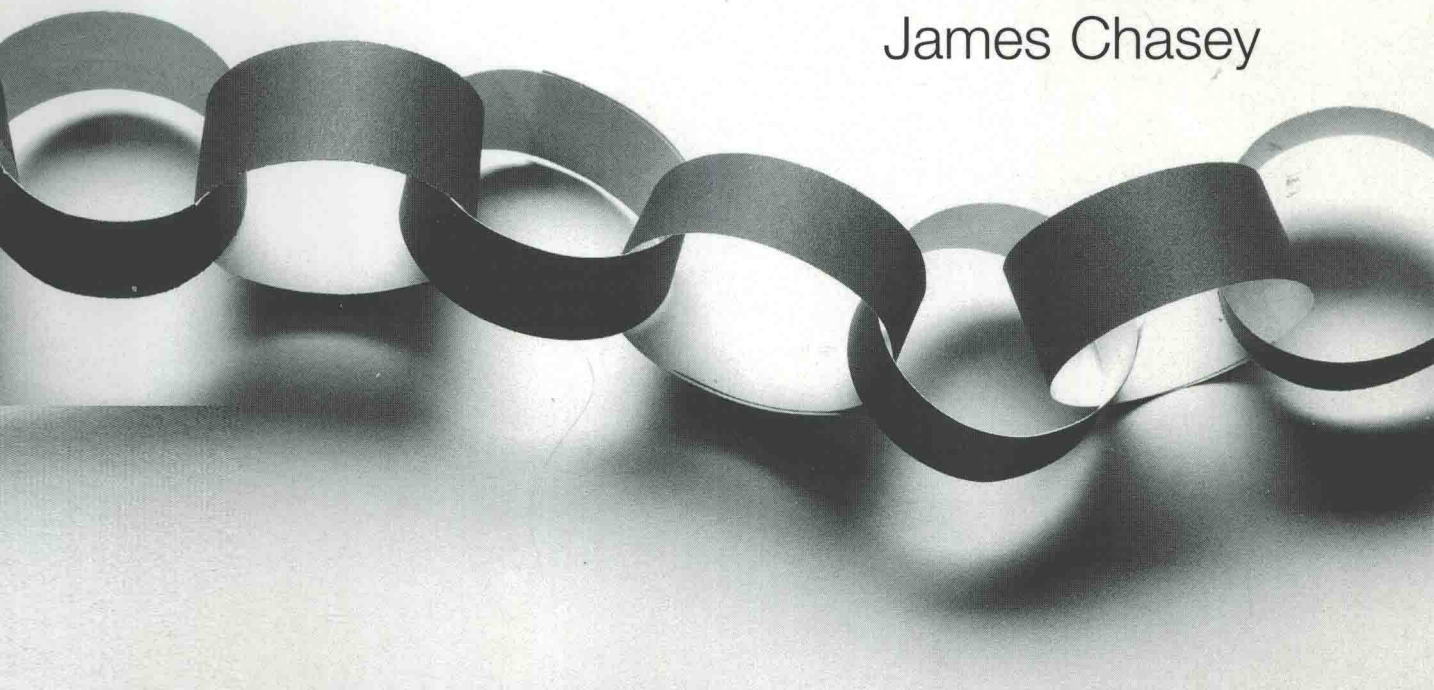
# Favorite Ways to Learn Economics

David A. Anderson
James Chasey



# FAVORITE WAYS TO LEARN ECONOMICS

**David A. Anderson**
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## ABOUT THE AUTHORS

David A. Anderson is the Paul G. Blazer Associate Professor of Economics at Centre College. He holds a Bachelor of Arts degree from the University of Michigan and Masters and Doctoral degrees from Duke University. Dr. Anderson has published research in the areas of classroom technology, active learning, and teacher evaluation, among topics from childbirth to social insurance. He has received a National Endowment for the Humanities distinguished professorship, and grants for economic education projects from the 3M Foundation and the Andrew Mellon Foundation.

James C. Chasey received his Bachelor of Arts degree from Purdue University and his Master of Arts degree from the University of Illinois. As the Christa McAuliffe Fellow for Illinois, he received advanced training at the University of Chicago Graduate School of Business. Mr. Chasey has received the Freedoms Foundation Leavey Award and the Purdue University outstanding education alumni award. He teaches Advanced Placement Economics at Homewood-Flossmoor High School, and has served as Adjunct Professor of Economics at the College of DuPage and Governors State University.

