 20 to 30 minutes. The purpose of this pilot study was to check the wording of questions and the difficulty of tasks, to time and limit the interview to 15 minutes, and to train interviewers and their assistants in note-taking and procedures.

Children in the present study were bussed from their respective schools to the auditorium (seating 1,188) for 1 p.m. matinee performances on three different days. All classrooms sat in the first two or three rows of the center front orchestra 10' from the downstage edge of the raised orchestra pit (10' wide x 35' long) where most of the action of the play took place.

Programs were distributed after the performance on the bus ride home or at school.

Since testing was not possible immediately following the performance, individual, 15-minute interviews were conducted on the day following the school's theatre attendance in separate, quiet rooms at the respective schools. Each child was picked up from his or her classroom to begin an informal acquaintance and to seek the child's assent to be questioned on the way to the interview room. The child sat next to the interviewer and the assistant sat on the other side further away. All interviews were audio tape-recorded for later scoring purposes. After the interview, the child was thanked and escorted back to the classroom. (See Appendix 1 for the complete interview.)

Interview Materials

For free story recall, the following objects represented characters and props in the production in analogous ways: Zacharias' and Pepper's boxes were constructed and painted identically by the scene designer (3" square and 4" square respectively). A small, 2" diameter drum (or Christmas ornament) represented the Drum Major's bass drum. Character "dolls" were created from long-shot, color photographs of each of the three characters (both their fronts and backs) pasted on 1/4" plywood with small cardboard stands at the bottom. Each doll was 6 1/2" high x 2 1/2" wide, so that characters could be placed inside each box.

Several photographs were used as visual prompts for recall throughout the interview. Color photographs of specific moments in the production were taken during each of the three dress rehearsals. Each shot visualized, as closely as possible, the size and perspective of the center front viewing experience. Care was taken to ensure that all necessary characters and scenery were included in each shot. Photographs were enlarged to 5 x 7 inches for easier detail recognition and with a matte finish to decrease finger printing marks.

For the character affect questions and tasks, black and white, diagrammatic facial expressions were copied or created from masks used in an improvisational theatre game package (CEMREL) and pasted on 8 x 11 inch poster board. Another strip of poster board depicted intensity values in large to small print as an iconic representation. (See Appendix 2 for pictures of all materials used.)

Response Measures

1. Familiarization with Story

Though children were not expected to be familiar with this original play, they were asked whether or not they already knew the story to be sure they had not received prior knowledge or training.

2. Enjoyment of the Play

Rather than ask to what extent the children themselves enjoyed the play, children were asked to rate the play on a 3

point scale in terms of children from another city to arrive at more objective responses.

3. Difficulty

Children were asked their personal opinion about the ease or difficulty in understanding this particular production.

4. Free Story Recall

Children were asked to identify each of the three characters by pointing to its "doll" displayed randomly on a table in front of them. To determine salient features in the production and children's understanding of the play's non-linear plot structure, children were then asked to retell the entire story "to someone who didn't see the play yesterday." To assist in their retelling, they were allowed to manipulate miniaturized props as a non-verbal means of assessing audio-visual comprehension. Interviewers and their assistants recorded detailed notes of children's physical use of props.

5. Inference Questions

The sequence of questions and tasks progressed from more difficult free recall of the whole play to specific open-ended inference questions (cued recall), forced-choice questions, and easier recognition tasks and questions.

a. Main Idea

Children were asked to make broad inferences regarding the "main idea" or theme of the whole play to test their overall dramatic literacy and their integration of key thematic concepts intended by the director. To help determine the modal sources

for these inferences, they were asked if they understood this idea from something they saw, heard, or felt, and what those cues were specifically. As a follow-up recognition task, they were then shown photographs of three key scenes, one at a time, as "some other main ideas in the play that other kids thought of": 1) when Zacharias and Pepper try to figure out if things look different from behind than from in front (perspective); 2) when Pepper and Zacharias argue and fight about their boxes because they are mad at each other (fight); and, 3) when Zacharias and Pepper stick together by sharing one box together because they're friends (friends). Children were asked to point to which photograph they thought was the biggest and then the smallest main idea of the play.

b. What Children Learned

Children were then asked whether they learned anything from the play, to state what they had learned, and whether they learned this from something they saw, heard, or felt.

c. Character Affect

Children were asked to infer characters' affects at three moments of high emotional intensity in the play. First, they were asked to identify and label four negative emotions (sad, surprised, mad, and scared--in the same order) from diagrammatic facial expressions. Then, given a photo prompt of the scene in question with character faces whited out, they were asked to show which feeling the character felt by pointing to one of the four facial expressions. Again, they were asked how they knew this

emotion or whether they knew it from something they saw, heard, or felt. Because emotions are seldom pure and because they can change in a matter of seconds, children were also asked whether the character felt an additional emotion. For each emotion cited, children were asked to rate the intensity of each emotion on a three point scale using a diagrammatic rendering [i.e., VERY, VERY (sad); Pretty (sad); just a little bit (sad)].

6. Media Preferences

Finally, children were asked if they would prefer to watch this same production on stage or on television and to give the differential reasons for their preferences.

Coding and Data Analysis

After transcribing the audio tapes, descriptive and correlational analysis of the data were based upon children's most frequent responses to open-ended and forced-choice questions and recognition tasks. Interviewers' notes on children's physical use of representational toys assisted interpretations. Responses were compared against the artists' intentions and an indepth content analysis of explicit and implicit audio-visual features of the production. Both positive and negative reasons were used to determine children's preferences for theatre or television.

Three adult raters were trained in coding for reliablity. Initial reliability after training ranged from 70% to 97%. After discussing coding for consistency and reconciliation purposes, reliability ranged from 87% to 100%. See Table 7 in Appendix 5

for interrater reliability for each response measure before and after reconciliation.

Free story recall was coded in two ways. First, the plot structure was divided into scenic units (see Appendix 4). Eleven central dramatic actions were defined as those character actions which move the plot forward directly in a linear fashion. Without these scenes, there would be no story. Eight secondary dramatic actions developed character relationships and initiated or triggered central actions to move the plot forward indirectly. Five incidental dramatic actions served as exposition or mood setting events, including the final curtain call. They were defined as gestural actions to assist character development, but were not crucial to the plot. Second, free story recall was coded according to children's use of concrete and implicit modal cues described below.

Meringoff's (1980, 244; Vibbert and Meringoff 1981, 20-21; Banker and Meringoff 1982, 51-52) coding system was adapted to score frequencies of visual, verbal/aural, and psychological bases used for most questions and free story recall. Bases were coded for each of the three characters. For example, if a child said, "They took each others' boxes," this bit was coded as both Pepper's and Zacharias' dramatic actions. The master bases coding scheme is described in general below (see Appendix 4 for more detailed coding scheme):

Visual Bases (for each character)	EXAMPLES:
dramatic actions	"DM stole their boxes."
acting behavior/gestures	"Z acted weird."
physical appearance	"P looked messy."
facial expression	"P's face looked mad."
spectacle	"They lived in boxes."

(scenery, costumes, props, lighting, sound effects)

Dramatic actions were defined as those visualized actions performed by characters which moved the plot forward in any way. Children's use of active verbs alerted coders to such dramatic actions. Acting behaviors or physical gestures were defined as the dynamic ways in which characters expressed their behaviors and attitudes in order to carry out a dramatic action. Physical appearance was denoted by a character's static visual condition. Spectacle was defined as any mention of various scenic elements, such as the boxes which moved or changed positions frequently in this play.

Verbal/Aural Bases (for each character)	EXAMPLES:
dialogue quoted/paraphrased	"P said, '...'"
inflection used	[child used inflection/noted in transcript]
dialogue described	"P said she liked it."
verbal action	"P was crying."
used words or information gleaned only from dialogue	"truck"
sounds or music	"I heard a drum playing."
child's sound effects	[child makes noises heard]

Children's use of dialogue was coded in two ways: whenever children quoted or paraphrased specific lines of dialogue and whenever they simply described the information which characters conveyed verbally. Because this play's dramatic actions relied heavily on the two protagonists' verbal arguments, such verbal actions as fighting, crying, yelling, and forgiving were coded separately. Children's mention of sound effects was coded separately from their vocal re-creation of such salient sound effects, as were their imitations of the actors' inflections identified during audio tape transciptions. Also noted were children's identification of words and information gleaned only from the play's dialogue. For example, the Drum Major's offstage "truck" is never visually seen but frequently verbalized. Because the audience hears the sound of a truck leaving and Zacharias states, "He's driving away" (p. 28), this critical verbal information was coded separately whenever children noted that "The Drum Major drove away with their boxes."

Psychological Bases (for each character)	EXAMPLES:
motives/wishes	"P wanted to get back at him."
thoughts	"Z thought it was alright."
traits	"Z was mean."
opinions	"P didn't like Z then."
feelings	"P was sad."
internal state	"Z felt like he did wrong."
relationships	"P was Z's friend."
sensory perceptions	"Z could see DM's truck."

Motives were defined as characters wanting to achieve a goal, while thoughts were more general aspects of characters' thinking. Traits were defined as static attitudes of a character's personality, while opinions referred to a character's likes and dislikes. Feelings denoted a character's emotional state, and this category was not used when coding Character Affect. Feelings contrasted from internal states which referred to more cognitive states of being. Sensory perceptions referred to the characters' uses of their five senses. Because this play focused on the relationship between Pepper and Zacharias, relationships referred to those psychological and inferential aspects of friendship and sharing.

Rather than ask the metacognitive question about how a child knew information from the play, children were sometimes asked whether they saw, heard or felt something which led to their answers from questions. Therefore, two new general categories were created to reflect children's personal ideas:

Felt (what child felt)	EXAMPLES
emotion	"I felt happy inside."
opinion/judgment/enjoyment	"It was my favorite part."
empathy/identification	"My sister and I fight."
prescription	"You should always be friends."
general knowledge	"It's not nice to squirt water."

Theatre Context

Any information where child discusses making up own plays, going to see a play, KU doing the play to make money, etc.

Children's own emotional responses to the play were separated from their cognitive evaluations or personal opinions of scenes or characters in the play. Some children gave analogous examples from their own lives which indicated their empathy or identification with characters. Other children prescribed good moral behavioral rules, while some simply relied on their general world knowledge to make inferences. Still others referred to the theatre context or event itself as sources for their inferences about the play.

Results

The findings reported here are organized according to the previous descriptions of the response measures.

1. Familiarization with the Story

None of the 38 children was familiar with this story.

2. Enjoyment of the Production

Of all the children, 76% stated that 1st graders in another city would like this play "a lot," and 24% said they would like it "a little bit." One child volunteered that he didn't like waiting for the rest of the audience to come into the auditorium.

3. Difficulty

When asked to rate the ease or difficulty in understanding this play, 63% rated it "sort of easy," 26% found it "real easy," and 11% thought it was "sort of hard."

4. Free Story Recall

When shown the three photographed doll figures standing in random order, all children correctly identified the characters by pointing to the doll in question.

When asked "to tell the story to someone who didn't see the play yesterday," children verbalized and/or used the dolls and miniaturized props to show and indicate incidental, secondary, and central scenes from the play. Verbal bits of codable information ranged from 4 to 75 ($X = 23$; $SD = 16$). Props were used 1 to 27 times when telling the story ($X = 7.7$; $SD = 8.2$), though 9 children did not use the props at all. Verbal bits correlated highly with use of props ($r = .54$, $p<.001$), suggesting

that props aided children's verbal recall of the story. The more children used props and verbalized the story, the more likely they were to recall the central scenes of the play in the correct sequential order (respectively $r = .36$, $p<.01$; $r = .57$, $p<.001$). Interrater reliability for coding scenes was 93%. The following scenes recalled are sequenced chronologically in the order events occurred in the play:

Table 1

Free Story Recall of Scenes	children	
Scene	freq	%
(I) P & Z woke up from their boxes	13	34
(I) P's morning rituals	8	21
(I) Z's morning rituals	9	24
(I) P & Z name calling/mixing shoes	5	13
(S) P & Z argue and fight in general	11	29
(S) Z shows P front/back (w/handkerchief)	5	13
(S) P & Z turn Z's box around to red/green	15	40
(S) P & Z turn P's box around w/no difference	5	13
(S) P & Z play water fountain	8	21
(S) P plays airplane w/big & little arm out	13	34
(S) DM enters marching/playing drum	21	55
(S) P & Z argue over who marches first	10	26
(C) Z marches off/plays drum first	17	45
(C) DM & P hide Z's box in P's box	23	61
(C) P marches off/plays drum next	18	47
(C) DM & Z push P's box offstage (to truck)	25	66
(C) DM drives away/steals both boxes	30	79
(C) P & Z confess their actions	15	40
(S) P plays on bottle/Z plays w/shoebox	3	8
(C) Z & P get new big box out of wall	32	84
(C) P leaves Z to find new friend	6	16
(C) P & Z play games in new box	20	53
(C) DM returns/P & Z chase him away	16	42
(C) P & Z share big box as friends	12	32
(I) Curtain call	3	8

I = Incidental scene
S = Secondary scene
C = Central scene

As shown in Table 1, less than half of all children recalled relational events between Pepper and Zacharias in the first half of the play. Instead, 55% jumped immediately to the Drum Major's first entrance--a key marker for the second French scene when the plot begins to take on a more linear, cause and effect, structure. Primacy effects show up in children's detailed retelling of Pepper's and Zacharias' nonverbal, incidental, morning preparations. Though the director perceived the front and back perspective concepts to be a major metaphor in the play, only 13% reported this main idea (e.g., using the handkerchief). Instead, each box's special unique qualities--Zacharias' red and green box, and Pepper's big and little arms--held more fascination for 40% and 34% of the children respectively. Though teachers deplored the characters spitting water at each other, only 21% of the children recalled this water fountain game. See Teachers' Evaluations in Appendix 6 and Behavioral Reactions of Audiences in Appendix 3.

Over half of the children retold the story as a linear plot structure as follows: the Drum Major marches in playing his drum (55%); he and Pepper hide Zacharias' box in her box (61%); he and Zacharias push Pepper's box offstage (66%); the Drum Major drives away in his truck and steals both boxes (79%); Pepper and Zacharias get a bigger box out of the wall (84%); and they play in it (53%). Apparently, losing the two boxes and getting one bigger new box were the most meaningful, central events in the play for the majority of these first grade children. While 53%

noted that the two protagonists "played" in their big box, only 32% elaborated further by inferring that they "shared" the box together. In other words, only about one-third integrated the characters' actions to infer and verbalize the play's main idea from the plot's resolution.

An average 46% also discussed both Zacharias and Pepper marching offstage with the drum, while roughly the same percentages reported the confession scene (40%) and the Drum Major's return (42%). The argument over who would march with the drum first interested 26% of the children. Surprisingly, only 16% mentioned the turning point or crisis of the play when Pepper leaves Zacharias to ponder his greedy behavior, and no child discussed the fact that Zacharias cried in despair over losing his best friend.

On the average, children recalled 6 of the 10 central scenes (SD = 2.7), 2 of the 8 secondary scenes (SD = 1.4), and 1 of the 5 incidental scenes (SD = 1.1). The more central scenes children recalled, the less they reported enjoying the play ($r = -.40$, $p<.01$).

In addition to scene recall, free recall was also coded by use of visual, verbal/aural, and psychological cues, and children's feelings or opinions expressed spontaneously. Table 2a in Appendix 5 describes the frequencies of cues used as a percentage of the total cues cited and the percentages of children who cited those cues. Also in Appendix 5, Table 2b summarizes these frequencies for each character and additional

cues, while Table 2c summarizes frequencies for only the three characters combined. Interrater reliability for coding all modal bases was 99%.

As shown in Table 2a, visual cues were 64% of total bases, primarily characters' dramatic actions and the "actions" of the boxes and scenic wall. Fewer children mentioned the characters' acting behaviors or gestures. Instead, they recalled an average of 14 character dramatic actions (range = 0-40; SD = 9.9).

Verbal/aural cues were 25% of total bases, primarily by describing and quoting characters' dialogue and noting such verbal actions as arguing. Few children used the characters' vocal inflections. Likewise, sounds heard (e.g., Pepper's rooster crowing) and created by children (e.g., booming drum) were used to a lesser extent. Children recalled an average of 5 references to dialogue (range = 0-14; SD = 3.9).

In addition, 71% of the children used words that could only be gleaned from the dialogue such as "truck," "fountain," "motorcycle," and "space shuttle." In fact, over half (53%) inferred specifically that the Drum Major "drove" away with the boxes in his "truck," even though the truck was an offstage entity implied through its sound effect and characters' dialogue. Those who recalled the "truck" also recalled other non-visualized words in free recall ($r = .42$, $p<.01$). Children were more likely to infer this aural truck information when they used all characters' dramatic actions (Pepper's $r = .35$, $p<.05$; Zacharias' $r = .31$, $p<.05$; Drum Major's $r = .32$, $p<.05$), and Zacharias'

acting behaviors ($r = .39$, $p<.01$); and, when they quoted Pepper's or the Drum Major's dialogue ($r = .29$; $p<.05$; $r = .33$, $p<.05$ respectively). Likewise, children were more likely to mention this truck information as they used more visual and verbal/aural cues during free story recall ($r = .37$, $p<.01$; $r = .36$, $p<.01$ respectively).

Psychological bases were 10% of total bases, primarily by reporting Pepper's and Zacharias' relationships and feelings, and all three characters' motives. Children recalled characters' motives and feelings an average of 1.4 times (range = 0-7; SD = 1.9). To a lesser extent, they inferred the three characters' thoughts, Pepper's and Zacharias' traits and opinions, and Pepper's internal state. Interestingly, when children inferred Zacharias' motives, they were more likely to report that both characters shared the big box ($r = .30$, $p<.05$).

More boys than girls also volunteered their own personal opinions about the play ($r = -.33$, $p<.05$), and one child identified a personal association, as the remaining 2% of total bases used.

As shown in Table 2c, children tended to describe characters' dramatic actions (66%) more than their dialogue (22%) or thoughts (12%). They used characters' dialogue in conjunction with characters' dramatic actions ($r = .60$; $p<.001$) and motives and feelings ($r = .46$, $p<.01$), and these psychological aspects also related to Pepper's and Zacharias' interpersonal relationship ($r = .32$, $p<.05$). Use of visual cues related

strongly to verbal/aural cues ($r = .68$, $p<.001$) and children's personal opinions and feelings ($r = .39$, $p<.01$). Visual and verbal/aural cues also related to verbal bits of codable information (respectively $r = .93$, $p<.001$; $r = .86$, $p<.001$) and use of props (both $r = .55$, $p<.001$). The more children verbalized the story, the more they also tended to express their personal opinions and feelings about the play ($r = 41$, $p<.01$). These opinions were also related to their use of verbal/aural cues ($r = .39$, $p<.01$). Overall, the more children used visual, verbal and psychological cues to retell the story, the more they recalled central scenes in their proper sequential order (respectively $r = .61$, $p<.001$; $r = .51$, $p<.001$; $r = .30$, $p<.05$).

5. Main Idea of the Play

a. Main Idea Inferences

The term "main idea" is introduced in first grade language arts textbooks throughout this school district. However, when asked to infer the main idea of the play immediately after free recall, many children evidenced difficulty in understanding the term "main idea." They were probed with additional words such as, "point," "moral," or "lesson" of the play. Four children (11%) did not know or were unable to verbalize the main idea (e.g., "I don't know that they showed me.").

Most children (45%) described concrete, inside-story information (e.g., "They got angry at each other"), while 21% inferred more abstract, outside-story generalizations about people (e.g., "Try to be friends"). The remaining 21% made

broader, generalized inside-story references as an intermediate level of abstraction (e.g., "Two friends trying to break up sometimes"). Over half (55%) simply described the story as a proposition, 26% offered prescriptions of how people should behave, and 2 children cited personal associations as types of main ideas. Interrater reliablity for coding Main Idea was 93%, level of abstraction was 87%, and type of idea was 95%.

Forty percent of the children inferred that friendship and "sharing" were the main ideas in the play as follows: "Friends break up and get back together again," because "They forgived each other." "You should keep a friend; because if you make up with a friend, and you don't get another one, that you will never get back with your other old friend;" and "because if they don't like each other, they couldn't see each other again, and then they would miss each other." "No matter who looks better, you can still be friends," and "Try to be friends."

Eleven percent found moral behaviors to be main ideas. Here, children replied that "When they [the Drum Major] took the boxes away, it just taught them a lesson--not to play tricks on other people." Two children cited the fact that "You shouldn't steal like that, no way." Another main idea was "To learn sometimes not to listen to people. They might be lying to you."

Another 11% inferred "fighting" as the main idea because "They got angry at each other;" and "The Drum person wasn't really their friend. Most of the play was about them being mean over their boxes and stuff. Then they liked each other a lot."

