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LABORATORY MANUAL  
**PRINCIPLES OF PSYCHOLOGY:  
EXPERIMENTAL FOUNDATIONS**

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**Experiment 1**

**Observing Children's Play Behavior**  
Dana Gross

**begins on the next page and constitutes pp. 11-20 of the full manual**

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# Observing Children's Play Behavior

Dana Gross

## Introduction

This lab will prepare you to carry out an observational, descriptive study of children's play in a naturalistic setting (figure 1). In the traditional experimental approach to research, behavior is studied in a controlled laboratory setting in which variables are manipulated and isolated. It is important to realize, however, that observations of behavior in natural settings often influence the hypotheses that are tested in laboratories. Therefore, research is often conducted in natural settings ("the field"). The naturalistic approach is also valuable because it enables researchers to study people or animals and their behavior in complex, real-life situations.

Your play project is a combination of descriptive and correlational research designs. Initially, you may not have a strong hypothesis about how age or gender will be related to play behavior (descriptive). As you read the research literature on your chosen topic, however, and do a preliminary observation, you may begin to develop hypotheses. Eventually, by focusing on just one play behavior as a function of children's age or gender, your project will become a correlational study.

## Defining Play

While we all probably recognize play behavior when it occurs, we may have difficulty trying to define it. In their (1983) literature review, Rubin, Fein, and Vandenberg list the following characteristics to distinguish play from other activities:

1. It is intrinsically motivated.
2. It is characterized by attention to means rather than ends.
3. It is distinguished from exploratory behavior: the emphasis is on "what can I do with this object?" rather than "what is this object and what can it do?"
4. It is characterized by nonliterality or pretense.
5. It is free from externally applied rules (in contrast to games).
6. The participant is actively engaged (in contrast to day-dreaming or idling)

Developmentally, play serves a variety of roles. Play has been demonstrated to be an effective vehicle for psychosocial development. In play, children learn to interact with others and behave according to pre-established rules. Play has also been cited as a tool that children use for morality development. Developmental psychologists Jean Piaget and Lev Vygotsky asserted that social play helps the child gain an advanced understanding of rules and socialization. Additional functions of play include exercising newly developed physical and cognitive abilities as well as providing a behavior that children can use to cope with traumatic events (Gray, 1991).

Researchers have identified several sub-types of play, which include rough-and-tumble-play (horseplay), constructive play (making things for fun), formal games (games and sports with designated rules), and pretend play (portraying

imaginary roles). Pretend play is of particular interest to developmental psychologists due to its prevalence, and its role in cognitive and psychosocial development (Gray, 1991).

### **Pretend Play: What is it?**

Pretend play is also referred to as symbolic play and is a ubiquitous part of childhood. "Pretend play consists in part of detaching behavioral routines and objects from their customary, real-life situational and motivational contexts and using them in a playful fashion. The child who really goes to sleep usually does so in bed, at bedtime, and when sleepy. The child who pretends to go to sleep will do so in other places, times, and psychological states; the routine is disconnected from its usual situational and psychological context" (Flavell, Miller, and Miller, 1993, p. 82).

"Children can pretend about either the identity or a property of an object, oneself, another person, an event or action, or a situation" (Flavell et al., 1993, p. 82). The fact that children in all cultures appear to engage in spontaneous pretend play, although the adults in those cultures never teach them how to do it, has led some psychologists to suggest that pretense may be a biologically evolved activity, like language.

Children can engage in solitary pretending or in shared, cooperative pretend play, which is also known as sociodramatic play. Parents do not teach their children how to pretend, but they do engage in pretense with their children; parents' presence changes children's pretend play.

### **At what age(s) does play occur?**

Play usually emerges during the first year of life. Pretend play begins to emerge during the second year of life and is seen primarily between the ages of 1 and 6 years. Before 12 months, most children are incapable of pretend play; after 6 years, children more frequently engage in formal games. Play lasts the duration of an individual's life, although its purpose, form, and prevalence fluctuate (Papalia, Olds, & Feldman, 2001).