## ACKNOWLEDGMENTS

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# A NOTE TO STUDENTS ABOUT ACTIVE LEARNING

Economics is the major of choice for rock stars like Mick Jagger, studs like Arnold Schwartzenegger, big shots like Ronald Reagan, and billionaires like Ted Turner. For some, however, the appeal of this exciting discipline can be tempered by the difficulty of grasping some of its fundamental concepts. We intend to change that. The purpose of the active learning experiments in this book is to take you inside the box and show you how it feels to be an economic actor. That is, this book will lead you through activities that simulate production, sales and various types of decision-making. Active learning has proven to be both popular and successful in eliciting the economic way of thinking and making concepts easier to learn and remember. These activities will help to clarify economic concepts, but only if you are an attentive, active, and engaged, participant. Be sure to take part earnestly and behave honestly. Passive participants will not reap the educational rewards. Please read the introduction and scenario for each activity before class. After each activity, reflect on the experiment overnight and bring the completed worksheet to the next class meeting.

*Above all, we hope that you enjoy this learning experience!*

# CONTENTS

# 1

# AN INTRODUCTION TO ECONOMICS

***Experiments***

## HOT DOG VENDORS ON THE BEACH

***Time required: 10 minutes***
***Materials required: none***

### INTRODUCTION

Reasoning through economic phenomena helps us to explain what we see in the real world and allows us to make wiser decisions in our own endeavors. This activity will put you into the shoes of an entrepreneur and ask you to make decisions about the three most important issues for new business owners: location, location, and location.

### SCENARIO

The setting for this activity is a long beach with many hungry swimmers and sun worshipers. Imagine yourself as one of two hot dog vendors working this particular strip of beach. Whether or not you are one of the students asked to demonstrate your decisions on the simulated beach in your classroom, think carefully about where you would locate your hot

dog stand under the circumstances described below. The scenario unfolds as follows:

- The two hot dog stands on this beach have identical prices, products, and overall appeal.
- Beachgoers will purchase from whichever hot dog stand is *closest* to them.
- Beachgoers are evenly distributed along the beach.
- Only one hot dog vendor can move at a time.

In the classroom experiment, two representative hot dog vendors will be asked to station themselves on the beach, and then take turns changing their location (if desired) in response to the other's location. The goal for each is to maximize hot dog sales.[1] Note that the shoreline along which the vendors may locate is a line from one side of the classroom to the other. There is no depth to the beach, meaning that they can move to the left or right along the beach, but they cannot venture forward into the dunes or backward into the water.

**REFLECTIONS (Please answer these questions *after* completing the classroom experiment.)**

1. Describe the optimal strategy for choosing a location under the conditions described above.

2. In what situations do you see a similar strategy practiced near where you live?

3. What evidence of this strategy have you seen on a national scale?

[1] Assume that maximizing sales is the same as maximizing profits. This is true if the vendors can always sell another hot dog at a price that exceeds the cost of providing another hot dog. If the cost of selling another hot dog—the "marginal cost"—increases as more are sold, the vendors will only sell hot dogs as long as their additional revenue from selling one more exceeds the marginal cost.

4. Can you think of applications of this strategy that go beyond retail sales?

## AFTERTHOUGHTS

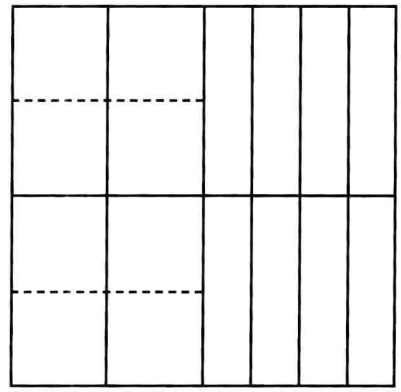
For most people, the retail application of this strategy is not immediately obvious, but makes good sense after thought and experimentation. That is one of the reasons why we study economics—there are many associated findings that are important and make sense, but they are not realized without examination. As Paul Samuelson said, economics can be "perfectly simple without being perfectly obvious." This makes economics valuable and exciting! (We hope you agree.)

## PRODUCTION POSSIBILITIES FRONTIER EXPERIMENT: LINKS AND SMILES

***Time required: 25 minutes***
***Materials for each student: 2 sheets of 8 ½ x 11 paper***
***1 roll tape***
***1 pair scissors***
***1 pencil or pen***

### INTRODUCTION

A production possibilities frontier (also known as a production possibility curve) indicates all of the possible combinations of two goods that can be produced in one period using all available resources. By looking at a PPF, the trained eye can determine the opportunity cost of each of the goods at every level of production, and whether or not production occurs at an efficient level. This experiment allows participants to derive and demystify production possibilities frontiers. After experimenting with different production goals, you will gain an understanding of input specialization and increasing opportunity costs.



### SETUP

There are two paper inputs used in this experiment: 5 ½" x 1 1/16" strips, and 2 ¾" x 1 ⅛" rectangles. To obtain enough of each paper input for the whole experiment, you will need two 8 ½ x 11 sheets of paper. Stack the two sheets on top of each other and make the following folds:

1. Fold the two most-distant ends together.
2. Fold the new most-distant ends together.
3. Undo the last fold and fold each of the most-distant ends in so that they touch the center line.
4. Without doing any unfolding, fold *one* side in once more so that it touches the center line.