Another 21% related secondary concrete actions throughout the play. Such actions included: "When they were getting taught how to play the drum and march;" "When [the Drum Major] put [Zacharias' box] in his truck and took them away;" and, "Getting their box back so they can sleep on the floor." Three children noted their favorite "funny part where Pepper was pretending to play the airplane" "when she put her hands out." The two boxes were main ideas because "The boxes were theirs, and that's what they lived in;" and "How [Pepper and Zacharias] got in it and how they were so big, and how they thought they was magic."

The remaining 3 children interpreted the main idea as "doing" or listening to plays in general because "It was fun." As one child put it, "The main idea is sitting and watching it. To listen and keep your eyes on it and learn, so if you wanted to do it some day later, then you'd know what they did." Likewise, another child (East Indian) focused entirely on the theatrical event of "Making a play, not like using puppets, but it's like using boxes and making what you want to make, not like puppets. Because with puppets, you have to buy or you can make them. I think they like made it up for other kids, and they want to get more money."

When asked how they knew their response to the main idea from what they saw, heard or felt, visual bases comprised slightly over half of all total bases (51%), primarily Pepper's and Zacharias' actions. For example, "They played together a lot, even though she's a girl and he's a boy." Verbal/aural and

psychological bases were used to a lesser extent (15% and 23% respectively). Some children felt "happy inside" when the characters shared, or "mad when somebody steals and you don't like it" (11% of all total bases). Interrater reliability for coding these modal bases was 95%. See Appendix 5 Table 4 for a breakdown of all bases.

Children were more likely to cite friendship as a main idea if they based their inferences on Zacharias' relationships ($r = .32$, $p<.05$). Boys tended to base their main idea inferences on Pepper's dramatic actions ($r = -.35$, $p<.05$); while girls based such inferences on Pepper's and Zacharias' feelings (both $r = .31$, $p<.05$), their own emotions ($r = .39$, $p<.05$), and their identifications with and prescriptions for characters (both $r = .31$, $p<.05$).

b. Main Idea Recognition

Children were shown three photographs, depicting three possible main ideas from the play, in the same chronological order as they occurred in the play (see Appendix #2). Three statements which described each main event were read aloud to them as each photograph was turned over and revealed: "This is when Zacharias and Pepper try to figure out if things look different from behind than from in front" (perspective); "This is when Pepper and Zacharias argue and fight about their boxes because they are mad at each other" (fighting); and, "This is when Zacharias and Pepper stick together by sharing one box together because they're friends" (friendship).

When asked to point to the "biggest main idea," 74% chose the friendship photo, and 13% each chose the perspective and fighting photos. When asked to chose the "littlest main idea" from the remaining two photographs (after their first choice had been removed), half chose the perspective photo, 29% pointed to the fighting photo, and the remaining 21% picked the friendship photo. Girls were more likely than boys to choose the fighting photo ($r = .30$, $p<.05$). Those who chose the perspective or fighting photo as the "biggest" main idea tended to choose the friendship photo as the "littlest" main idea ($r = .75$, $p<.001$; $r = .37$, $p<.01$ respectively).

Children who chose the friendship photo as the "biggest" main idea also inferred friendship as a main idea earlier ($r = .31$, $p<.05$), and their inferences were more abstract ($r = .41$, $p<.01$) and more prescriptive ($r = .40$, $p<.01$). They were also more likely to recall freely that Pepper and Zacharias "shared" their big new box as "friends" when retelling the story ($r = .28$, $p<.05$). Those who chose the perspective photo as the "biggest" main idea tended to base main idea inferences on Zacharias' dramatic actions ($r = .41$, $p<.01$).

In summary, friendship appeared to be the most important and relevant main idea of the play as inferred by 40% of the children and as recognized by the 74% who chose the friendship photo as the "biggest" main idea. Another 42% inferred various ideas regarding fighting, stealing, lying, playing tricks on others; and their favorite ideas and actions about the boxes. Eighteen

percent cited incidental ideas or did not know the play's main idea. From these findings, it is notable that children focused on positive versus negative character behaviors in roughly equal proportions.

6. What Children Reported Learning from the Play

When asked whether they l arned anything from the play, 37% said they learned nothing. One child said it was because she didn't understand the play, while another said she didn't learn anything because she already knew the play's main idea. Those who reported learning something tended to choose the fighting photo as the "littlest main idea" ($r = .32$, $p<.05$). However, there was no relationship between what children learned and their spontaneous main idea inferences.

Of the 63% who reported learning something from the play, half inferred abstract, outside-story generalizations and 34% made prescriptive notions about how people should or should not behave. Interrater reliability for what children learned was 97%, level of abstraction was 87%, and type of concept was 89%.

Eighteen children (47%) said they learned something about friendship--the fact that "You should share with others;" not fight, argue or get mad at each other; and, "not to play tricks on other people." Instead, "be nice to friends [because] if you lose a friend, you feel bad." Two children learned that "if you break up with a friend, you can get them back easily if you apologize," and "That friends can get back together." One child related a personal identification: "Well, me and my sister get in

fights a lot and I didn't really want to make friends with her, and I learned that I should." Another child offered these insights: "I learned that it really doesn't make a big difference--it's just a box. Each box isn't really as important as [Pepper and Zacharias], because they're alive and these boxes aren't." Girls were more likely to report learning these ideas about friendship than boys ($r = .40$, $p<.05$). These children also used props more frequently ($r = .29$, $p<.05$) and recalled more psychological cues in free recall ($r = .39$, $p<.01$). They also tended to express their personal opinions about the play during all inference questions ($r = .29$, $p<.05$).

Three children (8%) learned the following: "Never to let a stranger trick you, like take away your box [or] even your playhouse;" "That you're not supposed to steal things from other people;" or, as one child put it--"I used to always steal things, like at school, and now I know not to anymore at school. When [Pepper and Zacharias] stole each other's things, I go, 'Oh, now I know not to steal!' because it makes people mad and sad."

Two children (5%) learned about watching the play, and "that they have boxes and plays and they dress up and they act funny. And they don't usually really do things that are real. They sometimes do them like pretend or something. Like [the Drum Major] didn't have a real truck, because it would be too big for the stage." Another child (3%) learned Zacharias' point "That your front isn't the same as your back."

When asked how they learned this information, visual bases were 40% of all total bases, m[illegible]y Pepper's and Zacharias' dramatic actions. For example, "You learn because at the end they were playing with each other." Verbal/aural bases and psychological bases were used to a lesser extent (24% and 20% respectively). The play also reinforced ideas that children already knew (16%). For example, "I felt that you should be more kind to other people and make them feel better," and "If you lose a friend, you feel bad." Interrater reliability for coding these modal bases was 100%. See Appendix 5 Table 4 for breakdowns of sub-categories.

7. Comprehension of Character Affect

Children were shown four diagrammatic faces of "different feelings that characters sometimes feel at different times in plays" with verbal labels defined by the interviewer (in the same order). After describing one emotional moment in the play at a time, children were asked to point to a facial expression and to rate its emotional intensity (using another verbal diagram), once or twice, depending on how many feelings the character expressed See Appendix 5 Table 3 for character affects and intensities and Table 4 for a breakdown of sub-categorical bases.

a. Pepper's Affect

When asked how Pepper felt when Zacharias squirted water in her face, 79% thought she felt sad and most rated the highest intensity (very=17; pretty=11; little=2). Again with high intensities, 66% thought she felt mad (very=15; pretty=8;

little=2). There were high correlations between sadness and madness whether chosen first or second ($r = .84$, $p<.001$; $r = .63$, $p<.001$). Few children thought she felt surprised (very=3; pretty=1) or scared (very=1; pretty=1), though surprise was added if madness was selected first ($r = .39$, $p<.05$). Most children (61%) selected more than one affect and 39% selected only one affect. In contrast, the actress who played Pepper reported feeling extremely surprised, and then very mad when this moment occurred in the play.

When asked how they decided that Pepper felt these labeled emotions after being squirted, visual bases were 31% of all total bases, including Pepper's facial expression ($r = .32$, $p<.05$). Of the 4 children who chose surprise (the actress's choice), 2 children relied on Pepper's facial expression ($r = .60$, $p<.001$). Verbal bases were 23% of total bases, primarily Pepper's "crying, yelling, talking mean, arguing." Children were less likely to cite sadness if they based the emotion on verbal/aural cues ($r = -.46$, $p<.01$), and more likely to choose sadness if they based their inference on their own general knowledge about feelings or their identification with characters (both $r = .31$, $p<.05$). Psychological bases were 32% of total bases, mostly by inferring Pepper's opinion that "she didn't like being squirted," and because "she thought that he was being mean to her." Three children identified with Pepper's sadness or madness: "Because people don't like being squirted with water. Well, some people like that because they think it's fun. And if you get water in

your nose, then you can't breathe that hard. I like that but I don't like people squirting in my face;" and "it's not nice and you get mad" and "it doesn't really feel that good." Eight children based their affect choices on the same information as given in the question (i.e., "because he squirted water in her face"). Interrater reliability in coding these modal bases was 96%.

b. Zacharias' Affect

When asked how Zacharias felt when he found out his box was missing, 66% said he felt mad with high intensity (very=16; pretty=6; little=3). Another group (47%) thought he felt sad (very=12; pretty=5; little=1). Some degree of surprise was chosen by 37% (very=7; pretty=4; little=3), while few thought he felt scared (pretty=1; little=1). Over half (55%) chose more than one emotion. In contrast again, the actor who played Zacharias reported feeling very surprised ("shocked") and then very scared at this moment in the play.

When asked how they decided how Zacharias felt about his missing box, visual bases were 32% of total bases, by noting his facial expression, and the fact that Pepper and the Drum Major took his box away. Verbal bases were 22% of all bases, primarily by quoting his dialogue (i.e., "Where's my box?") with his inflections, and by noting his "yelling" or "talking very loud and mean." Again, children were less likely to choose sadness if they based their inferences on verbal/aural cues ($r = -.33$, $p<.05$). Psychological bases were 40% of all bases by inferring

his opinion that "he loved his box real good," "because it was special" and "his most favorite thing;" and, because "he thought it was very, very neat." One child identified with Zacharias' loss in that "I'd be angry when my box would be stolen," while another noted that "some people lose their things [and] get sad." Nine children repeated the fact that his box was missing, as stated in the question. Interrater rel'ability for coding these modal bases was 95%.

Three children who chose sadness tended to base their judgments on the fact that Pepper and the Drum Major took his box ($r = .47$, $p<.01$). Three who picked surprise based this choice on Zacharias' dialogue, "Where's my box?" ($r = .35$, $p<.03$). Low intensities were rated by the five children who used his facial expression ($r = -.45$, $p<.01$), though high intensities were rated when using his opinions ($r = .33$, $p<.05$).

When asked how Zacharias felt when Pepper left him with the biggest box near the end of the play, the overwhelming majority (97%) thought he felt extremely sad (very=26; pretty=9; little=2). Few children chose other emotions (surprised: very=2; little=1) (scared: very=1; pretty=2; little=1) (mad: very=1; pretty=1). Two children added that Zacharias felt "ashamed." Most (79%) did not add any other emotion than sadness or lonliness. Likewise, the actor reported feeling very sad (and "lonely") and pretty scared at the same time.

When asked how they decided how Zacharias felt when Pepper left him with the biggest box, visual bases were 20% of total

bases, primarily by "the way he sat down," "by himself," "without anything to do." Verbal bases were 15% of all bases, with most attention on his "crying."

Psychological bases were used the most (64% of all bases) by inferring his internal state of loneliness and not having his best friend, Pepper, anymore; or "anybody to play with," "to talk to," and "to help him get into the box." In fact, "he couldn't have fun with the box unless he had a friend because he couldn't do much in it," and "he really missed her." Zacharias' motives or desires included the fact that "he didn't want her to leave," "he wanted his friend to come back," "to share with her." His thoughts were that "He didn't know if she was gonna come back or not," and "he thought she would be gone forever." Instead of sadness, one child explained Zacharias' feelings this way: "He was mad that he left her, and he was surprised that she wouldn't want to have it for herself and she wouldn't want to be with him. He felt mad that she didn't want to be with him anymore." Another child felt that 'he should be ashamed of himself because he was mean to Pepper." Four children based their affect choices on Pepper's motives and her relationship with Zacharias combined ($r = .38$, $p<.01$). Nine children again repeated that Pepper left him, as given in the question. Interrater reliability for these coding modal bases was 92%.

8. Preferences for Theatre and Television

When asked whether they would prefer to see a production of Noodle Doodle Box on stage or on television at home, 71%

preferred theatre, 16% preferred television, and 13% liked both media.

Children had difficulty recognizing or verbalizing the differences between these two media. In fact, 2 children reported no difference between them, and 1 child simply repeated the reasons given in the question. Interrater reliability for coding media differences was 100%.

Visual and aural features of theatre were the primary positive reasons for preferring theatre ($r = .36$, $p<.05$). Visually, "You can see it better" "up close" "in the front row seat;" and "it has a bigger screen," and "you don't have to focus to get it." Aurally, "it sounds like real voices." One child's use of language evoked the audio-visual emphases of both media as: "I hear Pepper yelling there [and] see it on TV yelling" (emphasis added). Those who preferred theatre also reported that 1st graders in another city would enjoy this play "a lot" ($r = .49$, $p<.001$), primarily for these visual factors ($r = .38$, $p<.01$).

Only 8 children recognized theatre's live values in that, "You can see they're real people; because on TV, it's just like a camera copying over;" and, "I like [people up on a stage] because people look more real. I like it best to see it in real life."

Eight children, primarily girls ($r = .49$, $p<.001$), noted various emotional factors: "When you watch it on TV you can see it's not very funny, but when you watch it at the play, it's very funny." Another child observed astutely that "[Stage actors]

might play better than on TV." Other children felt a part of the action in these ways: "It's like you're in the play, but you're not;" and, "On the stage you're watching it in the theatre, and you wish you were there; and no matter what you wish, you're already there, and you don't wish you were."

The context of attending theatre was most salient for 6 children. One child noted; "when you go to a play, you see a lot of people [and] the seats go up and down." Another child would choose theatre in the summer time and TV in the winter time "because it'd be cold outside and I wouldn't get out." Other advantages of theatre are that "you have to drive to see it," and "you can't get up and work like my mom always does me."

Negative television factors involved the inverse of the examples cited above. Again, 8 children recognized that "on TV it's been taped," "it's not much real," and "they show pictures on a screen." In fact, "real people are on television, but they're on TV."

Television also accounted for worse visual features, primarily because "the movie camera messes up," "it can get far away or close up," "the TV goes faster," and "you can't see everything on TV." Smaller television screens pose a visual disadvantage, especially "if you have a small television, you can't see all of it" (?!). Emotionally, "you'll be bored watching TV all day."

Television's contextual disadvantages, including commercials, involved adult interventions at home: "Sometimes

your mom tells you to keep the TV down so you can't hear;" especially "if your brother was sleeping you would have to keep it real low down." At other times, "your sisters turn it off and turn it to another channel on you." The television set can pose problems when it "acts up" and "gets blurry."

Of the 11 children who preferred television or both television and theatre, 7 children noted television's positive features ($r = -.48$, $p<.001$); primarily its home comfort and the fact that "it's fun when you get to stay home and watch it, because you can watch it and play;" and "you don't have to sit with a crowd." Three children disliked theatre because at home "you don't have to get up and leave;" and "I don't like to be riding the bus because it takes a long time; [and] because if you have to use the restroom, then there's no bathrooms in plays." Again, "It's not very fun going to the play just because you just have to sit down and you can't play." Another child disliked waiting for the audience to be seated in a theatre auditorium. (It takes roughly 20 minutes to seat 500 children for these school matinees.)

An additional measure for media preference was computed by incorporating children's reasons for preferring th atre or television (see Appendix 4). Using this media preference index, those who preferred theatre also reported that 1st graders in another city would enjoy this play "a lot" ($r = .40$, $p<.01$), they inferred friendship as the play's main idea ($r = .37$, $p<.01$), and they tended to express more personal opinions, feelings, and

empathy throughout the interview ($r = .28$, $p<.05$). However, those who reported this enjoyment and theatre preference also recalled fewer central scenes in free recall (respectively $r = -.40$, $p<.01$; $r = -.32$, $p<.05$).

9. Overall Cognitive Processing and General Comprehension

Children's cognitive processing, as measured by their use of modal cues, was related to their general comprehension of the play with respect to main idea inferences, reports of what they learned, and their free recall of central scenes in sequence.

Those who inferred and used more psychological cues throughout the interview were more likely to rate their understanding of this play as "easy" ($r = -.32$, $p<.05$). In fact, children who made inferences about characters' thinking in free recall also tended to make the same types of psychological inferences during other parts of the interview ($r = .41$, $p<.01$). Yet use of psychological cues for making inferences was negatively related to use of aural cues in such inference-making ($r = -.28$, $p<.05$). Reports of enjoyment were also negatively related to such variables as recall of sequenced central scenes, use of verbal/aural cues, and general comprehension (respectively $r = -.45$, $p<.01$; $r = -.28$, $p<.05$; $r = -.40$, $p<.01$).

Those who were more verbal in their retelling of the story tended to have higher general comprehension levels ($r = .58$, $p<.001$). Likewise, those who used more props during free recall also showed higher levels of general comprehension ($r = .37$, $p<.01$) and cognitive processing of all available modal cues ($r =$

.54, p<.001). More specifically, use of props related to total use of visual and verbal/aural cues and children's expression of personal opinions throughout (respectively r = .53, p<.001; r = .57, p<.001; r = .28, p<.05). Children who recalled more central scenes in sequential order evidenced increased cognitive processing (r = .65, p<.001) and used more visual, verbal/aural, and psychological cues (respectively r = .57, p<.001; r = .42, p<.01; r = .44, p<.01).

Of primary importance, the more children used visual cues the more they also tended to use verbal/aural cues in making inferences and in free recall (r = .60, p<.001). In fact, higher levels of general comprehension were related to greater use of visual, verbal/aural, and psychological cues (respectively r = .57, p<.001; r = .42, p<.01; r = .48, p<.001) and overall levels of cognitive processing (r = .66, p<.001).

Summary of Findings

1. Children's Evaluations of Noodle Doodle Box

When asked to rate how much 1st graders in another city would enjoy this production, 76% of the 38 children said "a lot" and 24% said "a little bit." The majority (89%) found this unfamiliar play "sort of easy" or "real easy" to understand.

2. Children's Comprehension and Recall of Noodle Doodle Box

Free Recall of Plot

All children correctly identified the three characters. When asked to retell the story "to someone who didn't see the play yesterday," less than half recalled incidental or secondary events between Pepper and Zacharias in the first half of the play. Instead, most jumped immediately to the Drum Major's first entrance--a key marker for the second French scene when the plot takes on a more linear, schematic structure. On the average, children recalled 6 out of 10 central scenes, 2 out of 8 secondary scenes, and 1 out of 5 incidental scenes.

Over half of the children retold the story as follows (see Table 1): the Drum Major marches in playing his drum (55%); he nd Pepper hide Zacharias' box in her box (61%); he and Zacharias push Pepper's box offstage (66%); the Drum Major drives away in his truck and steals both boxes (79%); Pepper and Zacharias get a bigger box out of the wall (84%); and they play in it (53%). Almost one-third of the children (32%) inferred the play's main idea in the story's resolution by noting that the two protagonists "shared" the big box. Apparently, losing the two

boxes and getting one bigger new box were the most meaningful, central events in the play for the majority of these first grade children.

Of all modal cues used by children in retelling the story, 64% were visual cues, 25% were verbal/aural cues, and 10% were psychological cues (see Tables 2a and 2b). The more children used these cues to retell the story, the more they recalled central scenes in sequential order (visual $r = .61$, $p<.001$; verbal/aural $r = .51$, $p<.001$; psychological $r = .30$, $p<.05$). More boys than girls spontaneously expressed their personal opinions and enjoyment of the play ($r = -.33$, $p<.05$) (2%). Characters' dramatic actions (or what they did visually on stage) (66%) were described more than their dialogue (22%) or their thoughts (12%) (see Table 2c). Use of visual cues was related to verbal/aural cues ($r = .68$, $p<.001$). When children inferred Zacharias' motives, they were more likely to report that both characters shared the big box ($r = .30$, $p<.05$).

One use of verbal/aural information is particularly noteworthy. Over half (53%) of the children inferred specifically that the Drum Major "drove" away with the boxes in his "truck," even though the truck was an offstage entity implied through its sound effect and characters' dialogue and gestures. Children were more likely to infer this critical aural information the more they used all characters' dramatic actions (Pepper's $r = .35$, $p<.05$; Zacharias' $r = .31$, $p<.05$; Drum Major's $r = .32$; $p<.05$) and Zacharias' acting behaviors ($r = .39$, $p<.01$),

and the more they quoted Pepper's or the Drum Major's dialogue ($r = .29$, $p<.05$; $r = .33$, $p<.05$ respectively). Likewise, children were more likely to mention the "truck" the more visual and verbal/aural cues they used throughout free recall ($r = .37$, $p<.01$; $r = .36$, $p<.01$ respectively).