### **How do play and pretend play change with age?**

The play actions of very young children are brief and may be difficult to identify. Pretend play can be particularly difficult to identify. Younger children "activate" toys or even ordinary household objects; they frequently play by themselves or parallel to other children engaged in similar forms of pretense. With age, children show that they know they are pretending. Older children negotiate and develop interconnected play themes with other children and discuss the role each child will adopt. They do this by making verbal declarations about their actions ("I'm a doctor!") and about those of their play partners ("You be the dog!").

### **Examples of Play**

Solitary Play:

Puzzles

Playing solitaire

Video games  
Dressing Barbie  
Shooting hoops  
Roller skating  
Cooperative Play:  
Playing soccer  
Tag  
Hide and Seek  
Building a tree house  
Duck, duck, gray duck

- **Examples of Pretend Play**

Solitary pretend play:

pushing dolls in baby carriages  
feeding dolls or teddy bears  
pushing toy trains around a track while saying "chugga chugga  
choo choo"  
making a train out of Legos  
drinking from an empty cup  
talking on a toy telephone

Sociodramatic play:

playing tea party with another child  
adopting roles in a family where each child pretends to be a  
different member of the family  
making breakfast with other children, using empty bowls, glasses,  
and cups  
visiting the doctor

## **Objectives**

- To learn about techniques for observing behavior in naturalistic settings
- To discuss and define play
- To lay the groundwork for a semester-long observational study of children's play

## **Terms**

Experiment

Correlational study

Descriptive study

Self-report method

Observational method

Behavior

Narrative account  
Event sampling  
Naturalistic observation  
Observer bias  
Operational definition  
Play  
Pretend play/symbolic play  
Sociodramatic play  
States versus events

## **Methods**

### **Materials**

Video: "Observing Behavior in Natural Settings"  
Information sheets about the snow monkeys in the video  
Pre-observation worksheet  
Data sheet for recording observations

#### **PART 1**

Observing Behavior in Natural Settings: Video

<b>CT</b> Define "state" and "event." What kinds of states did you see in the video? What sorts of events were shown? Why do you think researchers distinguish between states and events?
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#### **PART 2**

Techniques for Naturalistic Observation:  
Video: Observing Behavior in Natural Settings

### **Observer Bias**

When we observe the behavior of people and animals, we do more than passively watch what they are doing--we make interpretations and draw inferences. These observer biases reflect our own background and beliefs about the behavior we are studying.

A narrative account is an objective record of the setting, participants, and behaviors observed. Use the space below to make notes for a narrative account of the snow monkeys' behavior. Describe what you see.

- a. Setting
- b. Participants
- c. Behaviors

**CT** Would you like to carry out observational research using only narrative accounts? Why or why not? What are some of the advantages and limitations of this technique?

### **Sampling Methods**

When making observations in naturalistic settings, we strive to gather data that are representative of our subjects' usual behaviors. We might use narrative accounts, but, as we just learned, these accounts may not be very precise and are often difficult to compare with those of different observers. By watching the snow monkeys again, we learn about and practice using a more systematic method, event sampling. In event sampling, observers record the occurrence of particular behaviors each time they occur. To study a particular behavior displayed by the snow monkeys, look at your narrative account and identify several behaviors you might study. List the behaviors you might study.

- 1.
- 2.
- 3.

When researchers observe behavior in natural settings, they take steps to ensure that their observations are as systematic and objective as possible. If naturalistic observations are carefully planned and carried out, the data collected are just as scientific as data collected in a laboratory setting. In order to preserve the reliability and validity of the data, psychologists often develop an operational definition to aid them in their research. An operational definition defines the criteria for the behavior being observed. The operational definition for “a monkey eating a banana” could be defined as: “When a monkey intentionally places a banana in his/her mouth and swallows it.” Such a definition would

help distinguish between incidents where a banana is placed in the monkey's mouth by another monkey or other such ambiguities. A good operational definition allows a researcher to distinguish between relevant observations and those that should be discarded or ignored.

### **Event Sampling**

Now choose a single behavior from your narrative account and write an operational definition for it below. Be as specific, concrete, and objective as possible.