5. Unfold the papers and you should have creases where there are dotted lines in the illustration above. Cut along the creases, and cut the four wider strips in half as indicated by the dotted lines. You should then have 16 strips and 16 rectangles.

## SCENARIO

In this experiment every person represents a manufacturing firm. Firms will make "links" and "smiles."

A *link* is a 5 ½" x 1 1/16" strip of paper wrapped into a circle and taped in place. Subsequent links are put through the previous link and taped to interconnect the links, forming a "paper chain," as are sometimes wrapped around Christmas trees.

A *smile* is manufactured by using scissors to round the four edges of a 2 ¾" x 1 ⅛" rectangle and drawing two eyes and a smile on one side of the circle.

Although strips are best for making links, and rectangles are best for making smiles, creative cutting and taping will permit strips to be made into regulation smiles and rectangles to be made into regulation links. For example, a strip can be made into a rectangle by cutting it in half and taping the halves together, long edge to long edge.

Participants begin each round with 4 strips, 4 rectangles, a pen, a roll of tape, and a pair of scissors. Resources may not be carried over from one period to the next, and only one layer of paper may be cut at a time. Each round of production lasts 70 seconds. The production goals for each round are as follows:

Round 1: Make four smiles and as many links as you can.

Round 2: Make only links.

Round 3: Make only smiles.

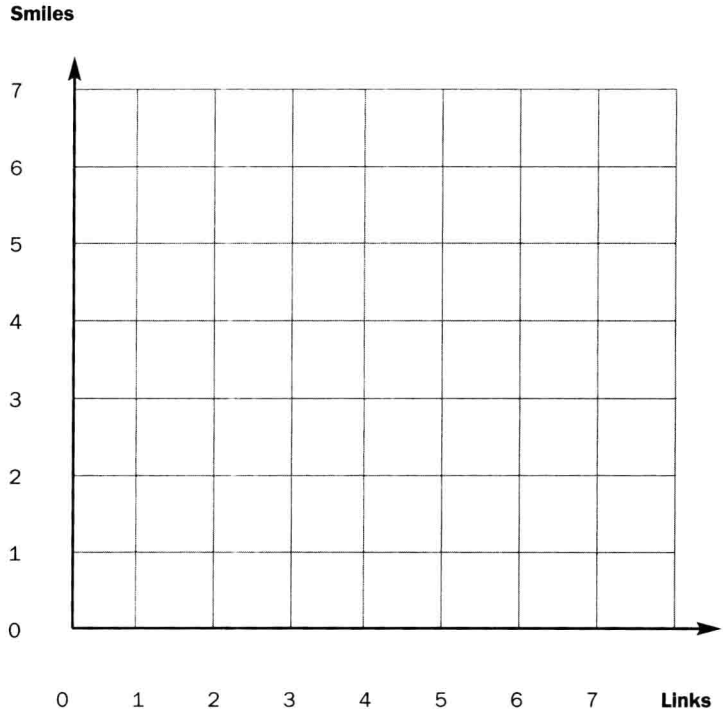
Round 4: Make one smile and as many links as you can.

Record the number of links and smiles produced in each round.

| | LINKS | SMILES |
|---|---|---|
| Round 1 | _____ | _____ |
| Round 2 | _____ | _____ |
| Round 3 | _____ | _____ |
| Round 4 | _____ | _____ |

**REFLECTIONS (Please answer these questions *after* completing the classroom experiment.)**

1. Draw your production possibilities frontier in the space below.




2. What was the opportunity cost of the first smile?

_____

3. What was the opportunity cost of the last smile or two?

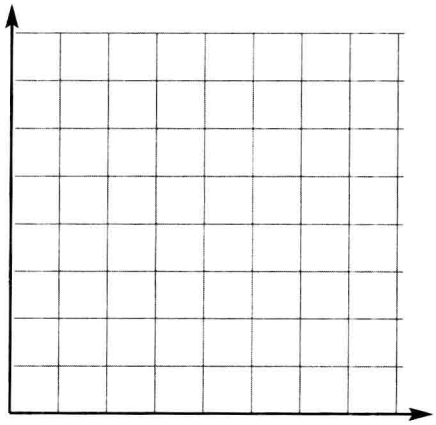
_____

4. Why did the opportunity cost of making smiles increase as you made more of them?

5. In this experiment you used strips that were specialized for making links, and rectangles that were specialized for making smiles. Give two examples of real-world inputs that are specialized for the production of particular goods.

6. Explain how the use of specialized inputs results in a concave production possibilities frontier.

7. List two goods that are made from virtually identical (rather than specialized) inputs and illustrate the general shape of a production possibilities frontier for those two goods.



## AFTERTHOUGHTS

Having acted as producers and derived production possibilities frontiers, you should come away with a better understanding of the implications of specialized resources and increasing opportunity costs. In subsequent classes you will be able to draw upon this experience to address issues of specialization and the role resources play in the shape of the PPF.