Verbal bits of codable information correlated highly with the use of props and photographed "dolls" ($r = .54$, $p<.001$), suggesting that props aided children's verbal recall of the story. In fact, the more children used props, the more likely they were to recall the central scenes of the play in sequential order ($r = .36$, $p<.01$).

Main Idea Inferences and Recognition

When asked to state the play's main idea, 40% inferred friendship and sharing, particularly if they focussed on Zacharias' relationship to Pepper ($r = .32$, $p<.05$); 22% cited fighting, stealing, lying, and playing tricks on people; 21% described their favorite ideas and actions about the boxes; and, 18% discussed the theatre context or did not know the main idea (e.g., "I don't know that they showed me"). On the other hand, when asked to recognize the "biggest" main idea from three orally described photographs, 74% chose the friendship photo ("This is when Zacharias and Pepper stick together by sharing one box together because they're friends.") Those who chose this photo also inferred friendship as a main idea earlier ($r = .31$, $p<.05$), and they were also more likely to recall freely that Pepper and

Zacharias "shared" their big new box as "friends" when retelling the story ($r = .28$, $p<.05$).

When asked whether they based their main idea inferences on something they saw, heard, or felt, 51% of all bases were visual cues, primarily the protagonists' dramatic actions (35%). Verbal/aural and psychological cues comprised 15% and 23% of total bases respectively, and children expressed personal knowledge and empathy for 11% of all bases (see Table 4).

Interestingly enough, sex differences were evident in the modal cues children used to infer the play's themes. Boys tended to base their main idea inferences on Pepper's (female) dramatic actions ($r = -.35$, $p<.05$); while girls used Pepper's and Zacharias' (male) feelings (both $r = .31$, $p<.05$), their own emotions ($r = .39$, $p<.05$), and their identification with and prescriptions for characters (both $r = .31$, $p<.05$). Girls were more likely than boys to choose the fighting photo as the "biggest" main idea ($r = .30$, $p<.05$).

What Children Learned From the Play

When asked whether they learned anything from the play, 47% learned something about friendship--girls more likely than boys ($r = .40$, $p<.05$); while 37% reported learning nothing--perhaps, in part, because they already knew the information. Those who reported learning something tended to choose the fighting photo as the "littlest" main idea ($r = .32$, $p<.05$). However, there was no relationship between what children learned and their main idea inferences. Again, visual cues (40%), primarily the

protagonists' dramatic actions (31%), were used over verbal/aural (24%) and psychological (20%) cues, and children's general knowledge or character identification (16%) (see Table 4).

Understanding Characters' Emotions

Given four diagrammatic facial expressions (labeled orally as "sad, surprised, mad, and, scared"), children were asked to infer characters' emotions and rate emotional intensities at three critical points in the play (see Table 3).

When asked how Pepper felt when Zacharias squirted water in her face, 79% thought she felt sad (very=17; pretty=11; little=2), and 66% thought she felt mad (very=15; pretty=8; little=2). Few children chose surprised (pretty=3; little=1) or scared (2). In contrast, the actress reported feeling extremely surprised, and then very mad at this moment in the play. Here, children relied on psychological cues (32% of total bases), visual cues (31%), verbal/aural cues (23%), and empathy or general knowledge (14%) (see Table 4). Regardless of which emotion children chose, 5 children used Pepper's facial expression to decide how she felt ($r = .32$, $p<.05$), perhaps because focus was drawn to her face by the squirting.

When asked how Zacharias felt when he found out his box was missing, 66% said he felt mad (very=16; pretty=6; little=3), 47% chose sad (very=12; pretty=5; little=1), 37% cited surprise (very=7; pretty=4; little=3), and only 5% thought he felt scared (pretty=1; little=1). Again, in contrast, the actor reported feeling very surprised ("shocked") and then very scared at this

moment in the play. Psychological cues comprised 40% of total bases, primarily Zacharias' opinions about his box, visual cues 32% (including 5 mentions of his facial expression), verbal/aural cues 22%, and personal information 6% (see Table 4).

When asked how Zacharias felt when Pepper left him with the biggest box near the end of the play, the majority (97%) found him extremely sad, and few chose alternative emotions. Likewise, the actor reported feeling very sad (and "lonely") and pretty scared at the time. Here, psychological cues were relied on for 64% of all bases, primarily by inferring his internal state of loneliness and the loss of his relationship with Pepper. Visual (20%) and verbal/aural (15%) cues were used to a lesser extent (see Table 4).

3. Children's Preferential Reasons for Theatre over Television

Finally, given a chance to see Noodle Doodle Box again, 71% said they would prefer to watch it in a theatre, 15% preferred television, and 13% liked both media. Visual features were the primary reasons for preferring theatre ($r = .36$, $p<.05$), with 8 children (21%) recognizing theatre's "real people" and live values. Eight children, primarily girls ($r = .49$, $p<.001$), preferred theatre's emotional qualities. Those who preferred theatre also reported that 1st graders in another city would enjoy this play "a lot" ($r = .40$, $p<.01$), inferred friendship as the play's main idea ($r = .37$, $p<.01$), and tended to express more personal opinions, feelings, and empathy throughout the interview ($r = .28$, $p<.05$). Most children had difficulty recognizing or

verbalizing the different conventions between theatre and television, though their concrete, differential reasons were consistent with their media preferences.

4. Children's Cognitive Processing and Comprehension

Children's cognitive processing, or their use of modal cues, related to their general comprehension of the play as measured by their main idea inferences, reports of what they learned, and free recall of central scenes in sequence.

As found in the two previous studies (Klein 1987; Klein and Fitch 1989), the more children used visual cues (primarily characters' dramatic actions) in making inferences and in free recall, the more they also tended to use verbal/aural cues ($r = .60$, $p<.001$). Unlike these past studies, use of verbal/aural cues did not relate to use of psychological cues. However, those who processed more deeply by making more psychological inferences throughout the interview rated their understanding of this play as "easy" ($r = -.32$, $p<.05$). When combining all modal bases used in free recall and all inference questions, children relied on what characters did (dramatic actions) 42% of all bases and what characters said (dialogue) 11% (see Table 5).

Those who were more verbal in free recall and those who used props more often tended to have higher general comprehension levels ($r = .58$, $p<.001$; $r = .37$, $p<.01$). Likewise, children who used more props exhibited increased cognitive processing ($r = .54$, $p<.001$) by integrating more visual, verbal/aural, and psychological cues (respectively $r = .53$, $p<.001$; $r = .57$,

$p<.001$; $r = .28$, $p<.05$). Deeper cognitive processing was related to free recall of central scenes in sequence ($r = .65$, $p<.001$). Overall, there was a strong relationship between general comprehension and use of all available modal cues ($r = .66$, $p<.001$).

Discussion and Conclusions

National Curriculum Objectives Met by First Graders

Comparing interview responses to theatre objectives in the National Curricu . first graders in this study had the opportunity to express and share their perceptions of this theatrical experience in multiple ways. Their enjoyment, ease in understanding this play, and preferences for theatre over television suggest high attention levels during the performance, especially given their probable first experience in attending theatre. In addition, almost one-third (32%) spontaneously expressed their enjoyment or opinions of this play when retelling the story. Those who integrated more modal cues in their cognitive processing exhibited higher levels of overall comprehension.

Plot and Characters

Though Noodle Doodle Box is considered an episodic, "Theatre of the Absurd" text (Berghammer 1983), more than half of these first graders recognized a linear plot structure by recalling most of the central actions located in the second half of the performance text. Thus, children found the cause-and-effect, schematic structure of this story, despite the apparent randomness of episodic events (e.g., Mandler 1984). As narrative studies bear out (e.g., Stein and Glenn 1979), these first graders told what happened in the play primarily by describing the initiating event (the Drum Major marches in playing his drum), the characters' major attempts and actions (hiding each

box), the play's crisis (the Drum Major steals both boxes), the outcome (Pepper and Zacharias get a new bigger box), and the resolution (they play or share it). Therefore, the process of recalling causal connections within an hour-long play appears to be similar to the immediate or delayed recall of much shorter prose or television stories (e.g., van den Broek, Lorch and Thurlow 1989). Finally, the finding that enjoyment of the play was negatively related to the number of central scenes recalled may reflect children's reactions to the "amount of invested mental effort" required by this non-linear play (Salomon 1981).

Contrary to the director's expectation, children did not recall the scene that the director considered to be the most highly emotional turning point in the play: when Zacharias, alone with the big box, recognizes his selfish behavior, sits down and cries. As the actor who played Zacharias suggested, perhaps children would rather try to forget extremely sad moments in plays. Likewise, it may have been because there was little or no physical movement at this moment to hold children's attention.

Dramatic actions, or what characters did to one another visually on stage, were recounted far more frequently (47%) than what characters said through their dialogue (13%). Even the boxes, as scenic spectacle, were attributed with salient, anthropomorphic actions. In a French study (Deldime and Pigeon 1989) which asked children to recall a very different production of this same play, aspects which were integrated into the action or linked to characters were also recalled most frequently (e.g.,

the two monumental boxes; the drum; Zacharias' use of "fantastomatic"; Pepper's crowing; the airplane sound coming from Pepper's box).

These critical findings in theatre studies support the same results found in television studies. As noted by Gibbons and her colleagues (1986, 1015), "Visual superiority may actually be action superiority," largely because drama is rooted in the visual representation of human action and behavior. In addition, what characters do concretely on stage actually serves to enhance and reinforce verbal information in delayed recall. For example, the characters' actions and gestures toward offstage left appear to have reinforced their use of the word "truck," which in turn may have increased children's recall about the Drum Major's implicit truck. Thus, attention to visual cues may increase attention to verbal cues and lead to better integration and sequencing of central actions.

As expected, these first graders tended not to describe characters' internal thought processes. In free recall alone, what characters did received far more attention (66%) than what they said (22%) or how they thought (12%) (see Table 2c). How characters behaved physically or verbally, what they wanted (motives), how they related, thought, felt, looked, or spok were described much less frequently (1% to 7%). Characters' appearances were not described, perhaps because children had the character dolls in front of them. All children correctly identified the three characters.

Though not asked to give reasons for characters' choices, at most, 10 children spontaneously inferred characters' motives--an expectancy for fourth to sixth graders. Those who inferred Zacharias' motives tended to infer sharing as a major thematic action of the play. This finding lends support to Scheibe, et al. (1989) who found that 4-year-olds are capable of inferring motives, and that the ability to draw inferences about motives and moral lessons in stories increases with age.

Main Ideas or Themes

Almost three-quarters (74%) of the children recognized friendship as the play's theme when asked to choose from three orally described photographs, but only 40% inferred this same theme spontaneously. Thus, children's ability to recognize central ideas in plays appears to be dependent upon the task or question asked of them. Visual prompts and limited verbalized choices may help young children to infer central ideas in audio-visual events, such as theatre or television, because they provide a closer match between information processing modality and recall (cf. White and Pollack 1985). The fact that those who chose the perspective or fighting photo as the "biggest" main idea also chose the friendship photo as the "littlest" main idea suggests that children may have interpreted the "littlest" main idea as the second most important theme, rather than the lowest ranking as was intended by the question.

Visualized character actions play a critical role in inference-making endeavors, supporting the notion that "Plays

teach because an idea is embodied in an action" (Davis and Evans 1987, 114). This finding holds true for this study and the previous two (Klein 1987; Klein and Fitch 1989). As shown in Table 6, first, third, and fifth graders all tended to rely on visual cues, primarily characters' dramatic actions, when inferring the main ideas of their respective plays (Noodle Doodle Box, Monkey, Monkey, and Don Quixote of La Mancha).

Table 6

Percentages of Total Modal Bases Used for Main Idea Across Three Studies

Modal Bases	1st/NDB	3rd/MM	5th/DQ
Visual Cues	51	43	47
(characters' actions)	(39)	(33)	(44)
Verbal/Aural Cues	15	13	16
(characters' dialogue)	(4)	(9)	(16)
Psychological Cues	23	29	31
(characters' motives)	(3)	(9)	(6)
Children's General Knowledge	11	13	6
[Didn't Know Main Idea	11	20	22]

There was no significant correlation between what children reported learning and their main idea inferences. One reason for the absence of this finding may be due to children who inferred friendship as a main idea and said they learned nothing from the play--perhaps because they already knew these ideas about friendship. Moreover, of the 18 children who reported learning about friendship 7 of them simply repeated their main idea

inferences about friendship. In other words, 11 children reported learning something about friendship, but they did not (or could not) infer this concept spontaneously as a main idea. These results indicate the importance of phrasing questions in multiple ways in order for children to report and verbalize their understanding of plays' themes more fairly.

It appears that the play may have reinforced sex-typed, prosocial ideas regarding the theme of friendship, given the unexpected sex differences in processing main ideas. Girls focused on emotional feelings and the fact that boys (i.e., Zacharias) should be friends rather than fight, as they are wont to do. This finding lends support to Lewis's observations (1987, 48) based on Gilligan's work (1982) that girls may view the moral dilemmas in plays as caring, subjective "actors," while boys perceive actions as objective observers or "lawyers" seeking justice. In other words, girls may have identified and empathized with Pepper's hurt feelings in the face of Zacharias' abusive mistreatment of her. More than changing children's social and moral attitudes and beliefs about human behavior, plays may simply reinforce what children already know and have learned about male and female relationships based, in part, on the genders of audience members and performers alike. Whether or not plays can alter children's subsequent behavior prosocially remains highly speculative and nearly impossible to prove conclusively on the basis of one hour-long play.

Recognizing Characters' Emotions

Cognitive research has shown that children's recognition of characters' emotions and their empathy with characters' feelings are not synonymous (e.g., Strayer 1989), though theatre producers would like to believe that such a transfer of learning takes place given children's natural, dramatic inclination to role-play. Likewise, viewers and actors do not always agree on the labels for portrayed emotions. Even when prompted with specific, static, emotional moments in time, it may be difficult, for children and adults alike, to label emotions when feelings are blended or when they change radically in milliseconds over a given period of time. Emotions recalled may be those that last longest as a function of memory.

These results also confirm that young children have difficulty discriminating among the negative emotions of surprise, sadness, anger, and fear. The findings are consistent with the conceptual analysis proposed by Stein and Jewett (1986). According to their dimensions (Table 9.1, 248), children label characters' emotions as anger or sadness on the basis of whether they focus on the cause (anger) or consequence (sadness) of the precipitating event. Children may have inferred sadness as Zacharias' predominant emotional state because he lost his best friend and faced abandonment as a consequence of his selfishness over the big box. In labeling his reaction to his missing box, some children (47%) focused on the consequential loss of his highly valued box and labeled him as feeling sad, while the

majority (66%) attended to the cause of his anger: someone stole his box.

Likewise, many children (66%) may have labeled Pepper's emotion as anger, caused by Zacharias' trickery and his obstruction of her goal to squirt him in return. Children's reasoning behind Pepper's sadness (79%) is more troublesome to explain. Perhaps they focused, like Pepper, on the implied consequences of Zacharias' actions, interpreting his water trick as a sign of abandoning her as a valued friend. This interpretation could be supported by the dialogue immediately following this event: Pepper says, "You're mean, really mean. I'm through being your friend" (15). Not to be outdone, Pepper chooses to threaten abandonment first as a blend of both anger and sadness.

The actor also reported feeling fear during his two situations, but few children labeled his emotion as scared. According to Stein and Jewett's dimensions for fear, this may have been because Zacharias showed little anticipation of physical or psychological harm, nor could he anticipate or prevent his box from being stolen. Although Zacharias was left alone on stage for a long period of time, children may have expected that Pepper would eventually return to end his loneliness, unlike Zacharias' fears.

The actress and actor reported feeling extremely surprised, respectively, when having her face squirted and when discovering his box was missing, yet few children (11% and 37%) chose this

emotion for these two moments in the play. Surprise may be a more challenging emotion for children to label because they must attend to both the causes and consequences of the emotion (Thompson 1989, 124, 142-43). While young children are able to identify causal agents in simple situations, making inferences about those causes is more challenging than simply identifying the consequences (cf., Scheibe, et al. 1989). Perhaps this explains why 12 of the 18 children who chose surprise for either Pepper's or Zacharias' situations also chose anger (causal-dependent, according to Klein and Jewett).

In contrast to the previous two studies, children (18%) cited facial expressions as visual cues to determine characters' emotions. This may be due to the fact that children in this study sat closer to the stage action than children in the previous studies--a physical difference of about 5 to 10 feet. In effect, they could see facial details more clearly, and they may have had to rely less on other situational cues to determine emotional states. However, even first graders are aware of emotional display rules, and most children may not have chosen to rely on facial expressions anyway (e.g., Camras 1986).

Comparing Theatre and Television

Children's preferences for theatre (71%) over television (16%) corroborate the 78% and 22% figures found in the previous studies (Klein 1987; Klein and Fitch 1989). However, unlike the responses of older children in these studies, first graders' preferential reasons indicate their lack of knowledge about the

conventions of theatre and its contrasts with television; perhaps, in part, because this may have been their first attendance to theatre or to this specific auditorium in particular. Nevertheless, their concrete reasons for media preferences are consistent with their preferential choices.

Children's propensity for attending to concrete visual cues shows up in their reasons for preferring theatre over television. Attention to these visual features may stem from the fact that these children sat in the first two or three rows of the center front orchestra nearest the stage action--the "best" seats in the house. However, for the most part, these first graders were unable to compare the media conventions of theatre and television directly. Rather, they focused on going to the theatre and the environment of the auditorium context, and only one-fifth recognized the live values of theatre. In particular, girls responded to theatre's emotional qualities. Whether or not girls, more than boys, prefer theatre for these emotional reasons remains for further investigation (cf., Ingersoll and Kase 1969).

Methodological Implications

Free recall is an indispensible way to collect the richest data set regarding children's overall comprehension of a staged play. Because information processing is modality specific (Calvert, Huston and Wright 1987), the results from these interviews confirm the critical importance of providing visual prompts for recalling audio-visual events. This study also lends support to Gibbons, et al. (1986), who found that children who

"reconstruct" audio-visual stories using props (or toys) show more elaborate free recall than those who simply recall the story verbally without such visual prompts. Using dolls and objects in dramatic play simulates characters' dramatic actions on stage as a closer modality match while assisting aural and visual cue retrieval during mnemonic cognitive processing.

Because children are learning how to make more abstract inferences as they mature, providing limited multiple-choice items for particular inference questions increases the probability of measuring children's real knowledge about plays. Choosing a play's main idea in a visually prompted and orally labeled recognition task is an easier cognitive task than having to infer this global, abstract concept in cued recall. Though theatre producers often assume that children will grasp intended conceptual messages, interview techniques such as these can assist in testing these assumptions.

Following inference probes with the question "How do you know?" challenges children's metacognitive abilities and reveals the modal cues used from the theatrical event to make such inferences. Theatre directors can determine which particular cues were most effective in communicating intended messages from the staged event to inform their conceptual approaches in future productions.

To gather the richest data possible, it is best to interview children individually rather than in small groups where lack of

focus and discipline problems can interfere with children's responses (Saldaña 1987, 14; first grade transcripts 1988).

Applications for Children's Theatre Directors

When selecting plays to produce, directors should choose scripts in which the dialogue involves characters in direct, concrete actions, rather than static conversations which "preach" abstract concepts about life. When dialogue involves offstage or abstract information, visual ways must be found to integrate the stage action with salient movement that is related directly to the spine of the play and does not distract for the sake of physical movement. Actors' gestures or pantomimes of offstage characters, objects, and events can reinforce critical verbal information and assist children in encoding important textual content. Because young children tend to focus on visualized consequences more than inferring the causes and motivations behind characters' actions, directors, actors, and designers should explore ways to visualize such internal, psychological objectives. By supplying additional visual cues which strengthen dialogue and textual information, directors can promote children's inferential cognitive processing of plays in performance.

Though many directors assume that children will grasp abstract notions of morality, justice, and other social and human values by virtue of attending theatre, such speculative assumptions are unfounded until producers speak directly with audiences afterward in one-on-one interviews. Directors'

intended concepts are not always commensurate with what is actually communicated in the auditorium. Young audiences may be viewing plays from their subjective experiences and information not known to the character at particular moments, rather than from the actor's psychological, moment-to-moment perspective and intended emotions. If directors intend audiences to recognize emotions "accurately," then perhaps they need to direct from both the actors' and child audience's point of view simultaneously.