Share your operational definition with your assigned group of three people. Then choose one person's operational definition to use as we watch the video a second time. Write that operational definition below.

As we watch the video a second time, count the number of times the behavior is displayed by the monkeys in the video and record this number below.

Number of times behavior was observed by

Observer 1 \_\_\_\_\_ Observer 2 \_\_\_\_\_ Observer 3 \_\_\_\_\_

<b><u>CT</u></b> Calculate the mean (average) for the number of times the behavior was observed by your group members? How does your mean compare to the data recorded by individual group members? What does this tell you about your operational definition?
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### PART 3

## Thinking about Play: Discussion

Based on the article you read in preparation for today's lab and previous experience, what is a possible definition for play?

As we watch the video examples of children at play, try to come up with some behaviors you might examine or research questions you might ask in a study of children's play.

#### PART 4

#### Developing a Specific Research Question about Play

During the remainder of lab today, work in research groups to begin planning a specific study of children's play. The requirements for the study that you design and carry out are as follows:

- **It must be observational.** In other words, you must study the world and the people in it just as they are, without interfering or otherwise changing the situation.
- **It must compare the play of two groups.** You may choose to study either (a) gender differences OR (b) age differences. For gender, there are just two groups to compare; for age, you will have to choose two different age groups (e.g., preschoolers vs. school age children). Determining the gender of the children you observe should be easy, but you will have to estimate children's ages if you choose to study age differences.
- **It must use event sampling.** Choose a single behavior -- or event -- to focus on, just as we did in lab today when we watched the videotape. Focusing on one child at a time, record every occurrence of this behavior during the time that you observe that child. Then focus on another child in the setting and record every occurrence of the behavior displayed by that child. Continue event sampling in this way until you have observed 10 children in each group. **Record your data on the following data sheet.**
- **It must include 10 children per group.** If you decide to study gender, observe 10 boys and 10 girls; if you choose age, observe a 10 younger and 10 older children. There are many ways to obtain your total of 10 children per age/gender. If you observe children in a relatively crowded setting, such as a playground, Legoland, or day care center, you might be able to do all of your observations in just one or two visits. If you study smaller groups of children, or even children playing alone, it may take a bit more time. In all cases, however, you should watch each child for approximately 5-10 minutes. Note the occurrence (or non-occurrence) of the play behavior your group is looking for.
- **It must be unobtrusive.** You must not alter the research environment.
- **Do not study multiple children simultaneously.** You should attempt to observe one child at a time. Studying many children in a single 5- to 10-minute data collection period will result in missed observations, which will drastically increase the variability of your data. Be sure to use the same

length of observation for each child. Decide ahead of time how long you will observe each child.

- **All members of the group should be present for all stages of the play project.** It will be difficult for all members of the group to analyze the data and answer questions by professors at the poster presentation if an individual is missing from any stage of the project.
- **It is STRONGLY recommended that you choose children who are between 2 and 10 years of age.** It will be difficult to detect play behavior in children who are under two, and older children will usually be involved in formal games.
- **Do not investigate play behavior that consists of formal games.** The event sampling method is an extremely poor means of analyzing such play behavior.

During the last part of lab today, each group will briefly share its initial ideas for the project. The rest of the class will give feedback to each group by responding, asking questions, or making suggestions.

The Pre-Observation Worksheet should help you keep track of the requirements for this project. **Give the completed worksheet to your preceptor before the information literacy lab so that it can be reviewed and approved before you begin your study.** Also take note of the following project progression chart.

The information provided about play at the beginning of this lab unit, the assigned reading for this lab, and the sources listed at the end of that handout will be helpful in suggesting possible research questions about children's play.

Before you begin collecting your data, your group may wish to make a preliminary visit to the setting in which you plan to carry out your observations. During that visit, take notes about the setting, participants, and any play behaviors you observe.

