

PHILOSOPHY OF ECONOMICS

Matthias Brinkmann

matthias.brinkmann@philosophy.ox.ac.uk

Introduction

- Philosophy of Economics: philosophically interesting questions about economic as a scientific approach
- Audience: everyone & students taking 106b
- I'll presume little background in economics
- Four lectures: we'll cover the very basics

PHILOSOPHY OF ECONOMICS

Some Past Exam Questions

Economics as a Science

- Is economics a science?
- If economics has a claim to be a science, why are there still recessions?
- 'Economics is more similar to geometry than physics'. Do you agree?

Laws in Economics

- Is the law of supply and demand really a law of economics?
- Are there any economic laws?

Some Past Exam Questions, cont.

Explanation

- If economists cannot make reliable predictions, can they nevertheless explain events in retrospect?

Instrumentalism

- ‘The only relevant test of the validity of a hypothesis is comparison of prediction with experience.’ (MILTON FRIEDMAN) Does this apply to the social sciences?

Experiments

- ‘Experiments in economics are valueless because they are not informative about non-experimental contexts.’ Discuss.

Philosophy of Science of Economics

- **Guiding Question:** What kind of science is economics? What is peculiar about it?
- Subquestions
 - Aims
 - Laws
 - Explanation
 - Prediction
 - Experiments

Structure

Historical Views

14. 10. Introduction
Features of Economic Theorising
Popperian Approaches

21. 10. Lakatosian Perspectives
Friedman's Instrumentalism

Recent Questions

28. 10. Reiss's Explanatory Dilemma
Economic Models

4. 11. Economic Models, cont.
Ceteris Paribus Laws
(Experiments in Economics)

Today

1. An Example of Economic Theory
2. Features of Economic Theorising
3. Popperian Approaches

AN EXAMPLE OF ECONOMIC THEORY

Hotelling's Law

STABILITY IN COMPETITION ¹

AFTER the work of the late Professor F. Y. Edgeworth one may doubt that anything further can be said on the theory of competition among a small number of entrepreneurs. However, one important feature of actual business seems until recently to have escaped scrutiny. This is the fact that of all the purchasers of a commodity, some buy from one seller, some from another, in spite of moderate differences of price. If the purveyor of an article gradually increases his price while his rivals keep theirs fixed, the diminution in volume of his sales will in general take place continuously rather than in the abrupt way which has tacitly been assumed.

A profound difference in the nature of the stability of a competitive situation results from this fact. We shall examine it with the help of some simple mathematics. The form of the solution will serve also to bring out a number of aspects of a competitive situation whose importance warrants more attention than they have received. Among these features, all illustrated by the same simple case, we find (1) the existence of incomes not properly belonging to any of the categories usually discussed, but resulting from the discontinuity in the increase in the number of sellers with the demand; (2) a socially uneconomical system of prices, leading to needless shipment of goods and kindred deviations from optimum activities; (3) an undue tendency for competitors to imitate each other in quality of goods, in location, and in other essential ways.