The methods outlined in this report can assist directors in understanding children's ideas about plays. Analyzing children's transcripts from interviews is much like a director's analysis of any play text. Language, grammar, and word choices provide clues and insights into children's imaginations and comprehension. In turn, children's responses can serve as a "test" of a director's artistic intentions and communicative efforts, especially when standards of performance criticism are lacking (Klein 1989). At the same time, such data can serve as an evaluative tool for theatre companies whose audiences come to them from local school districts desiring accountability.

Theatre companies often take on the responsibility of educating their audiences before performances through the use of teacher study guides and other means. Here, teachers may be provided with a valuable list of discussion questions (some of which are provided in this study) to prepare students for the theatre event they are about to experience.

Applications for Elementary Teachers

In many ways, the interview process detailed in this report served as an educational follow-up to children's theatre experience. Unfortunately, not all children receive the opportunity to evaluate and reflect upon the plays they have seen, largely because drama and theatre are not included in every school's curricula. The ability to draw inferences and make analogies between characters' situations and one's own life is particularly crucial in recognizing how theatre reflects the human condition of our lives. Therefore, elementary classroom teachers are urged to discuss plays with their students before and/or after theatre attendance as an integral part of language arts curricula. Alerting children to the conventional differences between theatre and television will also help them to appreciate the live values of theatre. The following questions, with no "right" or "wrong" answers, are suggested as guidelines. Each question may be followed by asking "How do you know?" to help children realize and attend to critical theatre cues presented in the aged production:

1. What happened in the play in the beginning, middle, and end?
2. What was the problem (conflict) in the play, and how did the characters try to solve it?
3. What did each character want to do? Why did s/he want to do it? How did s/he get (or not get) what s/he wanted?

4. What did the protagonist(s) and antagonist(s) learn at the end of the play?

5. What is the main idea of the play? or What did you learn from the play? Did you already know this before the play?

6. How were the characters and situations like people and experiences you know in real life?

7. How did the characters make you feel? What made you feel that way?

Future Research

This study completes a line of research which has explored children's comprehension or "dramatic literacy" of plays in performance and the modal sources for their inferences through recall by interviewing three grade levels (1st, 3rd, and 5th) on three separate productions (Noodle Doodle Box, Monkey, Monkey, Don Quixote of La Mancha). Through repeated descriptive studies of various plays in production with local audiences, theatre researchers may discover the underlying critical variables which influence children's comprehension of theatre. However, the need for a cognitive developmental theory regarding how children perceive, comprehend, and recall plays in performance still remains for future research. To this end, studies need to be designed that interview three age groups after seeing the same theatre production. From such a collection of studies, directors may then stage productions which better meet children's

developmental levels and enhance their aesthetic appreciation of theatre.

While this research has focused primarily on the dramatic content of plays in performance, future research needs to be conducted on children's understanding of theatrical form or the conventions involved in acting, staging, design, and technical areas. For example, what sense do children make of actors who play several characters by the mere switch of a costume and changes in physical and vocal behaviors? How do children interpret moods and changes in lighting and scenic arrangements? How do non-traditional, avant-garde forms of theatre affect their story schemas for linear plot structures? Why are children's reactions to theatre productions more focused on stage "tricks of the trade" and comparisons between the stage life of characters and the real life of actors than on dramatic content? What are the dimensions of children's fantasy/reality discriminations between fictive theatre worlds and real life?

Another area to be explored involves the emotional responses of theatre audiences. Rosenblatt (1984, 12) defines "theatrical sensibility," in part, by the capability "of being readily touched and deeply moved by a performance." "Emotional competence," as defined by Saarni (1989), or the ability to empathize and identify with characters in human situations remains an elusive and complex area for theatre research. As cognitive psychologists advance more detailed theories about the role of emotions in children's lives, theatre researchers may

draw upon this wealth of information to help determine the emotional effect and long-lasting value of theatre on child audiences. For example, Strayer (1989) has proposed a cognitive-affective continuum for empathy which measures the quantitative and qualitative relationship between children's cognitive recognition of characters' emotions and their affective responses to characters and situations. This continuum may assist in determining levels of empathy and character identification and which specific factors in productions evoke the greatest degree of emotional responses. Such an instrument would also help to clarify the theoretical debate among theatre educators regarding the role and emotional transferance from theatre to life.

Theatre research based on cognitive developmental knowledge and methods continues to inform practical artistic choices made in playwriting, directing, acting, and designing for children's theatre. In this way, the child audiences of today may be the more enriched adult audiences of tomorrow.

References

Anderson, Daniel R., Linda F. Alwitt, Elizabeth P. Lorch, and Stephen R. Levin. 1979. "Watching Children Watch Television." Attention and the Development of Cognitive Skills. Eds. Gordon A. Hale and Michael Lewis. NY: Plenum. 331-361.

Banker, Gail S., and Laurene K. Meringoff. 1982. "Without Words: The Meaning Children Derive from a Non-Verbal Film Story." Tech Rept. Harvard Project Zero, Harvard U. ERIC #ED 224 037.

Beagles-Roos, Jessica, and Isabelle Gat. 1983. "Specific Impact of Radio and Television on Children's Story Comprehension." Journal of Educational Psychology 75: 128-137.

Berghammer, Gretta. 1983. "An Analysis and Production Book of Mary Melwood's Tinqalary Bird." M.F.A. thesis. U of Texas at Austin.

Berndt, Thomas J. 1983. "Children's Conceptions of Friendships." Social Cognition and Social Development. Eds. Higgins, Ruble, and Hartup. Cambridge: Cambridge UP. 158-189.

Brody, Leslie R., and Robert H. Harrison. 1987. "Developmental Changes in Children's Abilities to Match and Label Emotionally Laden Situations." Motivation and Emotion 11.4: 347-365.

Brown, Laurene K. 1986. Taking Advantage of Media: A Manual for Parents and Teachers. Boston: Routledge & Kegan Paul.

Calvert, Sandra L., Aletha C. Huston, and John C. Wright. 1987. "Effects of Television Preplay Formats on Children's Attention and Story Comprehension." Journal of Applied Developmental Psychology 8: 329-342.

Camras, Linda A. 1986. "Judgments of Emotion from Facial Expression and Situational Context." Measuring Emotions in Infants and Children. Eds. Carroll E. Izard and Peter B. Read. Vol. II. Cambridge: Cambridge UP. 75-89.

Collins, Patrick A. 1985. "Toward Dramatic Literacy: A Position Paper." Children's Theatre Review 34.4: 3-6.

Collins, W. Andrew. 1983. "Interpretation and Inference in Children's Television Viewing." Children's Understanding of Television: Research on Attention and Comprehension. Eds. Jennings Bryant and Daniel R. Anderson. NY: Academic. 125-150.

Davis, Jed H. 1961. "Prospectus for Research in Children's Theatre." Educational Theatre Journal 13: 274-77.

Davis, Jed H., and Mary Jane Evans. 1987. Theatre, Children and Youth. New Orleans, LA: Anchorage Press.

Deldime, Roger, and Jeanne Pigeon. 1989. "The Memory of the Young Audience." Trans. Robert Anderson. Youth Theatre Journal 4.2: 3-8.

Donaldson, Sally K., and Michael A. Westerman. 1986. "Development of Children's Understanding of Ambivalence and Causal Theories of Emotion." Developmental Psychology 22.5: 655-662.

Dorr, Aimee. 1985. "Contexts for Experience with Emotion, with Special Attention to Television." The Socialization of Emotions. Eds. Michael Lewis and Carolyn Saarni. NY: Plenum. 55-85.

Esslin, Martin. 1987. The Field of Drama: How the Signs of Drama Create Meaning on Stage and Screen. NY: Methuen.

Gibbons, Jane, Daniel R. Anderson, Robin Smith, Diane E. Field, and Catherine Fischer. 1986. "Young Children's Recall and Reconstruction of Audio and Audiovisual Narratives." Child Development 57: 1014-1023.

Gilligan, Carol. 1982. In a Different Voice. Cambridge: Harvard UP.

Gnepp, Jackie, Eileen McKee, and Jodi A. Domanic. 1987. "Children's Use of Situational Information to Infer Emotion: Understanding Emotionally Equivocal Situations." Developmental Psychology 23.1: 114-123.

Goldberg, Patricia D. 1983. "Development of a Category System for the Analysis of the Response of the Young Theatre Audience." Children's Theatre Review 32.2: 27-32.

Harrigan, Jinni A. 1984. "The Effects of Task Order on Children's Identification of Facial Expressions." Motivation and Emotion 8.2: 157-169.

Harris, Paul L. 1989. Children and Emotion. NY: Basil Blackwell.

Hodge, Francis. 1982. Play Directing: Analysis, Communication, and Style. 2nd ed. Englewood Cliffs, NJ: Prentice-Hall.

Ingersoll, Richard L., and Judith B. Kase. 1969. "Effects of Others on the Enjoyment of Live Theatre: A Study of Fourth and Fifth Grade Children." New England Theatre 1.1: 38-44.

Kase, Judith B., Sue M. Sikes, and Charles D. Spielberger. 1978. "Emotional Reactions to Frightening and Neutral Scenes in Story Theatre." Communication Monographs 45: 181-186.

Klein, Jeanne M. 1987. "Children's Processing of Theatre as a Function of Verbal and Visual Recall." Youth Theatre Journal 2.1: 9-13; and, Fifth Grade Children's Processing of Explicit and Implied Features of Live Theatre as a Function of Verbal and Visual Recall. Diss. U of Kansas. Ann Arbor: UMI. 8813419.

Klein, Jeanne, and Marguerite Fitch. 1989. "Third Grade Children's Verbal and Visual Recall of Monkey, Monkey." Youth Theatre Journal 4.2: 9-15; and, "Third Grade Children's Comprehension of Monkey, Monkey as a Function of Verbal and Visual Recall." Lawrence, KS: U of Kansas. (Submitted to ERIC March, 1989.)

Klein, Jeanne. 1989. "Testing Children's Comprehension of Theatre." Paper presented at the International Drama Education Research Symposium, Toronto, May 1989.

Kowzan, Tadeusz. 1968. "The Sign in the Theatre." Diogenes. 61, Spring.

Landy, Robert L. 1977. "Measuring Audience Response to Characters and Scenes in Theatre for Children." Children's Theatre Review 26.3: 10-13.

Langer, Susanne K. 1953. Feeling and Form. NY: Scribner.

Levy, Jonathan. 1987. A Theatre of the Imagination. Rowayton, CT: New Plays.

Mandler, Jean Matter. 1984. Stories, Scripts, and Scenes: Aspects of Schema Theory. Hillsdale, NJ: Lawrence Erlbaum.

Maar, Paul. 1979. Noodle Doodle Box. Trans. and adapt. Anita and Alex Page. Boston, MA: Baker's Plays.

Meerum Terwogt, Mark, Willem Koops, Tonnus Oosterhoff, and Tjeert Olthof. 1986. "Development in Processing of Multiple Emotional Situations." Journal of General Psychology 113.2: 109-119.

Meringoff, Laurene K. 1980. "Influence of the Medium on Children's Story Apprehension." Journal of Educational Psychology 72: 240-49.

Meringoff, Laurene K., Martha M. Vibbert, Cynthia A. Char, David E. Fernie, Gail S. Banker, and Howard Gardner. 1983. "How is Children's Learning from Television Distinctive?: Exploiting the Medium Methodologically." Children's Understanding of Television: Research on Attention and Comprehension. Eds. Jennings Bryant and Daniel R. Anderson. NY: Academic. 151-179.

National Endowment for the Arts. 1988. Toward Civilization: A Report on Arts Education. Washington, D.C.: U. S. Government Printing Office.

National Theatre Education Project. 1987. A Model Drama/Theatre Curriculum: Philosophy, Goals and Objectives. New Orleans, LA: Anchorage Press.

Noodle Doodle Box. By Paul Maar. Dir. Jeanne Klein. University of Kansas Theatre for Young People, Lawrence. 30 Jan. to 4 Feb. 1989.

Rosenblatt, Bernard S. 1984. "A Theory for Curriculum for Theatre Education at the Elementary Grades." Children's Theatre Review 33.2: 11-15.

Saarni, Carolyn. 1989. "Emotional Competence: How Emotions and Relationships Become Integrated." Socioemotional Development: Nebraska Symposium on Motivation. Vol. 36. Ed. R. Thompson.

Saldaña, Johnny. 1987. "Statistical Results in Progress for the Theatre for Children Component of the ASU Longitudinal Study." Youth Theatre Journal 2.2: 14-27; and, "First Grade Transcripts of ASU Longitudinal Study." Personal communication, 1988.

Saldaña, Johnny. 1989. "A Quantitative Analysis of Children's Responses to Theatre from Probing Questions: A Pilot Study." Youth Theatre Journal 3.4: 7-17.

Salomon, Gavriel. 1981. "Introducing AIME: The Assessment of Children's Mental Involvement with Television." Viewing Children Through Television. Eds. Howard Gardner and Kelly Hope. San Francisco, CA: Jossey-Bass.

Salomon, Gavriel, and Tamar Leigh. 1984. "Predisposition about Learning from Print and Television." Journal of Communication Spring: 119-135.

Scheibe, Cynthia L., Maria Dell'Era, Danielle Duca, and Emily Klein. 1989. "Developmental Differences in Children's Understanding of Motives and Moral Lessons in TV Programs."

Paper presented to the Society for Research in Child Development Bienniel Conference, Kansas City, April 1989.

Shantz, Carolyn Uhlinger. 1983. "Social Cognition." Handbook of Child Psychology. Vol. III. Cognitive Development. Eds. John H. Flavell and Ellen M. Markman. NY: Wiley. 495-555.

Stein, Nancy L., and C. G. Glenn. 1979. "An Analysis of Story Comprehension in Elementary School Children." New Directions in Discourse Processing. Vol. 2. Ed. R. O. Freedle. Hillsdale, NJ: Lawrence Erlbaum. 53-120.

Stein, Nancy L., and Janet L. Jewett. 1986. "A Conceptual Analysis of the Meaning of Negative Emotions: Implications for a Theory of Development." Measuring Emotions in Infants and Children. Eds. Carroll E. Izard and Peter B. Read. Vol. II. Cambridge: Cambridge UP. 238-267.

Strayer, Janet. 1989. "What Children Know and Feel in Response to Witnessing Affective Events." Children's Understanding of Emotions. Eds. Carolyn Saarni and Paul L. Harris. Cambridge: Cambridge UP. 259-289.

Thompson, Ross A. 1989. "Causal Attributions and Children's Emotional Understanding." Children's Understanding of Emotions. Eds. Carolyn Saarni and Paul L. Harris. Cambridge: Cambridge UP. 117-150.

van den Broek, Paul, Elisabeth P. Lorch, and Richard Thurlow. 1989. "Effects of Causal Structure, Story-Grammar Categories, and Episodic Level on Children's and Adult's Memory for Television Stories." Paper presented at the Biennial Meeting of Society for Research in Child Development, Kansas City, April 1989.

Vibbert, Martha M., and Laurene K. Meringoff. 1981. "Children's Production and Applications of Story Imagery: A Cross-Medium Investigation." Tech. Rept. 23. Harvard Project Zero. Harvard U. ERIC #ED 210 682.

White, Mary A., and Janine Pollack. 1985. "Within and Across Modality Comprehension of Electronic Media in Children." International Journal of Man-Machine Studies 22: 209-214.

Wright, John C., Aletha C. Huston, Rhonda P. Ross, Sandra L. Calvert, David Rolandelli, Lee A. Weeks, Pouran Raeissi, and Richard Potts. 1984. "Pace and Continuity of Television Programs: Effects on Children's Attention and Comprehension." Developmental Psychology 20: 653-666.

Appendix 1: Noodle Doodle Box Interview

Child/Subject #:
Age: (1st grade) Sex:
School:
Date: Wednesday Thursday Friday

Introduction: (done on way to interview room)
I'm glad that you could come to see the play Noodle Doodle Box yesterday. When people see plays, they get lots of different ideas about the story and the way it was done.

May I ask you some questions about what you think about the play and have you play some games with pictures and props?
[Child Assent:] (yes) (no)

1. Did you already know the story of Noodle Doodle Box before you saw the play yesterday?
   (no)
   (yes) How did you know that story? (parent, teacher, other)

2. Do you think 1st graders in another city would like this play
   (3) a lot
   (2) a little bit (or OK), or
   (1) not at all?
   (write in volunteered information:)

3a. Was this play ( ) easy or ( ) hard to understand?
   (if both:) Was it (2) sort of easy or (3) sort of hard?

b. Was it
   (1) real easy (4) real hard
   (2) sort of easy (3) sort of hard

4. Free Story Recall: [MAXIMUM 5 MINUTES]
[Given 3 photo dolls, 2 boxes, and drum]

We're going to use these props so you can show me what happened in the play. First,
a. Show me which character is Pepper. (correct) (incorrect)

b. Which character is Zacharias? (correct) (incorrect)

c. Which character is the Drum Major? (correct) (incorrect)
[Provide answers if incorrect.]

Good. Now let's pretend you're telling the story to someone who didn't see the play yesterday. Show me and tell me what happened in the play. (What else happened? What happened after that?)

[RECORD CHILD'S PLAY WITH PROPS AND MAIN EVENTS. If child says nothing while playing with boxes, describe out loud what child is doing.]

5a. (So,) what do you think is the MAIN IDEA of the play? (What's the most important point of the play?)

5b. Do you think that's the main idea because of something you

SAW	HEARD	or FELT?
What did you see?	What did you hear?	What did you feel?

6. Main Idea Recognition/Rank [Given 3 photos of Main Idea]

Here are pictures of some other main ideas in the play that other kids thought of.

[Show 1st MI photo] This is when Zacharias and Pepper try to figure out if things look different from behind than from in front.

[Show 2nd MI photo] This is when Pepper and Zacharias argue and fight about their boxes because they are mad at each other.

[Show 3rd MI photo] This is when Zacharias and Pepper stick together by sharing one box together because they're friends.

6a. Of these three, which do you think is the BIGGEST main idea of the play?

(perspective) (fight) (friends)

[Take child's choice away.]

6b. Which do you think is the LITTLEST main idea of the play?

(perspective) (fight) (friends)

7a. Did you learn anything from the play?
(no) [Skip to 8 below]
7b. (yes) What did you learn?

7c. Did you learn that from something you

SAW	HEARD	or FELT?
What did you see?	What did you hear?	What did you feel?

8. Comprehension of Affect [Given 4 diagrammatic faces]

These are pictures of 4 different feelings that characters sometimes feel at different times in plays.

[Show sadness] What feeling is this? (Let's call this sad.)

[Show surprise] What feeling is this? (Let's call this surprise.)

[Show anger] What feeling is this? (Let's call this mad.)

[Show fear] What feeling is this? (Let's call this scared.)

8a. [Show 1st AFF photo] When Zacharias squirted water in Pepper's face, how did PEPPER feel? Show me which feeling.

(sad) (surprise) (mad) (scared)

[Show and point to Intensity poster:]

1. Did she feel
   (1) just a little bit _____
   (2) Pretty _____, or
   (3) VERY, VERY _____?

2a. How did you decide that Pepper felt (emotion/not degree)?
[If don't know, probe 2b]

2b. Was it something you

SAW	HEARD	or FELT?
What did you see?	What did you hear?	What did you feel?

3a. Sometimes people have more than one feeling. Did PEPPER feel anything else?

(no) [Skip to 8b. next page]

(yes) Show me which other feeling.

(sad) (surprise) (mad) (scared)

3b. Did she feel
   (1) just a little bit _____
   (2) Pretty _____, or
   (3) VERY, VERY _____?

8b. [Show 2nd AFF photo] When ZACHARIAS found out his box was missing, how did he feel? Show me which feeling.

(sad) (surprise) (mad) (scared)

[Point to Intensity poster:]

1. Did he feel
   (1) just a little bit _____
   (2) Pretty _____, or
   (3) VERY, VERY _____?

2a. How did you decide that Zacharias felt (emotion)?
[If don't know, probe 2b]

2b. Was it something you

SAW	HEARD	or FELT?
What did you see?	What did you hear?	What did you feel?

3a. Did ZACHARIAS feel anything else?
(no) [Skip to 8c. next page]

(yes) Show me which other feeling.

(sad) (surprise) (mad) (scared)

3b. Did he feel
(1) just a little bit _____
(2) Pretty _____, or
(3) VERY, VERY _____?

8c. [Show 3rd AFF photo] Near the end of the play, when Pepper left Zacharias with the biggest box, how did ZACHARIAS feel? Show me which feeling.

(sad) (surprise) (mad) (scared)

[Point to Intensity poster:]

1. Did he feel
   (1) just a little bit _____
   (2) Pretty _____, or
   (3) VERY, VERY _____?

2a. How did you decide that Zacharias felt (emotion)?
[If don't know, probe 2b]

2b. Was it something you

SAW	HEARD	or FELT?
What did you see?	What did you hear?	What did you feel?