### **Discussion Questions**

1. Why do children play? In what ways might children's play contribute to their development? Putting this another way, what might happen -- in both the short- and long-term -- to a child who never played?
2. Research suggests that all immature mammals, as well as birds and even some reptiles, engage in play. How is children's play behavior different from the play behavior exhibited by nonhuman animals? How are children's play and other animals' play similar?

## **Data sheet**

## References

### Required Lab Reading

Brownlee, S. (1997, February 3). The case for frivolity: Play isn't just fun. Young animals can't do without it. *U. S. News & World Report*, 122(4), 45-49.

### Suggested Readings

Bretherton, I. (Ed.). (1984). *Symbolic play: The development of social understanding*. Orlando, FL: Academic Press.

Flavell, J. H., Miller, P. H., & Miller, S. A. (1993). *Cognitive development (3rd ed.)*. Englewood Cliffs, NJ: Prentice Hall.

Fromberg, D. P., & Bergen, D. (Eds.). (1998). *Garland reference library of social science: Vol. 970. Play from birth to twelve and beyond: Contexts, perspectives, and meanings*. Levittown, PA: Garland. [This encyclopedia presents essays by experts on pedagogy, anthropology, ethnology, history, philosophy, and psychology. Here you will find why play is important to developing mathematical thinking, promoting social skills, constructing games, and stimulating creativity.]

Gray, P. (1991). *Psychology (2nd ed.)*. New York, NY: Worth.

Haight, W. L., & Miller, P. J. (1993). *Pretending at home: Early development in a sociocultural context*. Albany, NY: State University of New York Press. [Tracing the development of pretend play in nine children growing up in educated, middle-class European American families, this text shows how pretend play is embedded in distinct sociocultural contexts.]

Papalia, D.E., Olds, S.W., & Feldman, R.D. (2001). *Human development (8th ed.)*. Boston, MA: McGraw-Hill.

Rubin, K. H., Fein, G. G., & Vandenberg, B. (1983). Play. In P. H. Mussen (Series Ed.)

& E. M. Hetherington (Vol. Ed.), *Handbook of child psychology: Vol. 4. Socialization, personality, and social development (4th ed., pp. 694-774)*. New York: Wiley.

Sawyer, R. K. (1996). *Pretend play as improvisation: Conversation in the preschool classroom*. Hillsdale, NJ: Erlbaum. [Sociodramatic play, or role play, encourages children's imaginations to have free reign.]

Slade, A. & Wolf, D. P. (Ed.) (1994). *Children at play: Clinical and developmental approaches to meaning and representation*. Oxford, UK: Oxford University Press.

Stambak, M., & Sinclair, H. (Eds.). (1993). *Pretend play among 3-year-olds*. Hillsdale, NJ: Erlbaum.

Sutton-Smith, B. (1998). *The ambiguity of play*. Cambridge, MA: Harvard University Press. [Sutton-Smith studies play through the disciplines of biology, psychology, education, metaphysics, mathematics, and sociology.]

**Web links**

Children's Folk Games

<http://www.geocities.com/Athens/Styx/6504/home.html>

Children's Museum of Indianapolis: Playscape exhibit

<http://www.childrensmuseum.org/playscap.htm>

Children's Play Panel

<http://www.ilam.co.uk/polchild.htm>

Dr. Toy's Internet Guide

<http://www.drtoy.com>

Family Childcare Newsletter, Issue No. 118, March 1997

<http://www.mes.umn.edu/Documents/F/A/FA1036.txt>

Games Kids Play

<http://www.gameskidsplay.net>

The Institute for Play

<http://www.instituteforplay.com>

International Association for the Child's right to Play

<http://www.ipausa.org>

Nature of Children's Play

<http://ericps.ed.uiuc.edu/npin/respar/texts/fampeer/nature.html>

Preschoolers' pretend play--or improv--develops social, conversational skills

<http://wupa.wustl.edu/nai/feature/1997/Mar97-Improv.html>

Pretend play as improvisation: Conversation in the preschool classroom  
(book published by Lawrence Erlbaum Associates)

<http://www.artsci.wustl.edu/~ksawyer/play.htm>

TASP: The Association for the Study of Play

<http://www.csuchico.edu/phed/tasp>