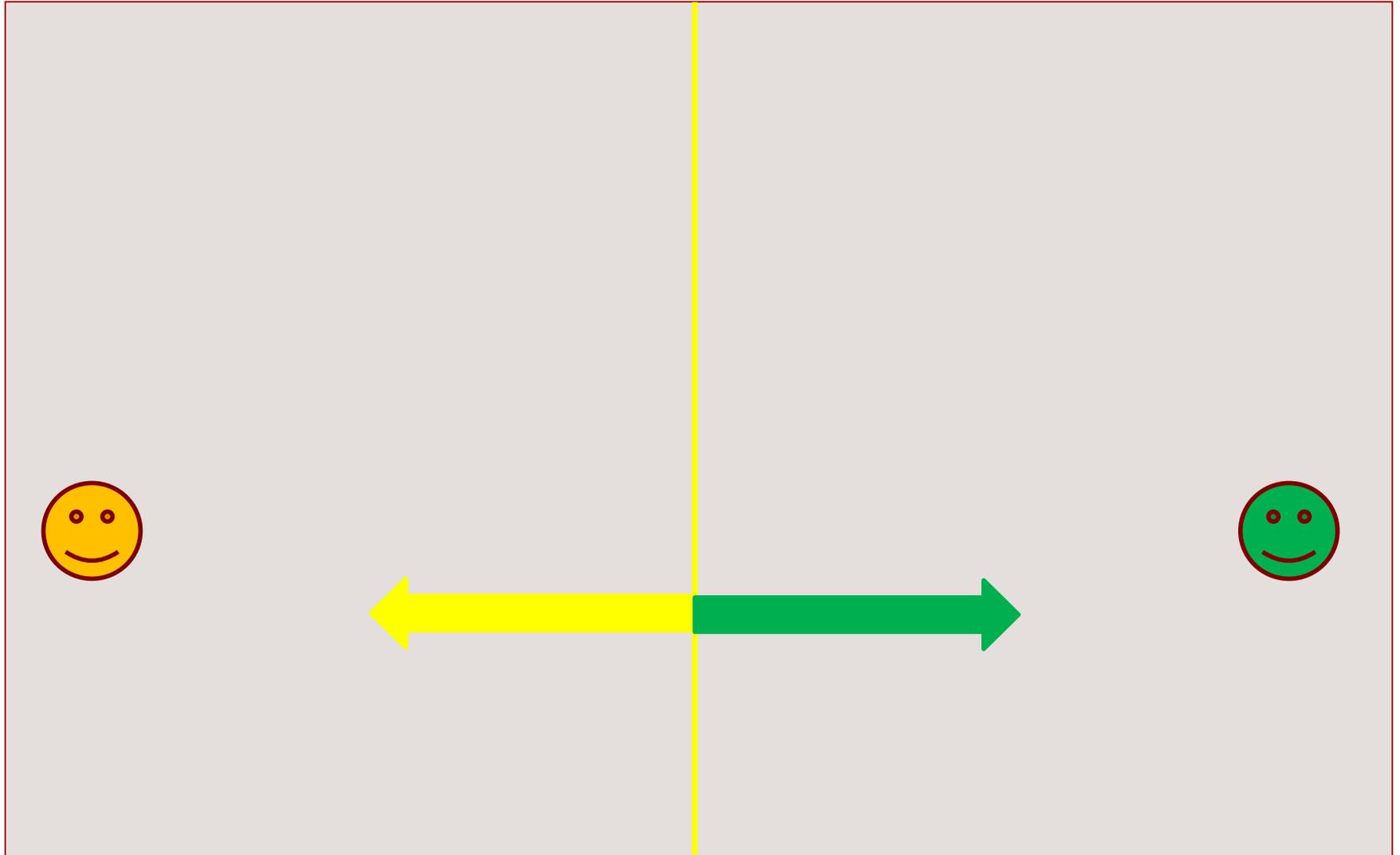
Piero Sraffa has discussed ² the neglected fact that a market