3a. Did ZACHARIAS feel anything else?
(no) [Skip to 9. next page]

(yes) Show me which other feeling.

(sad) (surprise) (mad) (scared)

3b. Did he feel
(1) just a little bit _____
(2) Pretty _____, or
(3) VERY, VERY _____?

9a. Would you rather
(2) go to see Noodle Doodle Box as a play on a stage (like you did yesterday)
or
(1) watch a production of it on television at home?

9b. What's the difference?

[THEATRE]

[TV]

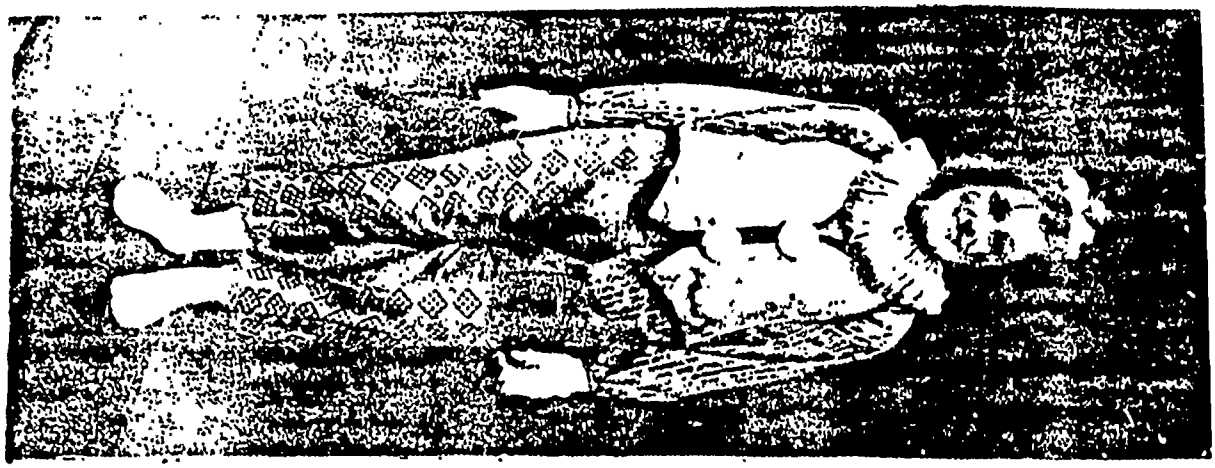
Debriefing: (stand up and start leaving)
Okay, we're done. Let's go back to your classroom now. Thank you so much for all your help. You really know a lot about this play and your ideas have really helped me a lot.

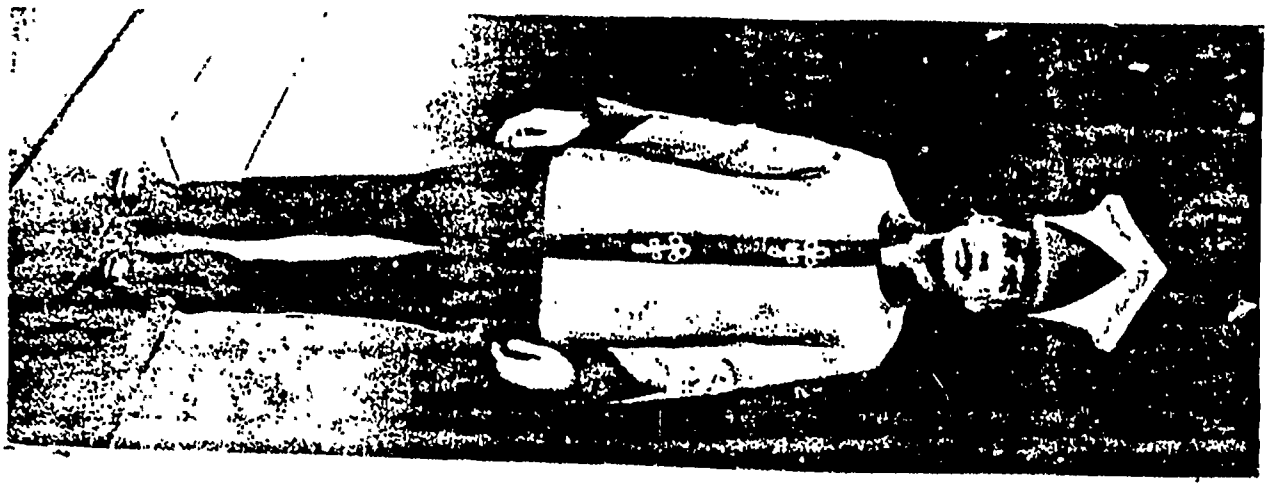
[While walking back to classroom]
10. Do you have any questions about the play?

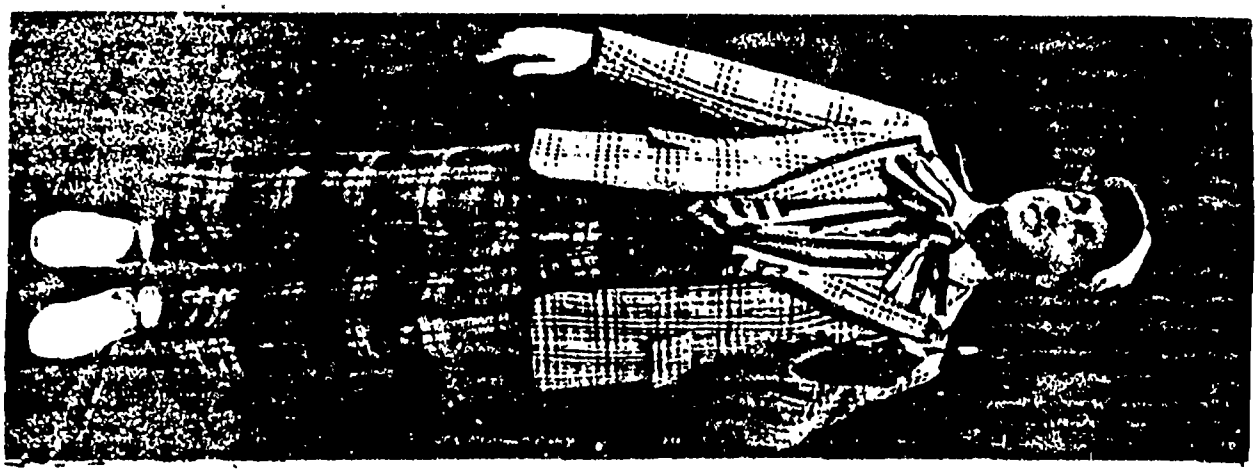
Appendix 2: Photographs and Materials Used in Interview

Props Used in Free Recall
Zacharias' box, Drum Major's drum, Pepper's box

Character Dolls Used in Free Recall: Pepper-Drum Major-Zacharias





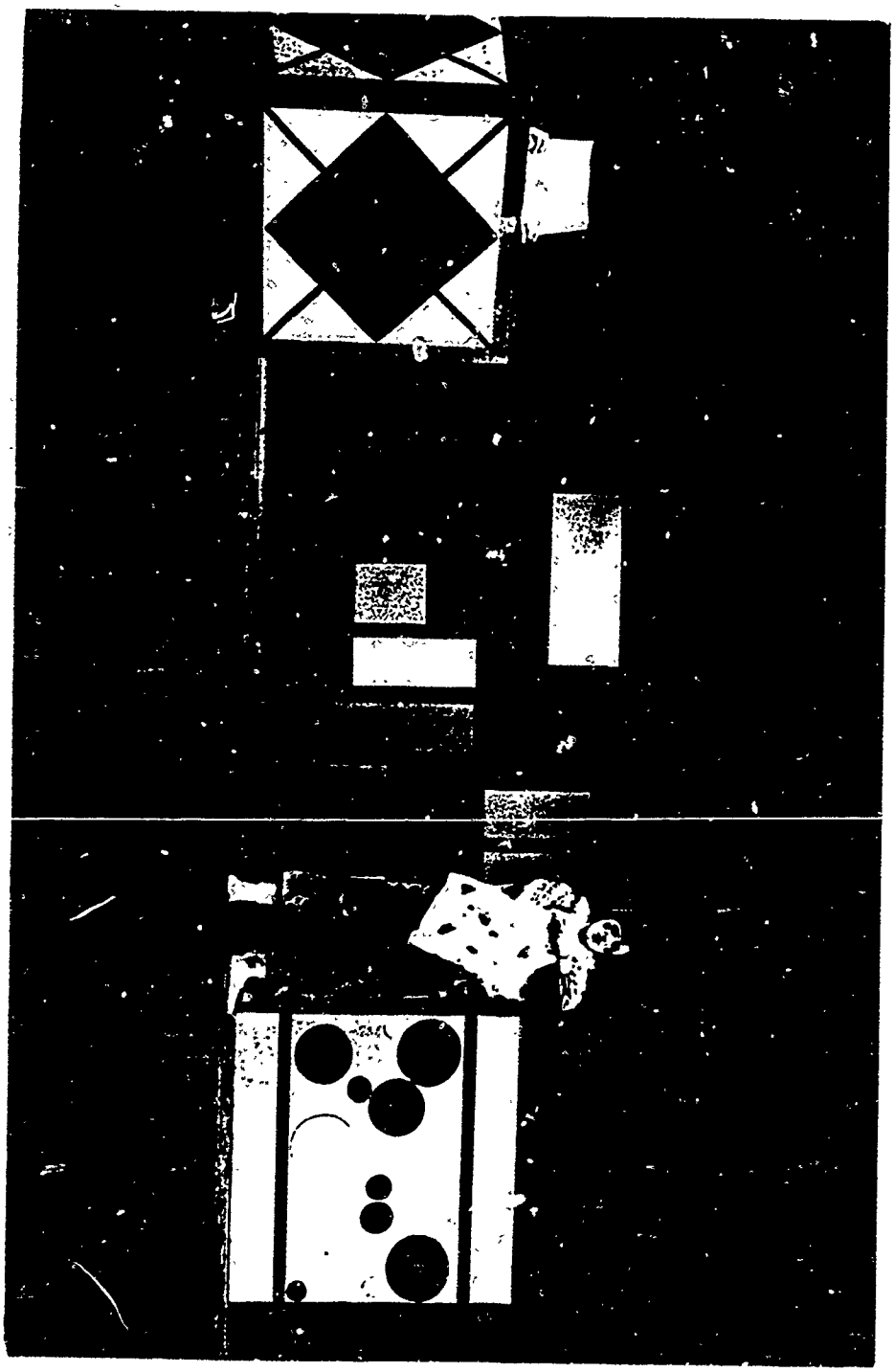


115

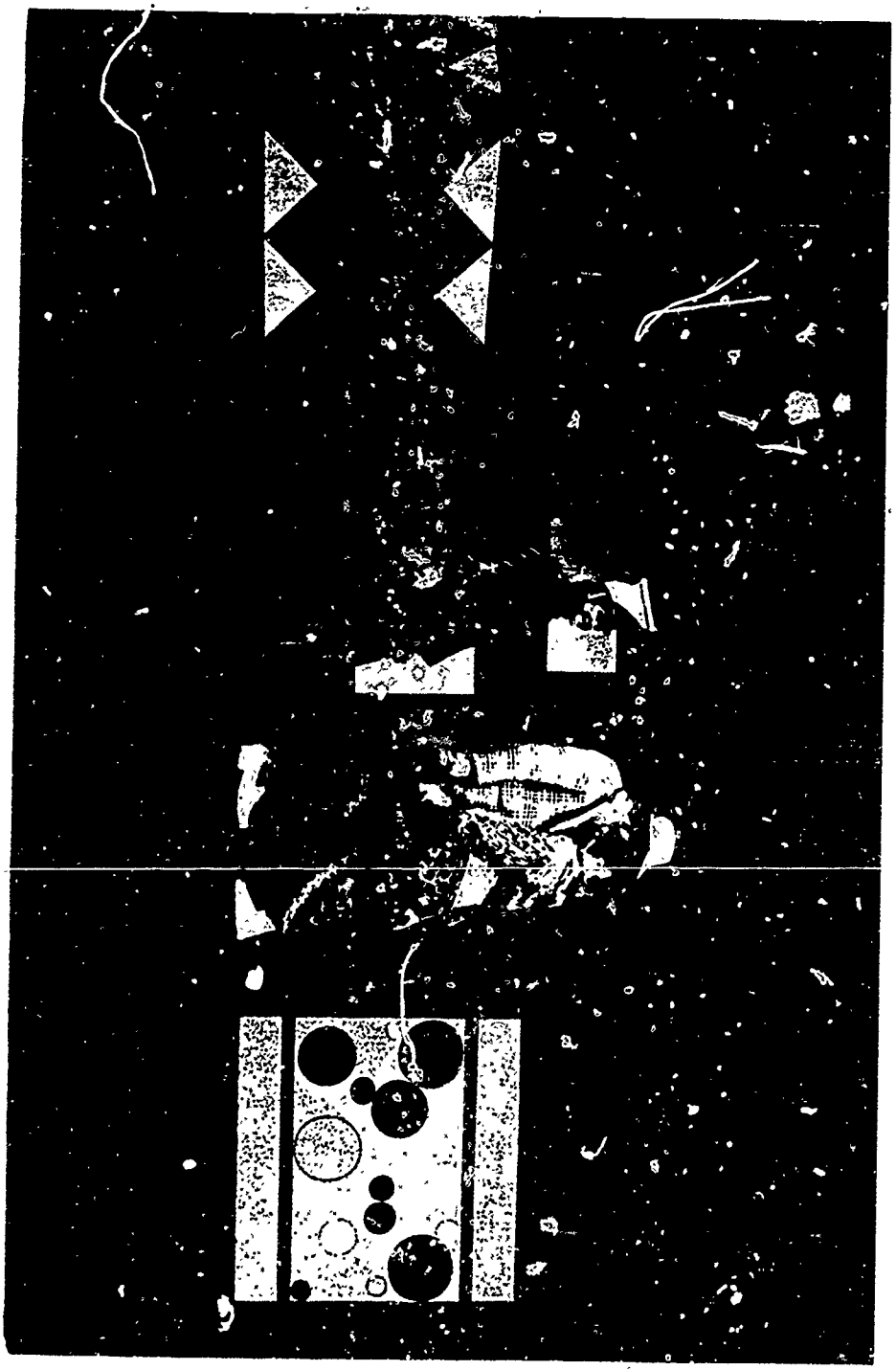
116

Photographs Used in Main Idea Recognition

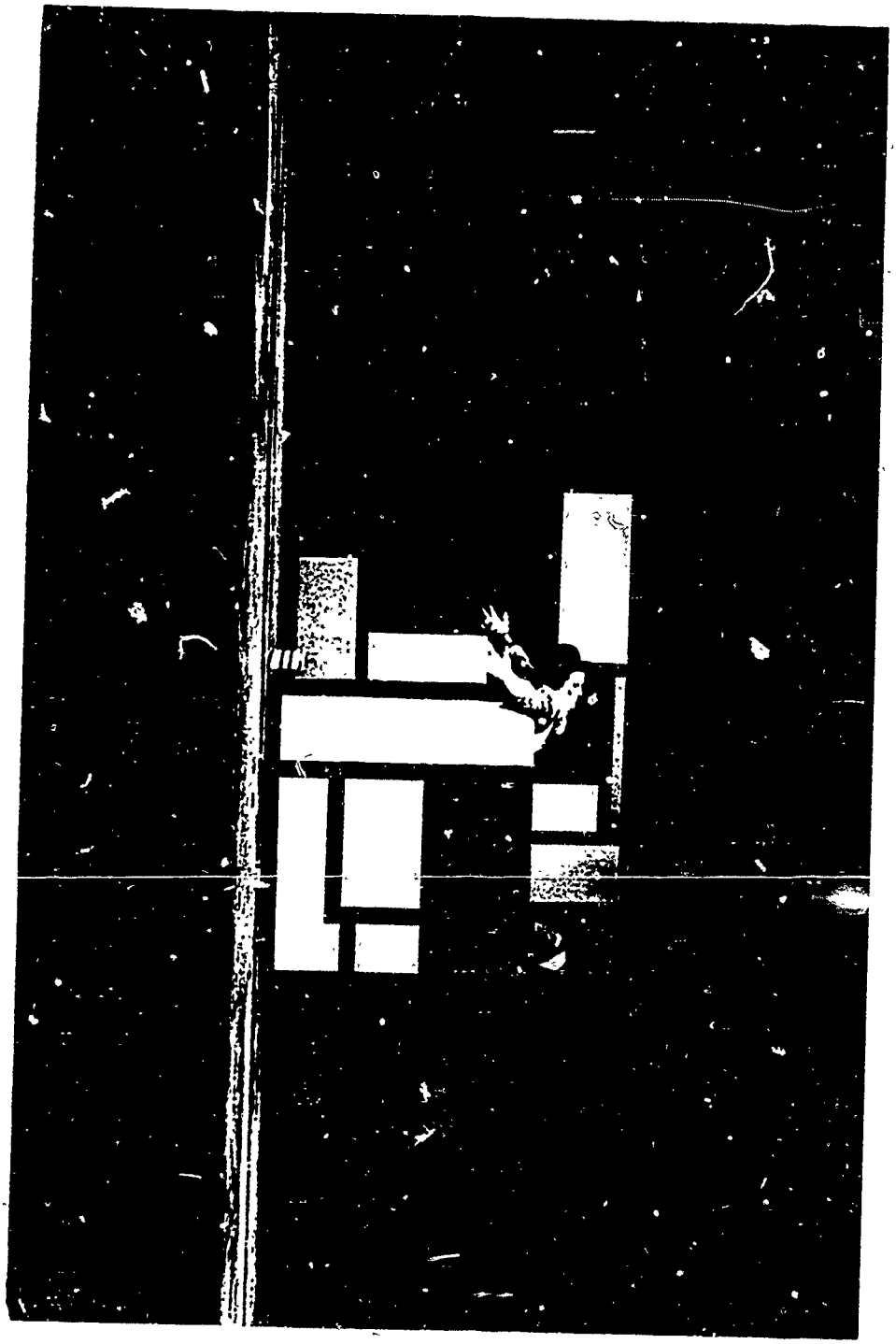
"This is when Zacharias and Pepper try to figure out if things look different from behind than from in front."



"This is when Pepper and Zacharias argue and fight about their boxes because they are mad at each other."

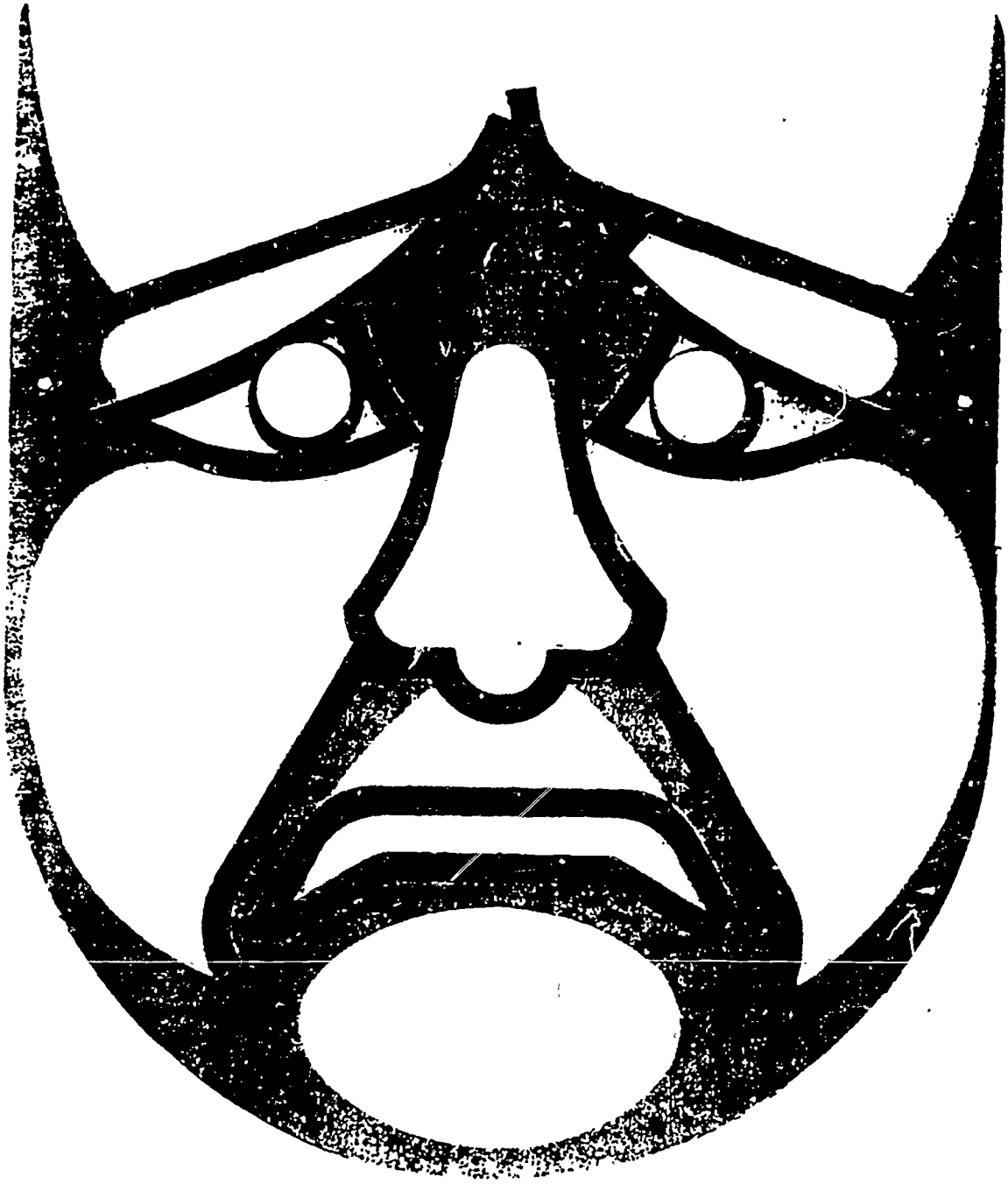


"This is when Zacharias and Pepper stick together by sharing one box together because they're friends."



Character Affect Diagrammatic Faces and Intensity Prompt

SAD



JUST A LITTLE BIT

PRETTY. 120

VERY VERY

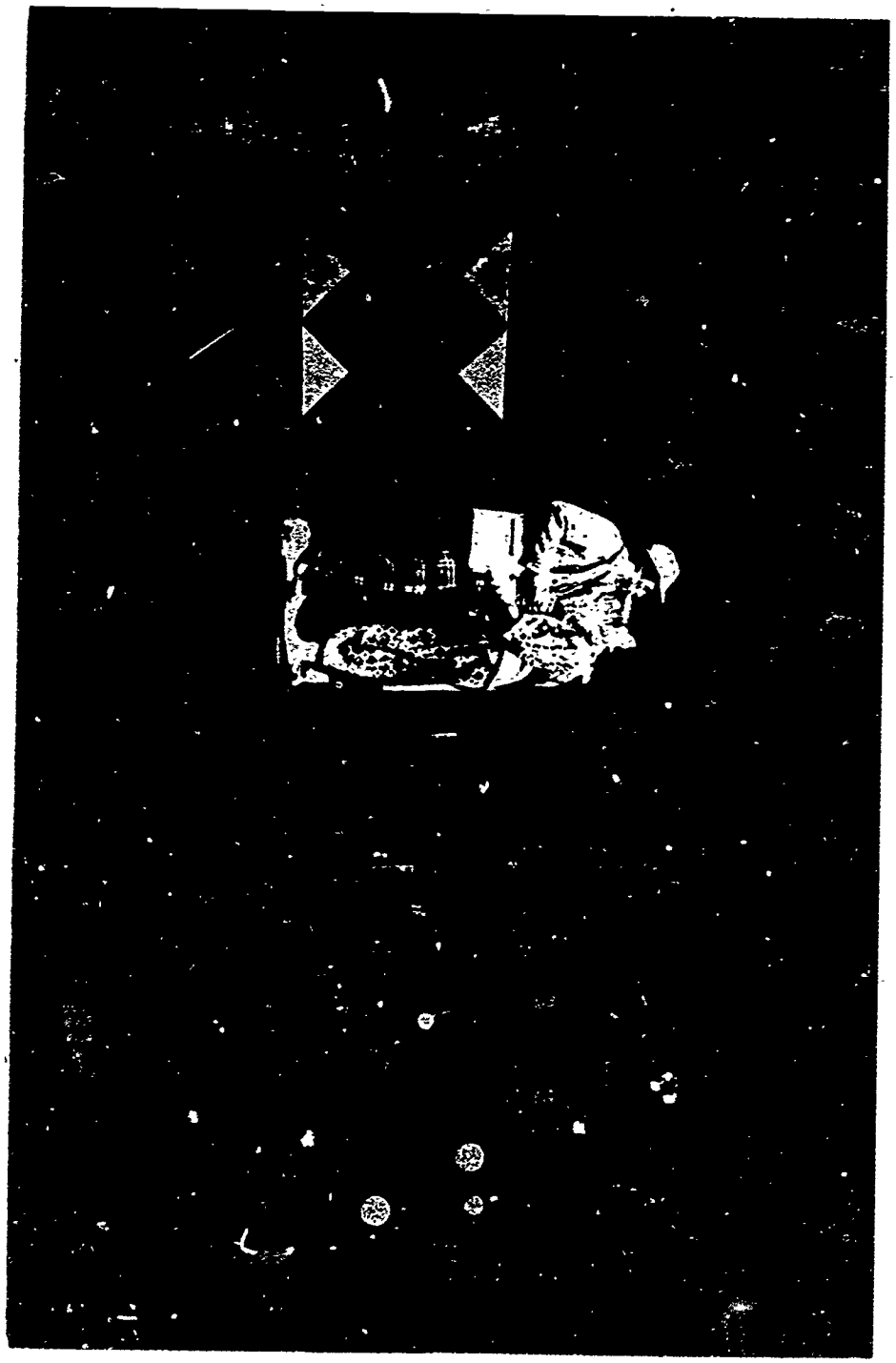
MAD

SURPRISED

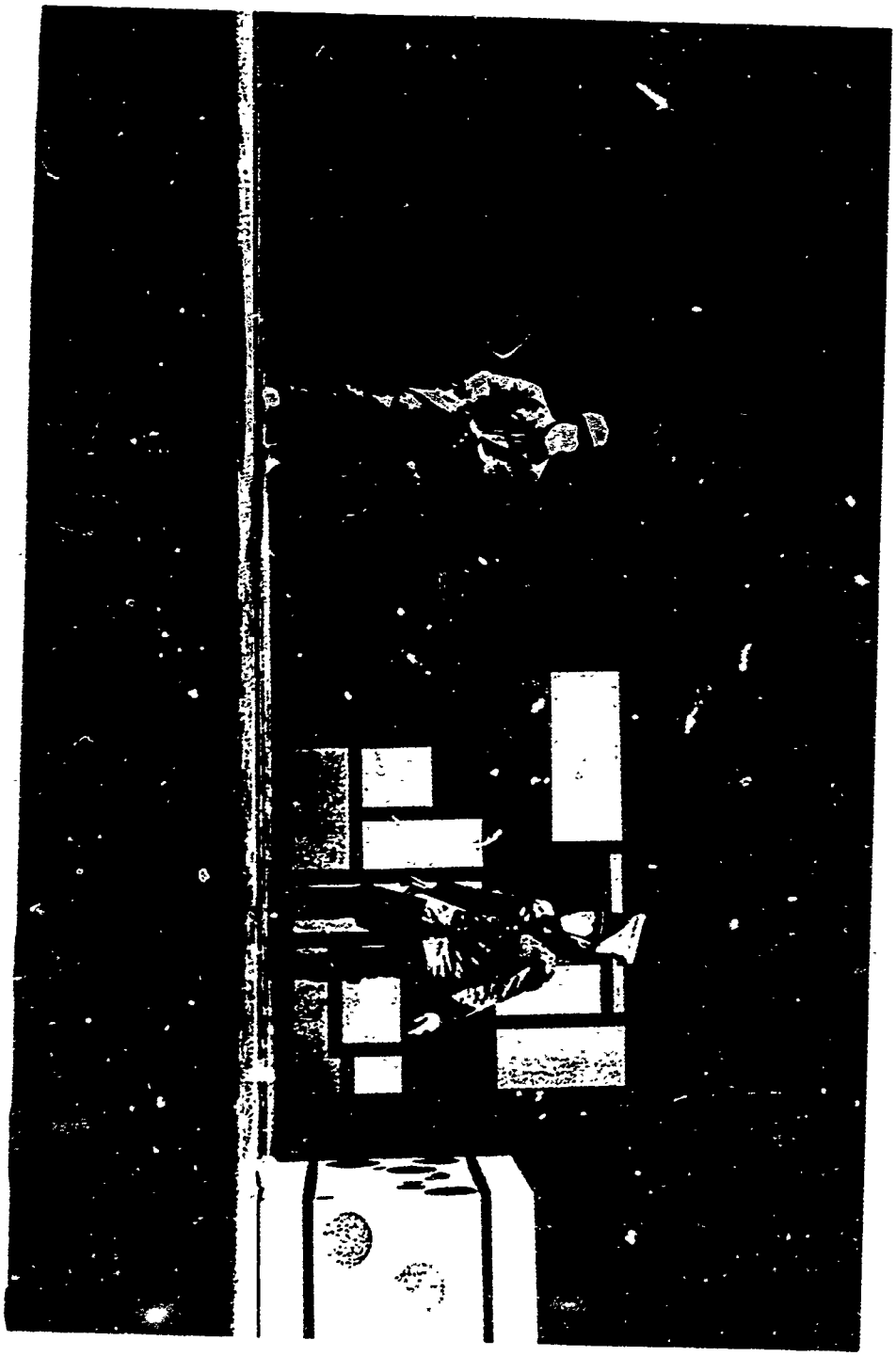
SCARED

Photographs of Three Emotional Moments in Play

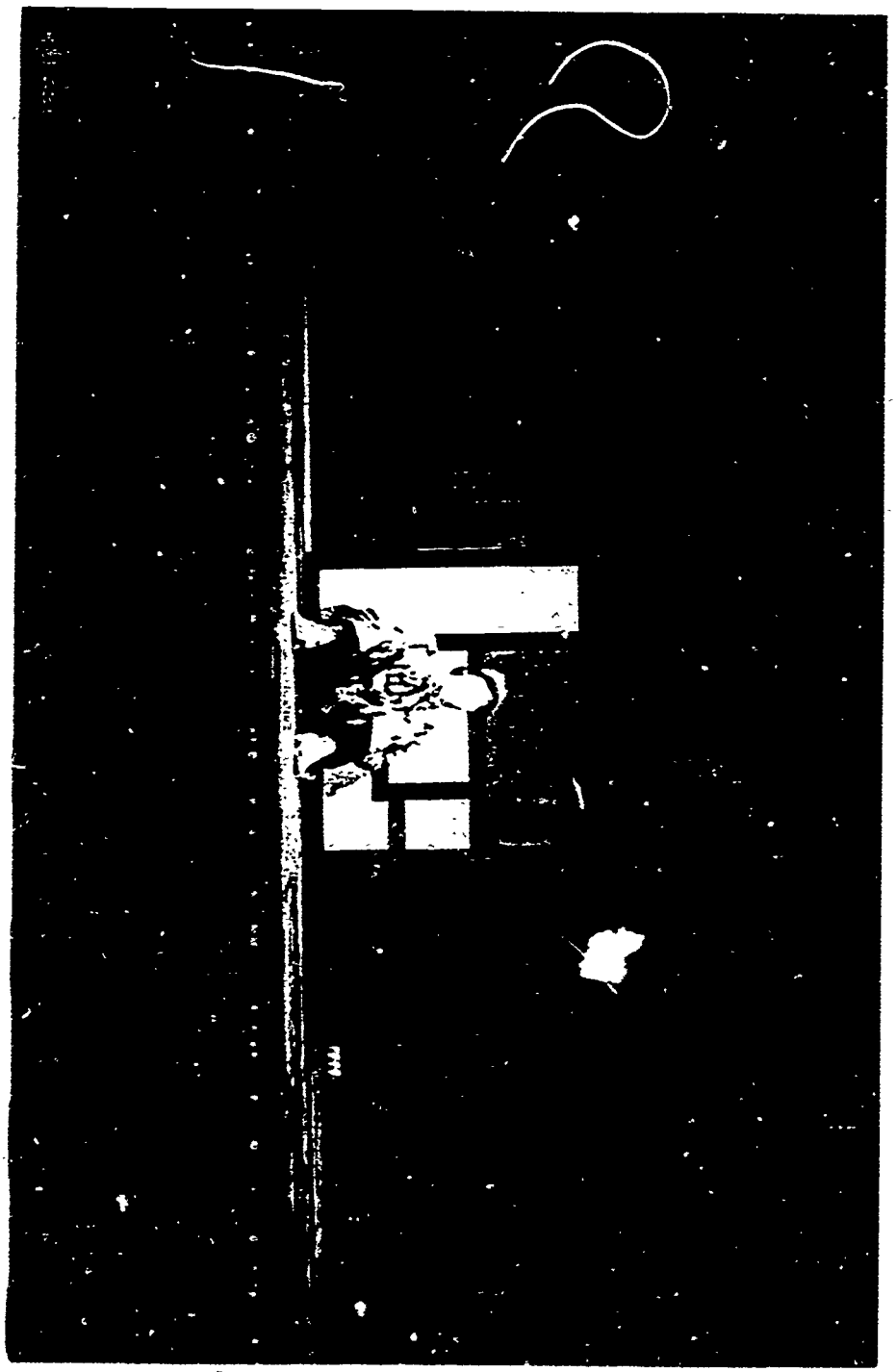
"When Zacharias squirted water in Pepper's face, how did PEPPER feel?"



"When ZACHARIAS found out his box was missing, how did he feel?"



"Near the end of the play, when Pepper left Zacharias with the biggest box, how did ZACHARIAS feel?"



Appendix 3: Behavioral Reactions of Audiences at Performances

During matinee performances, the researcher listened to the reactions of the entire child audience (averaging 500) with the following composited results. The squeaky loge seats in this auditorium provide an aural barometer of children's behaviors.

As the pre-show theme music began, the audience quieted. When Pepper stuck one hand through the side hole in her box, one child said, "Aha," as if knowing all along that someone was planted in the box before the audience entered. Children giggled and laughed sporadically throughout the opening non-verbal sequence as Zacharias and Pepper woke up and prepared for a new day. Examples of such moments were when: Pepper crowed and yelled "Cock-a-doodle-doo" to wake up Zacharias inside his box; a shoebox, white and black shoe, and toothbrush was placed at the top of Zacharias' box one at a time; Pepper donned her walkman, kept beat to the music, and began her aerobic exercises inside her box; Zacharias brushed his teeth, then his hair and shoes with the same toothbrush (some children voiced their disgust here); Pepper spouted water above her face and sang while gargling; and, when Pepper smelled her dirty socks before struggling to put them on.

Children giggled or laughed out loud during other physically humorous moments or when the two characters used words and vocal inflections to tease one another. Examples include when: Pepper made fun of Zacharias' name ("Zacky"), and then oinked like a pig to learn why he called her a "piglet"; Zacharias fell back into

his box as Pepper was trying to help him out; he urged Pepper to read the newspaper "louder" or "out loud" rather than hum, and then she recited her poem by heart as a trick; and, Zacharias hit her with the newspaper for cheating. Children giggled whenever Pepper whined or cried loudly as a tactic to make Zacharias feel sorry for her or to get what she wanted from him, though one child called her a "cry baby."

Children quieted substantially during the following moments when: Zacharias challenged Pepper to read from the newspaper; he offered her a "present" as an apology; he tried to prove to her that her front was the same as her back; they turned his box to discover that it was green and red; and, when Zacharias outlined the rules of the fountain game. However, when he sprayed water in her face, twice no less, children erupted into loud laughter and some clapped their hands. They quieted again when Pepper began to play airplane in her box, but they began to giggle when she stuck out a big and little arm (one child called the little arm an "umbrella" as if knowing all along what it <u>really</u> was). They grew a bit restless during Zacharias' attempts to get inside Pepper's box, but they quieted when she teased him back by forcing him to clean her box.

When the Drum Major entered halfway through the play, children quieted considerably at this new character, though they grew restless during his opening scene and quieted when Zacharias and Pepper argued over who would march first. Whenever the Drum Major had long speeches with Pepper or Zacharias, children were

restless during these conversations. There was some slight clapping when Pepper and the Drum Major hid Zacharias' box inside her box. They quieted with Zacharias' discovery of his missing box, but resumed restlessness during the Drum Major's explanations of how to get back at Pepper. They quieted a bit when Pepper returned to discover her missing box, and when both characters heard the sound of the Drum Major's truck driving away. Zacharias' line, "I'll kick him in the behind," drew laughter.

Children grew restless during the characters' confession scene, until Pepper whistled in her bottle and the "magic" began. They remained quiet during each discovery of a bigger box behind the wall and through Pepper's exit, leaving Zacharias alone on stage. They giggled and laughed increasingly at his attempts to get into the big box alone, and one child said, "He almost made it." They quieted when Zacharias began to cry, and even more so when Pepper returned.

Children were partly restless as Zacharias apologized, until the physically humorous moments when they helped each other into the box and fell in. With the Drum Major's return for the last time, children quieted a bit until his speeches which drew more restlessness. They laughed when Zacharias fell back into the box, quieted for the final moments, then erupted into loud applause at the blackout and end of the play.

Appendix 4: Coding Method for Statistical Analysis

[First number in transcripts refers to subject number. Left margin numbers & letters refer to questions of interview sheet.]

Subject Number

School 1-Grant 2-Wakarusa 3-Centennial

Sex 1-male 2-female

2. Enjoy 3-a lot 2-a little bit 1-not at all

3. Difficulty 4-real hard 3-sort of hard
2-sort of easy 1-real easy
(If don't know, leave blank)

4. Free Story Recall:
Within transcript:
[ ] means prompt or probe by interviewer OR clarification of which character child is referring to
{ } means action child performed with props = Prop Bits
(Code number of times child uses or points to props)

To code:
Mark a slash (/) between bits of information which you are able to code, and number each bit with a circle around the number. If child repeats exact same information, use parentheses ( ) and do not code = Verbal Bits

Code each slashed bit using the Master Bases codes, and write the code letter and number directly above the bit [Visual=V#, Aural/verbal=A#, Psychological=P#), Felt=F#] (see last pages).

In addition to coding Visual Dramatic Actions for each character, double-code the mention of Scenes (see next page). Write Scene letter and number codes in the left-hand margin next to the bit(s) as C# (=Central Actions), S# (=Secondary Actions), I# (=Incidental Actions). Definitions:

Central Actions - Character actions which move the plot forward directly in a linear fashion. Without these scenes, there would be no story.

Secondary Actions - Character actions which develop character relationships and which initiate and trigger central actions as catalysts to plot and move plot forward indirectly.

Incidental Actions - Character actions which serve as exposition or mood setters. They are gestural actions to assist in character development, but are not crucial to the plot.

FREE STORY RECALL - SCENE/UNIT ACTIONS
(listed in chronological order)

I1 P & Z each in their own boxes; got up/woke up

I2 P put hands out; crowed like a rooster to wake up Z; morn prep

I3 Z put his alarm clock, shoes and toothbrush on his box; morn prep

I4 Z & P called each other names; mixed up shoes

S1 P & Z fought/argued over everything

S2 Z gave P his handkerchief which had holes on both sides

S3 Z showed P that front and back of things are different

S4 Z & P turned Z's box around - green and red

S5 P & Z turned P's box around - no difference

S6 Z & P played water fountain

S7 P played airplane by sticking arms out; big and little

S8a DM played a drum and marched - back & forth past Z & P

S8b Z & P argued about who marches w/drum first

C1 Z played the drum first and marched offstage

C2 DM & P hid Z's box inside P's box

C3 P played the drum next and marched offstage

C4 DM & Z pushed P's box offstage into the truck

C5 DM drove away in truck or DM took/stole both boxes

C6 Z & P fought or confessed to one another about taking boxes

S9 P made noises with her water bottle

S10 Z pretended his shoebox was a truck

C7 Z drove his "truck" around wall and box grew bigger & bigger
or Z & P got a new big box or big box came out of back wall

C8 P left Z to find new friend &/or Z left alone w/big box & P returned

C9 P & Z got into big box or they played rocket/space ship/airplane or they lived in big box

C10 DM returned & Z & P chased DM away or DM left

C11 Z & P shared big box or they were friends again [also MAIN IDEA]

I5 Curtain call or lights turned off

Free Recall Sequencing Score

Using first 10 Central Scenes only, score the number of scenes stated in chronological order, assigning points to number of correct scenes stated before, for maximum 45 points. For example: only 6 scenes stated in following order: C1(0), C2(1), C4(1), C6(2), C8(3), C7(3), C10(5) = 15 pts.