Economic Journal 39
(1929), 41-57

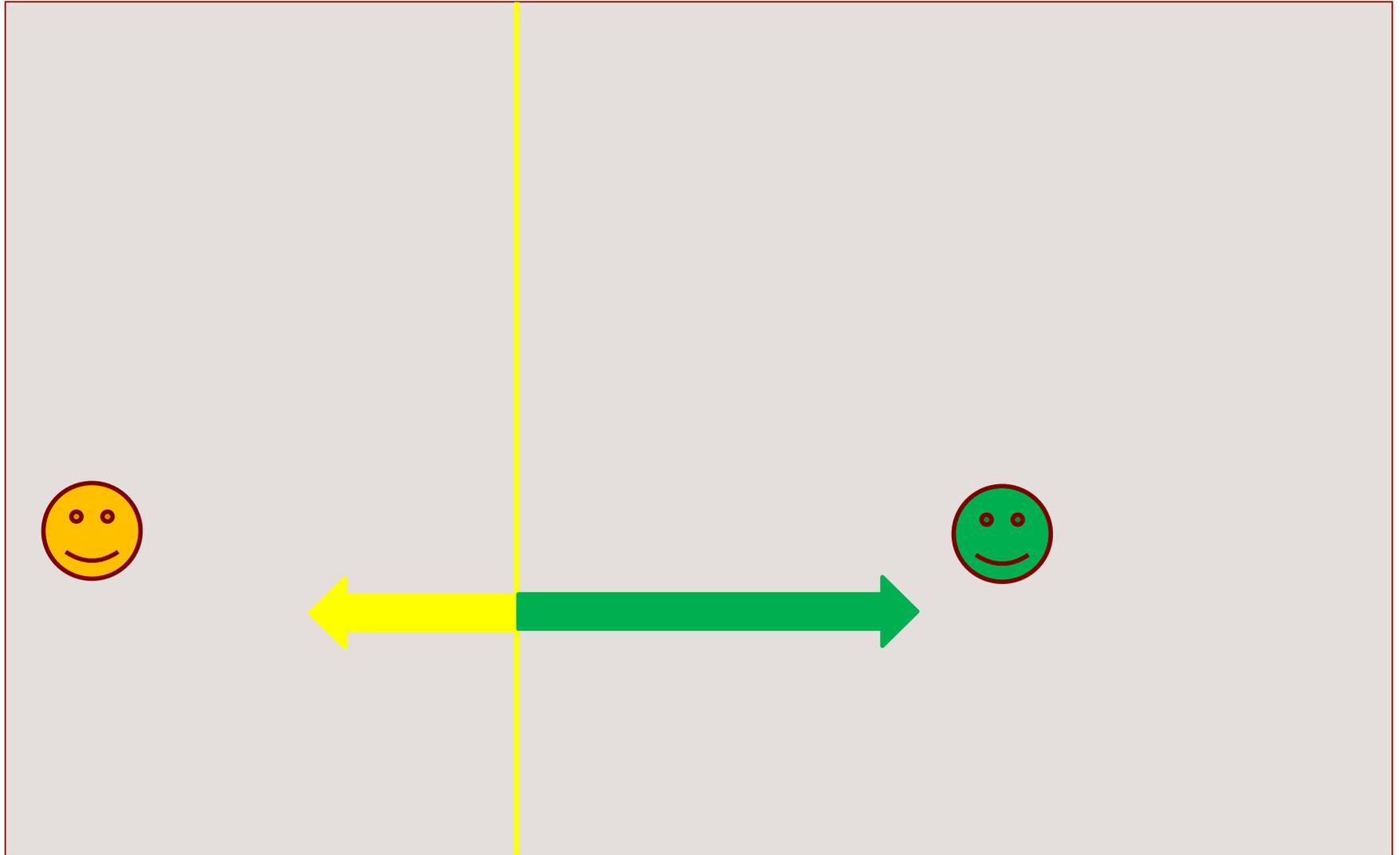
Law of minimal differentiation

If there are two competitors and a geographic or product space, the most profitable location is next to a competitor

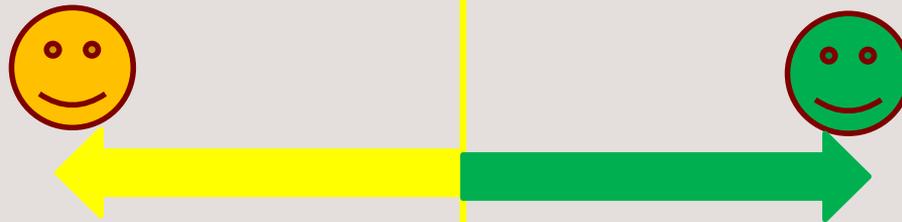
Basic Model



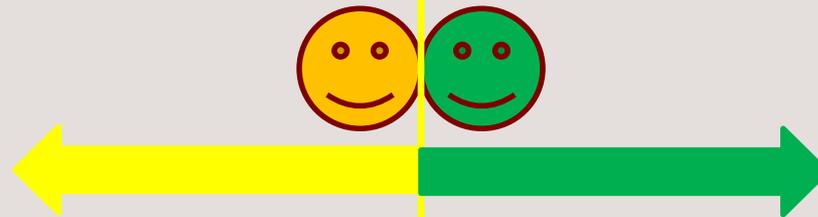
Basic Model



Basic Model



Basic Model



Some Observations

- Counterintuitive result
- High Abstractness/General Applicability of the Model
 - *So general is this tendency that it appears in the most diverse fields of competitive activity, even quite apart from what is called economic life. In politics it is strikingly exemplified. The shoes are too much alike. Our cities become uneconomically large and the business districts within them are too concentrated. Methodist and Presbyterian churches are too much alike; cider is too homogeneous.*
- Explanatory?

FEATURES OF ECONOMIC THEORISING

1. Vague Laws

- Many economic laws predict that two variables hang together, but they merely suggest a tendency
- Gresham's Law: bad money will drive out good

Problems

- How are vague laws helpful?

2. Ceteris Paribus Laws

- Economic laws are often implicitly restricted
- “Other things being equal, the ice cream vendors will converge on one spot”

Problems

- How can such laws be helpful if we don't know whether “things are equal”?

3. Abstraction in Models

- Economic models are highly abstract
 - ice cream vendors moving on a line
 - uniform distribution of buyers
 - etc.