5a. Main Idea

Main Idea (write highest number in left margin of transcript)

5-friendship/sharing
- -were/should be friends
- -friends breaking up
- -playing together
- -forgiving each other

4-good moral behaviors
- -not to play tricks on people
- -don't listen to liars
- -shouldn't steal

3-conflictual actions
- -fighting/being mean/getting angry
- -stealing boxes
- -wanting boxes back

2-secondary concrete actions
- -boxes were theirs
- -magic boxes
- -Z's box changes color
- -P plays airplane w/big & little arms
- -how to march and drum
- -getting new box

1-doing or listening to plays

0-don't know
[then leave next 2 variables blank as missing data]

Write the next 2 variables in right margin in transcript:

Levels of Abstraction
- 3-abstract; outside-story generalization
- 2-intermediate; inside-story generalization
- 1-concrete; inside-story reference

Type of Main Idea
- 3-child cites personal association
- 2-prescription; "people should"
- 1-proposition; describes story

5b. Main Idea Saw, Heard, Felt [see Master Bases for coding]

6. Main Idea Recognition

MIR Big	1-friends	2-perspective	3-fight
MIR Lit	4-friends	5-perspective	6-fight

Code 0=no or 1=yes for each of the 6 numbers above.

7a. Learned
1-yes
0-learned nothing [leave next 3 var. blank as missing data]

7b. What Child Learned (write highest number in left margin)
4-friendship/sharing
-friends are more important than boxes
-keeping and getting friends back
-don't fight/argue/be kind to others
-forgiving each other

3-good moral behaviors
-not to play tricks on people
-don't let strangers trick you
-shouldn't steal

2-secondary concrete actions (perspective)
-front isn't same as back

1-doing or listening/watching plays

Write the next 2 variables in right margin in transcript:

Levels of Abstraction
3-abstract; outside-story generalization
2-intermediate; inside-story generalization
1-concrete; inside-story reference

Type of Concept Learned
3-child cites personal association
2-prescription; "people should"
1-proposition; describes story

7c. Learn Saw, Heard, Felt [see Master Bases for coding]

8. Comprehension of Affect

8a. P squirt 1 & 8a3a. P squirt 2
8b. Z miss 1 & 8b3a. Z miss 2
8c. Z left 3 & 8c3a. Z left 4

Code the 6 affect variables above as:

1-sad	0=no	1=yes
2-surprise	0=no	1=yes
3-mad	0=no	1=yes
4-scared	0=no	1=yes

[If child does not give 2nd feeling, then leave blank]

8a1. P intensity 1 & 8a3b. P intensity 2
8b1. Z intensity 1 & 8b3b. Z intensity 2
8c1. Z intensity 3 & 8c3b. Z intensity 4
[If child does not give 2nd feeling, then leave blank]

Code the 6 intensity variables above as:
3-VERY VERY 2-Pretty 1-little bit

Code all HDYD/SHF using Master Bases coding

In addition, code for repeating given information from the question asked of child, by writing the word "repeats" in left margin of transcript next to HDYD/SHF:

Repeats Given
1-repeats: "Because he squirted water in her face." OR
"Because his box was missing." OR
"Because Pepper left him."

9a. Preference 3-theatre 2-both 1-TV

9b. Difference 1-yes (there's a difference)
0-no (there's no diffference)

Reasons: (count frequencies of each + & - reason and code 0 if reason not used at all)

Positive Theatre Reasons
1-real people in real life
2-better visual/aural factors
-see it better/clearer w/"normal eyes"
-see up close/front row seat
-see all of it
-bigger "screen"
-goes slower (no camera cuts)
-real voices
-don't have to focus to get it
3-emotional factors
-very funny/neat/nice
-it's like you're in the play
-wish you were there (on stage)
4-auditorium context
-large audience
-seats go up and down
-can't get up to avoid doing mom's work
-you and characters might get to be on TV (?)
-drive/go to see it - in summertime
(and/or repeat of given?)

Negative Theatre Reasons
1-going to theatre and auditorium context
-sitting w/large crowd
-waiting for other people
-riding busses takes long time
-must sit and can't play
-have to get up and leave
-cold in wintertime
-no bathrooms

Positive Television Reasons (inverse of above)
1-staying at home and not going anywhere
-more comfortable
-can watch and play at same time
-warmer in wintertime
-no crowds
-no waiting
-can use restroom if need to

Negative Television Reasons

1-tape-recorded people
2-worse visual factors
    -can't see all of it as well
    -smaller screen
    -camera zooms in and out
    -goes faster (jump cuts)
3-emotional factors
    -not very funny/boring
4-TV context
    TV set problems
        -camera messes up/TV acts up
        -blurry
    lack of TV control in family
        -mom says keep volume down/brother sleeping
        -sisters turn it off or change channels
    small audience watching
    commercials
    staying at home

MASTER BASES CODING
"HOW DO YOU KNOW?" (HDYK) or SAW, HEARD, FELT

[Adapted from Meringoff 1980, 244; Vibbert & Meringoff 1981, 20-21; Banker & Meringoff 1982, 51-52]

For all the following, count frequencies within each category. For example, if child says, "Pepper marched and played drum," code P's dramatic actions (Visual #1) twice as two dramatic actions. If child says, "They shared the box," code one dramatic action each for Pepper and Zacharias (Visual #1 & 6). When coding Saw, Heard, Felt, ignore which choice child made and code according to the information child gave. For example, Heard: "They were both acting weird"--code as Visual, not Aural.

Visual Bases SAW (write V#)	EXAMPLES:
1-Pepper's dramatic actions	"P played airplane."
2-Pepper's general acting behavior	"P acted silly."
3-Pepper's physical gestures	"P put hands out hole."
4-Pepper's appearance	"P's back and front was different"
5-Pepper's facial expression	"P's face looked mad."
6-Zacharias' dramatic actions	"Z spit water at P"
7-Zacharias' acting behavior	"Z acted mean."
8-Zacharias' physical gestures	"Z was sitting down."
9-Zacharias' appearance	"Z looked neat and clean."
10-Zacharias' facial expression	"Z's face was sad."
11-Drum Major's dramatic actions	"DM took their boxes."
12-Drum Major's acting behavior	"The way DM acted."
13-Drum Major's physical gestures	"DM put the drum down."
14-Drum Major's appearance	"DM looked weird."
15-Drum Major's facial expressions	"DM's face looked mean."
16-Spectacle:	
Scenery & Props	"Boxes came out of wall."
Costumes	"DM wore a mask on back of head."
Lighting effects	"Lights went off."

MASTER BASES CODING (cont.)

Verbal and Aural Bases HEARD (write A#) EXAMPLES:

1-Pepper's dialogue quoted	"P said, '...'"
2-Pepper's inflection used [child used inflection/noted in transcript]	
3-Pepper's dialogue described	"P said she wouldn't be friend."
4-Pepper's verbal actions	"P cried/yelled/fought/forgave Z."
5-Zacharias' dialogue quoted	"Z said, '...'"
6-Zacharias' inflection used [child used inflection/noted in transcript]	
7-Zacharias' dialogue described	"Z told her he put it in truck."
8-Zacharias' verbal actions	"Z argued/hurt P, then apologized."
9-Drum Major's dialogue quoted	"DM said, '...'"
10-Drum Major's inflection used [noted in transcript]	
11-Drum Major's dialogue described	"DM told them how to march."
12-Drum Major's verbal actions	"DM shouted at them."
13-Used words or information gleaned only from dialogue [CODE ONCE PER WORD PER CHILD]	"Truck; fountain; motorcycle; space shuttle"
14-Sounds or Music	"I heard drum playing." "It was like a rooster crowing."

15-Sound Effects {child makes noises of truck/airplane/rocket/etc.}

16-"Drum Major drove away w/boxes" or "DM took boxes in truck" (FR only)

MASTER BASES CODING (cont.)

Psychological Bases (write P#)	EXAMPLES:
1-Pepper's motives/wishes	"P wanted to find a friend."
2-Pepper's thoughts	"P thought Z was mean to her."
3-Pepper's traits	"P was mean to DM."
4-Pepper's opinions	"P didn't like being squirted."
5-Pepper's feelings (not for P Affect)	"P got mad at Z."
6-Pepper's internal state	"P felt like he did wrong."
7-Pepper's relationships	"P was a friend to Z"
8-Pepper's sensory perceptions	"P saw and heard the drum."
9-Zacharias' motives/wishes	"Z wanted the big box."
10-Zacharias' thoughts	"Z thought his box was better."
11-Zacharias' traits	"Z was mean."
12-Zacharias' opinions	"Z really liked his box."
13-Zacharias' feelings (not for Z Aff)	"Z felt ashamed."
14-Zacharias' internal state	"Z was hurting, sick, & lonely."
15-Zacharias' relationships	"Z shared his box w/P."
16-Zacharias' sensory perceptions	"Z touched the ground."
17-Drum Major's motives/wishes	"DM wanted to take the boxes."
18-Drum Major's thoughts	"DM thought boxes were magic."
19-Drum Major's traits	"DM was mean."
20-Drum Major's opinions	"DM really liked their boxes."
21-Drum Major's feelings	"DM felt happy when he got them."
22-Drum Major's relationships	"DM wasn't their friend."
23-Drum Major's sensory perceptions	"DM heard Z coming back."

MASTER BASES CODING (cont.)

FELT (What child felt) (write F#)	EXAMPLES
1-Child's emotion/sensation	"I felt happy inside."
2-Child's opinion/judgment/enjoyment	"It was my favorite part." "I liked Z because he was funny."
3-Child's empathy/identification	"You're mad when people steal." "My sister & I fight."
4-Child's prescription	"You should always be friends."
5-Child's general knowledge (anytime child provides information they've learned from outside sources)	"It's not nice to squirt water."

THEATRE CONTEXT (write TC)
(Any information where child discusses making up own plays, going to see a play, KU doing the play for children to make money, etc. Do not use this category for Media Preference Reasons which has its own separate coding.)

[Note: After running frequencies and correlations, collapse the above HDYK variables into total Visual, Verbal/Aural, Psychological, and Felt Bases to run further stats against other variables. Keep in mind that the resulting frequencies always reflect the explicit visual and verbal/aural features available in the individual play production.]

Major Collapsed Variables for Final Correlations Run

SEX

ENJOY

DIFFICULTY

MAIN IDEA

LEARN

CHLEARN

AFFECT = [4 EMOTIONS FOR 3 MOMENTS (PS, ZM, ZL) = 12 SEPARATE SCORES]

VERBBITS

PROPBITS

SEQSCORE

GENERAL COMPREHENSION (or depth of processing) =
[SEQSCORE + MI + CHLEARN]

TOTAL FR VISUAL BASES [(1-16) FRV]
TOTAL FR AURAL BASES [(1-15) FRA]
TOTAL FR PSYCH BASES [(1-23) FRP]
TOTAL FR FELT BASES [(1-5) FRF]

TOTAL VISUAL BASES
[(1-16) MIV + LV + PAFFV + ZAFF1V + ZAFF2V + FRV]
TOTAL AURAL BASES
[(1-15) MIA + LA + PAFFA + ZAFF1A + ZAFF2A + FRA]
TOTAL PSYCH BASES
[(1-23) MIP + LP + PAFFP + ZAFF1P + ZAFF2P + FRP]
TOTAL FELT BASES
[(1-5) MIF + LF + PAFFF + ZAFF1F + ZAFF2F + FRF]

COGNITIVE PROCESSING = (Total Visual + Aural + Psych + Felt)

MEDIA PREFERENCE = [Preference for Theatre/TV + (Positive Theatre + Negative TV) - (Negative Theatre + Positive TV)]

Appendix 5: Additional Tables and Reliability

Table 2a

Frequencies of Sub-Categorical Bases for Free Recall

Visual Bases	freq	% bases	% children
Pepper's dramatic actions	188	17	87
Pepper's acting behavior/gestures	46	4	55
Zacharias' dramatic actions	200	18	92
Zacharias' acting behavior/gestures	31	3	37
Drum Major's dramatic actions	128	12	95
Drum Major's acting behavior/gestures	3	<1	5
Spectacle (e.g., actions of boxes)	93	9	87
Sub-Total	689	64	

Table 2a (cont.)

Verbal/Aural Bases	freq	% bases	% children
Pepper's dialogue quoted	31	3	32
Used Pepper's inflections	7	<1	13
Pepper's dialogue described	29	3	53
Pepper's verbal actions	25	2	50
Zacharias' dialogue quoted	28	3	24
Used Zacharias' inflections	5	<1	5
Zacharias' dialogue described	21	2	37
Zacharias' verbal actions	20	2	45
Drum Major's dialogue quoted	4	<1	11
Used Drum Major's inflections	1	<1	3
Drum Major's dialogue described	27	2	32
Used 3 unvisualized dialogue words	36	3	71
Heard sounds/sound effects	4	<1	10
Created/vocalized sound effects	14	<1	5
"Drum Major drove away in truck"	20	2	53
Sub-Total	272	25	

Table 2a (cont.)

Psychological Bases	freq	% bases	% children
Pepper's motives/wishes	12	1	27
Pepper's thoughts	6	<1	11
Pepper's traits	1	<1	3
Pepper's opinions	1	<1	3
Pepper's feelings	13	1	24
Pepper's internal state	1	<1	3
Pepper's relationships	16	2	32
Zacharias' motives/wishes	12	1	27
Zacharias' thoughts	7	<1	11
Zacharias' traits	2	<1	5
Zacharias' opinions	1	<1	3
Zacharias' feelings	11	1	16
Zacharias' relationships	17	2	34
Drum Major's motives/wishes	5	<1	13
Drum Major's thoughts	2	<1	3
Sub-Total	107	10	

Child's Feelings	freq	% bases	% children
Child's opinion/judgment/enjoyment	16	2	32
Child's identification/empathy	1	<1	3
Sub-Total	17	2	

GRAND TOTAL OF ALL BASES 1085

Table 2b

Summary of Frequencies for Free Recall Bases

Visual Bases	f	% of total
Pepper's actions/behaviors	234	22
Zacharias' actions/behaviors	231	21
Drum Major's actions/behaviors	131	12
Spectacle (boxes' actions)	93	9
Sub-total	689	64
Verbal/Aural Bases	**f**	**% of total**
Pepper's dialogue/verbal actions	92	8
Zacharias' dialogue/verbal actions	74	7
Drum Major's dialogue	32	3
Used unvisualized words and cited "truck"	56	5
Heard or made Sound Effects	18	2
Sub-total	272	25
Psychological Bases	**f**	**% of total**
Pepper's thinking	50	5
Zacharias' thinking	50	5
Drum Major's thinking	7	<1
Sub-total	107	10
Children's Feelings	17	2
GRAND TOTAL	1085	100

Table 2c

Summary of Frequencies for Characters Only in Free Recall Bases

	f	% of total
What Characters Did (visual)	596	66
What Characters Said (verbal/aural)	198	22
How Characters Thought (psych)	107	12
TOTAL	901	100

Note:

What Characters Did includes dramatic actions and acting behaviors/gestures.

What Characters Said includes dialogue quoted and described, verbal actions, and use of inflections.

How Characters Thought includes all psychological bases.

Table 3

Character Affect and Intensities

1. When Zacharias squirted water, Pepper felt:

	1st emotion	2nd emotion	% of children
Sad			
VERY, VERY	13	4	45
Pretty	8	3	29
little bit	2		5
			79
Mad			
VERY, VERY	9	6	40
Pretty	3	5	21
little bit		2	5
			66
Surprised			
VERY, VERY	1	2	8
Pretty	1		3
			11
Scared			
VERY, VERY		1	2
Pretty	1		2
			5

2. When Zacharias' box was missing, he felt:

	1st emotion	2nd emotion	% of children
Sad			
VERY, VERY	9	3	32
Pretty	3	2	13
little bit	1		2
			47
Mad			
VERY, VERY	13	3	42
Pretty	4	2	16
little bit	1	2	8
			66
Surprised			
VERY, VERY	3	4	18
Pretty	2	2	11
little bit		3	8
			37
Scared			
Pretty	1		2
little bit	1		2
			5
Ashamed			
VERY, VERY		1	2

Table 3 (cont.)

3. When Pepper left Zacharias, he felt:

	1st emotion	2nd emotion	% of children
Sad			
VERY, VERY	25	1	68
Pretty	9		24
little bit	2		5
			97
Mad			
VERY, VERY		1	2
Pretty		1	2
			5
Surprised			
VERY, VERY	1	1	5
little bit		1	2
			7
Scared			
VERY, VERY	1		2
Pretty		2	5
little bit		1	2
			10
Ashamed			
VERY VERY		2	5

Table 4

Frequencies of Sub-Categorical Bases for Inferences
("Was it something you saw, heard or felt?")

	MainIdea	ChLearn	PepAff	Zach1Aff	Zach2Aff	Total
Visual						
P actions	21	7	5	4		37
P behavior	2		3			5
P gesture	1	1	1			3
P appearance	1	1	2			4
P face			5			5
Z actions	20	7	2		2	31
Z behavior	2		1	2	1	6
Z gesture	1				6	7
Z appearance				1		1
Z face				5	2	7
DM actions	4	1		4		9
Spectacle	7	1	—	—	—	8
Sub-Totals	59	18	19	16	11	123

Table 4 (cont.)

	MainIdea	ChLearn	PepAff	ZachlAff	Zach2Aff	Total
Aural						
P quote			1			1
P said	2	2	2			6
P cried	2	3	8			13
Z quote				5		5
Z inflection				3		3
Z said	2	2			1	5
Z cried	2	2	2	3	7	16
DM said	1					1
Words	5	1	1			7
Hear sound	1	1				2
Made sound	2	—	—	—	—	2
Sub-Totals	17	11	14	11	8	61

Table 4 (cont.)

	MainIdea	ChLearn	PepAff	ZachlAff	Zach2Aff	Total
Psych						
P motive	2		2		5	9
P thought			3			3
P trait	2					2
P opinion			7			7
P feel	2		(not coded for Affect)			2
P internal		1	2			3
P relation	3	3	2	1	2	11
P sensory	1					1
Z motive	1		2	1	5	9
Z thought	1			6	4	11
Z trait	3		2			5
Z opinion				11		11
Z feel	2		(not coded for Affect)			2
Z internal					10	10
Z relation	5	5			9	19
Z sensory	1			1		2
DM motive	1					1
DM thought	1					1
DM trait	1					1
DM opinion	1	—	—	—	—	1
Sub-Totals	27	9	20	20	35	111

Table 4 (cont.)

	MainIdea	ChLearn	PepAff	ZachlAff	Zach2Aff	Total
Child Felt						
Emotion	3	1	1			5
Opinion	5			1		6
Empathy	2	3	4	1		10
Prescribe	2	2			1	5
Knowledge	1	1	4	1	—	7
Sub-Totals	13	7	9	?	1	33
GRAND TOTAL	116	45	62	50	55	328
Th Context	2					2
Don't Know	4	14				

Percentages of Total Bases

Bases	MainIdea	ChLearn	PepAff	ZachlAff	Zach2Aff
Visual	51	40	31	32	20
Verbal	15	24	23	22	15
Psych	23	20	32	40	64
Felt	11	16	14	6	1

Table 5

Ranked Summary of Frequencies of Sub-Bases Used

	FreeRec	Inferences	f	% of total
What Characters Did				
Zacharias' actions	200	31	231	16
Pepper's actions	188	37	225	16
Drum Major's actions	128	9	137	10
Sub-total	516	77	593	42
What Characters Said				
P's dialogue	60	7	67	5
Z's dialogue	49	10	59	4
DM's dialogue	31	1	32	2
Sub-total	140	18	158	11
How Characters Behaved Physically				
P's gestures/behaviors	46	8	54	4
Z's gestures/behaviors	31	13	44	3
DM's gestures/behaviors	3	—	3	<1
Sub-total	80	21	101	7
What Spectacle Did	93	8	101	7
How Characters Behaved Verbally				
P's verbal actions	25	13	38	3
Z's verbal actions	20	16	36	2
Sub-total	45	29	74	5

Table 5 (cont.)	FreeRec	Inferences	f	% of total
How Characters Related				
Z's relationships	17	19	36	3
P's relationships	16	11	27	2
Sub-total	33	30	63	5
What Characters Thought				
P's thoughts/opinions	7	10	17	1
Z's thoughts/opinions	8	22	30	2
DM's thoughts/opinions	2	2	4	<1
Sub-total	17	34	51	4
Children's Spontaneous Feelings				
Emotions		5	5	<1
Opinion/Enjoyment	16	6	22	2
Empathy/Identification	1	10	10	<1
Prescriptions		5	5	<1
Knowledge		7	7	<1
Sub-total	17	33	50	4
Cited Unvisualized Words	56	7	63	4
What Characters Wanted				
P's motives	12	9	21	1
Z's motives	12	9	21	1
DM's motives	5	1	6	<1
Sub-total	29	19	48	3

Table 5 (cont.)	FreeRec	Inferences	f	% of total
How Characters Felt Emotionally				
P's feelings	13	2	15	1
Z's feelings	11	2	13	<1
Sub-total	24	4	28	2
Heard or Made Sounds	18	4	22	2
How Characters Looked (note: face used for Affect questions only)				
P's appearance/face		4/5	9	<1
Z's appearance/face		1/7	8	<1
Sub-total		17	17	1
How Characters Spoke				
P's inflections used	7		7	<1
Z's inflections used	5	3	8	<1
DM's inflections used	1	___	1	<1
Sub-total	13	3	16	1
What Characters Perceived				
P's sensory/internal state	1	4	5	<1
Z's sensory/internal state	___	12	12	<1
Sub-total	1	16	17	1

Table 5 (cont.)	FreeRec	Inferences	f	% of total
Characters' Traits				
P's traits	1	2	3	<1
Z's traits	2	5	7	<1
DM's traits	—	1	1	<1
Sub-total	3	8	11	1
GRAND TOTALS	1085	328	1413	100%

Table 7

Percentages of Interrater Reliability

(before and after reconciliation)

Coding for:	Before	After
Free Recall of Scenes	84	93
Free Recall of Bases	82	99
Main Idea Inferences	93	
Main Idea Level of Abstraction	87	
Main Idea Type of Concept	95	
Main Idea Bases	72	95
What Child Learned	97	
Learned Level of Abstraction	87	
Learned Type of Concept	89	
Learned Bases	71	100
Pepper Affect Bases	72	96
Zach 1st Affect Bases	70	95
Zach 2nd Affect Bases	80	92
Media Differences	85	100

TABULATION OF RESULTS
Teacher Evaluation

Noodle Doodle Box
KU-TYP Spring 1989
1st through 3rd grades

There were 54 total respondents:
46 Lawrence USD 497 & St. Johns teachers for a 43% return rate.
9 Regional teachers including Jefferson County North, Pomona, Baldwin, and DeSoto for a % return rate.