Problems

- Are some economic models too abstract?

4. False Assumptions in Models

- Often, the assumptions in economic models are false
 - utility-maximising agents
 - agents only care for distance
 - perfect knowledge

Problems

- How can we gain knowledge from economic models given that some of their assumptions are clearly false?

5. Theorising not empirically driven

- Much of economic theorising seems neither inspired nor driven by new empirical data
- Often, only already existing phenomena are explained

Problems

- Shouldn't science not usually be empirically driven?

Blaug 1980, p. xxi

Articles published in the AER

	1972–6 (%)	1977–81 (%)
1. Mathematical models without any data	50.1	54.0
2. Theoretical models without mathematical formulation and without data	21.2	11.6
3. Statistical methodology	0.6	0.5
4. Empirical analysis based on data developed by the author	0.8	1.4
5. Empirical analysis using statistical inference on published data	21.4	22.7
6. Other types of empirical analysis	5.4	7.9
7. Empirical analysis based on artificial simulation and experiment	0.5	1.9

Source: Leontief (1982)

6. No or Few (Controlled) Experiments

- Experiments are rare
- Especially in macroeconomics, we have no controlled experiments
- However, experiments have gained much ground in economics in the last 20 years

Problems

- Aren't experiments central to science?

7. Questionable Predictive Success

- It's unclear whether there's been much predictive success in economics
- Behavioural economics appears to show that most decision-theoretical predictions are mistaken
- However, this is in the end a hard-to-quantify empirical question.

Some Features of Economic Theories

1. Vague Laws
2. Ceteris Paribus Laws
3. High Abstraction in Models
4. Wrong Assumptions in Models
5. Theorising usually not empirically driven
6. Few (Controlled) Experiments
7. Lack of Predictive Success

POPPERIAN FALSIFICATIONISM

Popper's Views

1. Falsificationism
2. Problems for Economics
3. Possible Replies

Elements of Popper's Views

- **Demarcation Criterion.** Some claim is scientific if it can be falsified
- **Procedural Ideal.** Science should focus on severe testing of falsifiable predictions

Two Possible Objections to Economics

- **Economics is not a science.** According to our best criterion of what constitutes science, economics isn't one
- **Economics is flawed science.** As compared to our ideal image of the scientific procedure, economics is very flawed

Falsification

- The problem of induction
 - Swan 1 is white, Swan 2 is white, ..., Swan n is white
 - We can not infer that Swan n+1 is white
 - We can not **verify** the claim that “all swans are white”
- Popper accepts this implication: we can never positively confirm a theory
- But: we can **falsify** the claim “all swans are black”
- **Falsificationism**: Any science makes (in principle) falsifiable claims (Popper)
- A scientific theory allows us to specify a clear set of observations that would allow us to falsify it

Popperian Methodology

- 1) Consider only falsifiable theories
- 2) Always test a theory as severely as possible
Severe Testing: test for particularly unlikely, new evidence
- 3) An experimentally refuted theory must be rejected
Probably not after a single experiment, but after a history of refutations
- 4) An acceptable new theory must always have greater empirical content than its predecessors
Progress: Our ideas get progressively better, with newer theories containing the empirical content of the old

Popper's Views

1. Falsificationism
2. **Problems for Economics**
3. Possible Replies

What Hotelling did

- The proposed law is vague and restricted by (implicit) ceteris paribus clauses
- The model makes no clearly testable predictions
- No test or experiment is proposed or undertaken
- Contradicting evidence does not lead to the rejection of the model
- Some supporting evidence is given, but it's unclear by what criteria it is selected

A Harsh Criticism

Despite the fact that preaching falsificationist methodology has been very popular among economists, the method fails to provide a reasonably adequate set of rules for doing economics. Strict adherence to falsificationist norms would virtually *destroy all existing economic theory* and leave economists with a rule book for a game unlike anything the profession has played in the past.

(Wade Hands, “Popper and Lakatos in Economic Methodology”)

Popper's Views

1. Falsificationism
2. Problems for Economics
3. **Possible Replies**

Questions

1. Is the fact that economics fails to fulfil Popper's criteria a principled problem, or just a problem with how it is often (currently) practiced?
2. Does Popper's account apply to economics, or is it too much focussed on the natural sciences?
3. Is Popper's account of good science the correct account?

Thanks!

If you want the slides to this lecture, please email me at
matthias.brinkmann@philosophy.ox.ac.uk