In the table below, the numbers indicate the number of teachers who ranked the question with the scale number at the top. 1 = low; 7 = high

	1	2	3	4	5	6	7
1. Understanding play	2	1	4	8	12	16	12
3. Attention levels			1	5	19	20	8
6. Meaningful experience	8	6	4	10	7	12	7
7. Rank w/other TYP (N/A - 5)	3	4	7	13	5	6	10
8. Teacher preparation	3	2	8	14	17	5	3

Note: Totals are calculated by multiplying the number of respondents in each rank by the rank number.

ANALYSIS

1. To what extent did the children in your class appear to **understand** what was happening in the play? N = 54

Mean: 5.3
Median: 6
Mode: 6
Totals: 1-3 = 14 (7); 4 = 32 (8); 5-7 = 240 (40)

Subjectively: Teachers perceived that children understood the play well in the upper-third of the scale.

2. Would you identify the portion(s) that seemed to confuse children?

Reported nothing (26).
None (3)
They didn't seem to be confused over any of it.
We had talked about the theme of the story prior to going.
I think they understood that the boxes were taken, but the deeper meaning of real friends as opposed to a friend who uses you, that was lost on them.
I felt that the message of the story was not clear. If not for discussion afterward, many would not have understood the theme.
The "moral" of the story would have to be summed up and verbalized for first graders at the end of the performance.
They became a little restless during the dialogue. It took them a while to figure out what it was about. Some of the younger children need more movement--less dialogue.
The quieter, slower dialogue.
The drum major's two faces.
They wondered why the Drummer had a mask on the back of his head.
They didn't understand the music man at first--two faces.
They did not understand why the drum major was masked at the end.
Why did the drummer wear a head gear?
Didn't understand the 2 faces on Drum Major until we discussed it.
The drummer wearing a mask on the back of his head. We talked about being two-faced after the production.
Drummer seemed to confuse some of them.
The drummer trying to convince each character to turn on the other.
The end where the boxes pushed out of the large background scenery.
What was supposedly funny and what was not.
The silly behavior seemed to have no purpose--it was just constantly there!
We try to teach them to not spit, hit, yell, call names. They are confused when they see it's OK. TV is no different.
Spitting! They are taught <u>never</u> to do such a thing--even if it is a play!
I'm afraid my children did not realize that the behavior of the characters at the beginning of the play was the reason for the bad feelings between them.
Some things that they laughed at (and were funny) I thought caused them to lose the meaning and did not understand.
All of it!
We would prefer to have them see a classic story.
N/A

Director's Response:

It appears that most teachers found nothing confusing in this play. The most confusing aspect appears to be the Drum Major's mask(s) (cited by 9 teachers), because few children understood the cliche, "a two-faced" character. It is unclear whether children's confusion over the play's theme was over the nature of friendship or the idea of multiple perspectives, as explained in the study guide.

3. To what extent did the children in your class seem attentive most of the time? N = 53

Mean: 5.5
Median: 6
Mode: 6
Totals: 1-3 = 3 (1); 4 = 20 (5); 5-7 = 271 (47)

Subjectively: Teachers perceived that children attended to the play very well in the upper-third of the scale.

4. What segment(s) appeared to lose their attention?

Reported nothing (26).
None this time.
None--perhaps the "marching."
They were fine because theater (live) really is a special experience.
They were impressed with the room, not the acting.
Kids generally at this age can sit about 30-40 minutes without wiggling too much--then they get fidgety.
Hard to sit for that long.
Some of the dialogue sequences--some students became restless. I'm not sure what (?) caused the coughing episode.
Anytime conversation, rather than "action" took place, they were squirming.
Too little action. Too much dialog. Theme was universal but bland.
The very first--before they did any action--water fight.
The beginning with all the arguing.
After the first half hour.
The middle part began to drag.
Redundant fighting toward middle.
The part right before the drum major entered.
Just before drum major and spitting.
The band leader part.
They became a bit restless just after the two boxes were taken off stage.
When they were no boxes and Pepper had left the stage.
After the boxes were taken away.
When the boxes were taken, the children seemed disinterested.
When the boxes were removed from the stage.
Long conversation of a serious nature between Zacharias and Pepper after losing both boxes and why.
After both boxes were taken and Zach and Pepper were just talking.
A couple, only when Zacharias was sitting down crying.
When, at the end, Pepper actually stayed away.
Quiet, slow parts.
When bandleader appeared in disguise.
The end.

Director's Response:

Again, almost half the teachers did not report any attention problems, while over half provided diverse responses, some of which were vague or contradictory. As would be expected, many children seemed to shift in their seats during the play's transitional scene(s) after the boxes were

removed. Many teachers want characters to be in constant, non-stop motion throughout plays and to never carry on dialogue conversations. Are children incapable of attending to quiet, serious moments in plays which contain high degrees of emotional intensity? Why should theatre imitate the sense of constant movement created by television's camera cuts? Are young children conditioned by television's 30-minute program lengths; and, if so, should theatre do the same or provide audiences with an alternative media experience?

5. What comments did you overhear your children say about the play after it was over?

Reported nothing (12).
"Like it." "Neat." "Were they real people?"
"It was good." "Like the people." "They were funny."
"Neat." (2)
"It was fun." (2)
"It was great." "I thought it was funny when . . ."
"I liked it when Zacharias spit in Pepper's face." "It was funny when Zacharias couldn't get in the big box."
"I liked the part where they were spitting." "I didn't like her crying." "The show was about friendship." "They learned that you can still be friends with a good box or not."
"Great." "Liked it." "Boring." "Pretty good."
"It was weird, funny, strange, okay."
"They liked it." (3)
"It was O.K." "Kind of babyish." "I liked it." "It was dumb."
Liked the whole thing. Good, colorful, funny.
That was fun...I liked it.
That it was weird but funny and that they still didn't know what the story was about.
"It was about friendships."
It was too babyish--silly--so-so.
Didn't like it. Didn't like only 3 actors. Funny in parts. Boring.
It was boring. It was funny.
It was funny; liked the boxes; the water part was the funniest.
Didn't like the spitting. Toothbrush in mouth and then hair was "gross."
Comments about squirting water and spitting water.
When the boxes started disappearing, they knew "they'd been had."
They could see their behavior in it.
Very interesting--Half thought it was silly and funny, and the other half were offended by the unhealthy things with the water bottle and by the way the characters treated each other. Evidently, their strong sense of the right and wrong way to treat a friend interfered with their enjoyment. The play got the desired response from them, I suppose.
The children liked most of the play. This production was not as exciting as past plays.
They wished there were more characters and more action. Wished they could have seen Monkey, Monkey again (me, too!). They liked the slapstick elements.
They liked last year's better.

They liked Pepper's arms when she was flying the best.
They enjoyed the humor and uninhibitedness of the characters.
They discussed some of the parts they thought were funny.
They seemed to think it was funny.
They liked it very much.
They enjoyed it--thought it was fun. The music man wasn't nice, fair.
They liked the boxes and the silly parts.
They thought it was stupid. They liked the lessons about friendship but thought the story could have been told with less silly behavior.
Some of it was boring.
None. "Thank goodness" it was too cold the next day for anyone to spit water.
Very little.
They didn't enjoy it very much.
Not much.

Director's Response:
Children's comments about this play appear contradictory sometimes. This may reflect the vast differences between first graders who may prefer "sillyness," and more mature third graders who may already know the importance of friendship and friendly behaviors. The nature of this "absurdist" play could also cause differences in opinion and taste. As one teacher notes with insight, perhaps children were divided over the characters' behaviors toward one another.

6. Do you think the experience was a meaningful one (in an educative sense) for children? N = 53

Mean: 4.3
Median: 4
Mode: 6
Totals: 1-3 = 32 (18); 4 = 40 (10); 5-7 = 156 (26)

Subjectively: Teachers are in complete disagreement over the meaningful, educative value of this experience, as shown by their range of scores across the scale.

Volunteered comments:

(rated 7) Social education is a real plus! So many of our (Lawrence) students are not able to attend any sort of functions outside of school and home. Just seeing the lobby of the theatre is a treat. One student remarked it was like a castle.
(rated 6) The children from our (county) school are from a blue collar rural area and so just going to a play was an education for many of them.
(rated 1) Our classroom discussions on friendship were invaluable but I don't think the play meant much.
(rated 1) Worthless.

7. How do you think this production ranks with the others in the TYP series that you have seen? N = 52 (excluding 5 who have not seen TYP)

Mean: 4.1
Mode: 4
Median: 4
Totals: 1-3 = 32 (14); 4 = 52 (13); 5-7 = 131 (21)

Subjectively: Again, teachers are divided (or ambivalent?) on how this production ranks with past TYP plays, though most placed their rankings in the upper-third of the scale.

Volunteered comments:

(ranked 1) The last 4 years each play has been bad.
(ranked 7) I loved the rock people play. [Just So Stories? 1986]
(ranked 3) Quality was fine--play was boring.
(ranked 7) Compared to Monkey, Monkey [1988] in appropriateness for children.
(ranked 7) Much better than last year.
(ranked 5) 3rd grade.

8. Please indicate the level at which you prepared the children for seeing the play (using the following as a guide):
i.e. 7 Extensive preparation (including all below)
6 Engaged in some related activities
5 Discussed background and thematic concepts
4 Told or read the story/synopsis
3 Told them the title of the play
2 Told them we were going to a play
1 No preparation

N = 51
Mean: 4.4
Mode: 5
Median: 4
Totals: 1-3 = 31 (13); 4 = 56 (14); 5-7 = 136 (25)

Subjectively: Teachers appear to have prepared children quite well by reading the story synopsis. Almost half went beyond the synopsis by discussing thematic concepts and background or by engaging in other related activities.

9. Which sections of the Teacher's Guide were most useful or effective?

Great!
Story synopsis (22)
The Teacher's Guide was very good.
Follow-up suggestions.
After play questions picture book references; creative writing.

Questions to ask children.
Questions after the play; Extensions in Language Arts. All seemed useful, just not enough time to do it.
Related poems and stories.
Related questions about "same and different."
Suggested activities (2)
Background.
Preparatory discussion ideas.
Things to Think About.
Treatment of symbols and themes.
The cartoons and relationships to their experiences were helpful.
Page 4 [Zacharias and Pepper as Symbols of Young Children's Friendships]
Set design. *Excellent followup in the classroom [referring to Drama Workshop with Zacharias and Pepper.]
The bibliography.
It was all helpful and interesting.
I liked it--It seemed more detailed with lesson suggestions and books.
We discussed afterwards concepts such as friendship, differences, sharing, etc. We wrote about this also. I think it was more worthwhile than they realize.
Didn't use. I read it earlier and thought it was good, but the play crept up on me. I wasn't ready.
I am at fault as I didn't take time to look at the teachers' guide. I am a substitute teacher and wasn't sure that I should read it. However, after reading these questions, I did look at the guide and it looked most helpful--especially the synopsis.
I don't recall getting a teachers' guide. [Lawrence]
I did not do any preparation as to my instructions for interviewing. [Note: This teacher's classroom took part in a KU study of 1st graders to explore their comprehension without pre-training.]
N/A (2)

10. Which sections of the Teacher's Guide were least useful or effective?

The synopsis was nice but not written very clearly. Transition scenes were confusing.
Synopsis not clear.
[Director's Note: The synopsis was written in simple grammar and vocabulary, as requested by teachers in past years.]
Boxes as Symbols of Limited Egocentric Perspectives (2)
Characters--theme--too advanced.
Activities.
Extensions in writing--not very many ideas.
Visual Art (3)
Art and drama sections.
N/A (4)

11. Additional comments in regard to this production:

It was colorful and had a high interest level.
Colorful, spoke loud enough.
We could hear what was being said which was wonderful. (We sat on the very front rows.) No screaming from audience.
I've been going to these for 3 years and this was my favorite. I felt it was the most meaningful to kids, something like friends they know about and can relate to.
Enjoyable, very well organized for seating and bus loading and unloading.
I'm not sure you ever know how young children will react. Too much dialogue, with little action often does not hold their attention.
Dragging in the middle.
We felt it was not for 3rd graders.
The children thought it was babyish and too young for them. I think however that they meant the behavior of the characters. It was well done for what it was though. [3rd graders]
Seemed more age appropriate than past productions.
Much more appropriate for our level than other years' productions.
Much more appropriate than last year's play yet still not quite on the primary level.
This production was not as exciting as other productions I've seen in the past.
Teacher's guide was well-written. Thanks for all the friendly, efficient help at the theater.
Nice length. [Note: The production ran 55 minutes.]
The acting was good.
Good acting by girl and first boy. Spitting water in each others' faces wasn't the best modeling for children.
I didn't like the spitting as I believe that children learn from example.
It would seem that there might be a better way of showing a joke than by spitting. I thought the kids laughed at some inappropriate times.
Spitting was presented as a comical event, which some children will probably try to duplicate.
Some behaviors (spitting water on others) were objectionable.
I didn't like the spitting, kicking in the butt, and the way they treated one another.
I did not like the spitting and the portrayal that it is OK to treat your friends badly.
The spitting of water in each others' faces was repugnant to me!
We have worked both long and hard to teach these students spitting is a nasty, dirty, germ spreading habit. I did not appreciate its use in the play.
We are concerned about children seeing rude, bad manners portrayed as humorous.
Too much fighting.
Sexist--I thought we had come a long way "Baby"--The woman whined and cried to get her way--portrayed as foolish and immature. Male portrayed as strong, when we <u>despertly</u> need role models being fair and courteous,--we learned name calling and physical violence got "our way."
It did not seem worth attending.

Director's Response:

Again, individual teachers appear to contradict one another in their assessment of this production. There is little agreement over the age-appropriateness of plays for the primary level. Though the major theme of this play revolved around ways to treat friends (e.g. by sharing toys and not letting others divide your friendship), many teachers focussed entirely on the negative elements which occurred before the play's ending. In order to present a conflict and then resolve it (i.e. create drama), the playwright incorporated these negative behaviors to make his points about the nature of real friendships. Pepper, too, hated Zacharias' spitting, name calling, and his refusal to share the big box. This is why this female character asserted herself and carried out her threat of leaving him to find another friend in a very serious and confrontational manner. It was not until this action that Zacharias realized his offenses and broke down and cried ("unusual" behavior for a male). After these two characters resolved their problems, they cooperated with one another in several ways (e.g. by helping one another into the big box and by chasing off the Drum Major). The female role-played an airplane pilot and the male role-played a flight attendant and mechanic. These are some of the non-sexist behaviors and role-models which children are equally capable of imitating, if one evaluates the play in its entirety.

12. Additional comments in regard to future KU-TYP productions:

Keep up the good work.
Keep it up. Thanks for being available to Pomona for the children's experience of a live production.
I don't know what to tell you. No one was sitting on the fence about this one.
Please reconsider spitting in future productions. We work hard on manners at school and then we go to the play and laugh about it??? I didn't appreciate that.
I feel that the last few TYP productions for the primary children have been geared for pre-school or kindergarten.
The children enjoy most exciting plays.
Nice set, good portrayal of children.
Your productions are always good, well-acted, easy to hear--I just wish you'd choose different themes.
Perhaps someone could tell the audience about the play right before it begins. Tell what to look for and the lesson which the story teaches.

Then the children will be primed for attending.
Keep them about topics the kids can identify with.
I think songs and dancing are always of high interest. I think the theatre productions are very beneficial for all our students. All in all I feel the productions are excellent and very worthwhile.
I would rather not waste classtime on it.
Kids love singing, slapstick, audience participation.
We would like to see plays about our favorite books or classics--Things we could relate to and work on here at school. Thank you for not having audience participation.
How about some classics for children in primary level? This would be a

great extension of classroom.
Let's get production more children oriented and fast moving. Primary kids would like productions that are literature familiar.
A production the students are familiar with (or should be--many of our students have not been told the classics, nursery rhymes, etc.)
We would like a well known story.
Use of "familiar" subject might be nice.
Why don't you stick with traditional folk or fairy tales.
Classics.
I would like to see more children's classics.
I would like to see more dramatizations of classic children's literature.
I would like to see a return to the classics. This is the only theatre experience many of these children have. The quality of the plays is not very good.
I will state for the eigth time in eight years that the quality of the productions is fine. But, why are all primary plays so silly? We would have <u>loved</u> "Charlotte's Web" because we are reading it. I think you should provide quality <u>classics</u> for these children. They love the theater. Give them something that they don't see on TV every day. They are mature enough to handle it! If it's "invaluable" [reference to Thank You on form] and all of the teachers I work with feel the same way, why do we always get the <u>same silly shows</u>???
Charlotte's Webb would have been fun for this age group to see!
I'd like to see Charlotte's Web or something like that.
One of our favorite books is "Charlotte's Web." We all wish we could have gone to that production. Some classics would be wonderful.
Fairy tales, familiar stories--(Glad you asked--have always felt who cares what they want?)

For 3 yrs. my school has been 1st to arrive and last to go. This is ridiculous. We had to wait 20 min. until everyone else got there--then another 25 min. until we left at the end. Our kids were well behaved but I think someone needs to get coordinated. This is utter nonsense.
We are usually the first bus to arrive but the last to leave. This is extremely hard on small children.
The first buses to arrive should be the first to leave. It is expecting too much of the small children to wait for the performance to begin, then wait and be last to leave. The odor which was similiar to paint thinner caused several children to complain of a headache.
Lacquer smell made some of us ill--light headed.

Director's Response:

Again, teachers overwhelmingly want "familiar" children's literature classics which can be integrated into their curriculums. Again, I continue to search for dramatic adaptations which are not silly and completely unfaithful to the original tale, or use audience participation (unfeasible with an audience of over 500 children). When I find those adaptations which are respectful of the original story and child audiences, I will recommend them to the University Theatre Production Committee. In the meantime, KU-TYP will continue to expose children to the "unfamiliar" classics in the children's theatre repertoire--plays which they may never

see on TV or Disney animated films, but which are produced frequently in theatres all across the nation. [Charlotte's Web was chosen for the 4th through 6th grade this year because the book is recommended at this reading level.] KU-TYP will continue to provide a balance in title familiarity, taking into consideration the results of question 14 (below).

13. Are there other ways in which KU-TYP can be of service to you?

We are going to have the actors come next week--They should enjoy that.
30-45 minute workshop good idea, but difficult to work around your KU schedule.

14. How many students in your classroom prefer to see plays or stories already familiar to them? [It was hoped that teachers would provide actual numbers of children after asking children to vote on this issue.]

Familiar	Unfamiliar
YES!	
all (4 teachers)	none (1 teacher)
X (5 teachers)	
most (6 teachers)	few (1 teacher)
majority	
2/3 (2 teachers)	1/3
10	8
10*	3
12	7
14	5
15	8
19	1
21	5
76 [entire school?]	none
20	
27	2
10	15
60%	40%
50% (3 teachers)	50% (one prefers this for extension)
24	24 (they all said both)
all	all
4	12
4	16
1	16 (2 don't care)
0	15
0	19
	X (1 teacher)

*Not necessarily well-known or over-familiar. I think they like to know something about the play in advance.

[Note: One teacher responded to our invitation to serve as a consultant. She will be contacted in this regard.]