

Economics 5250
Fall 2008

Dr. Lozada
Final Exam

This exam has 67 points. There are eight questions on the exam; you should work all of them.

Questions 1, 2, and 4 are worth 8 points each.

Question 5 is worth 9 points.

Questions 3 and 7 are worth 6 points each.

Questions 6 and 8 are worth 11 points each.

Put your answers to the exam in the blue books you have brought (if you remembered to bring blue books).

Answer the questions using as much precision and detail as the time allows. Correct answers which are unsupported by explanations will not be awarded points. Therefore, even if you think something is "obvious," do not omit it. If you omit anything, you will not get credit for it. You get credit for nothing which does not explicitly appear in your answer. If you have questions about the adequacy of an explanation of yours during the exam, ask me.

You have two hours to finish this test.

Answer all of the following eight questions.

1. [8 points] In what sense is an open-access fishery inefficient? What market failure causes the inefficiency?
2. [8 points] Construct an example to show that since “willingness to pay” is not equal to “willingness to accept,” it may be impossible to use Cost/Benefit Analysis to make a social decision. Your example should be about a realistic (though fictional) environmental decision which needs to be made, and part of your answer should be a brief description of that decision.
3. [6 points] Explain how “non-anthropomorphic utilitarianism” can be both consequentialist (“teleological”) and extremely supportive of measures to protect the environment.
4. [8 points] A passage in your textbook reads:

The third caveat is that substitutability may not be relevant to all natural resources. Neoclassical economics tends to work with the idea of fairly smooth substitution between inputs. It is because of this substitution that it is possible, analytically anyway, to obtain results which reduce the emphasis we might wish to place on natural resources. But natural resources are not like other resources in that their many functions include their role in, for example, the maintenance of biogeochemical cycles in the environment and on which mankind depends. Only if we can substitute wholesale for these functions can we sustain the idea of trading off between K_M and K_N .

What is the general topic within which this passage fits? What, broadly speaking, is the typical neoclassical view of this topic? What is a non-neoclassical view of it?

5. [9 points] Attached to this exam is an article from the *New York Times* from earlier this year.
 - (a) What are its implications for economics?

- (b) What are its implications specifically for environmental and natural resource economics?
6. [11 points] Suppose the instantaneous profit of a mining firm is graphed in Figure 1.
- (a) Make a graph with time on the horizontal axis and quantity extracted per period on the vertical axis. On this graph, show the implications of:
- a strategy of “maximize short-run profit;” and, by contrast,
 - a strategy following the Hotelling Rule.
- (b) Make a graph with time on the horizontal axis and profit earned per period on the vertical axis. On this graph, show the implications of:
- a strategy of “maximize short-run profit;” and, by contrast,
 - a strategy following the Hotelling Rule.
- (c) Argue that strategy (ii) is more plausible than strategy (i). Then argue the opposite.
7. [6 points] David Ricardo wrote in the early 19th century about agriculture’s “intensive” and “extensive” margins. What does Ricardo’s work have to do with the debate about long-run natural resource scarcity?
8. [11 points]
- (a) Briefly explain Figure 2a. You do not need to derive it.
- (b) Sketch the supply curve of the firm if the following describe its situation:
- Figure 2b.
 - Figure 2c.
 - Figure 2d.
- (c) Do you think this supply curve can be upward-sloping for all levels of price, regardless of how large?

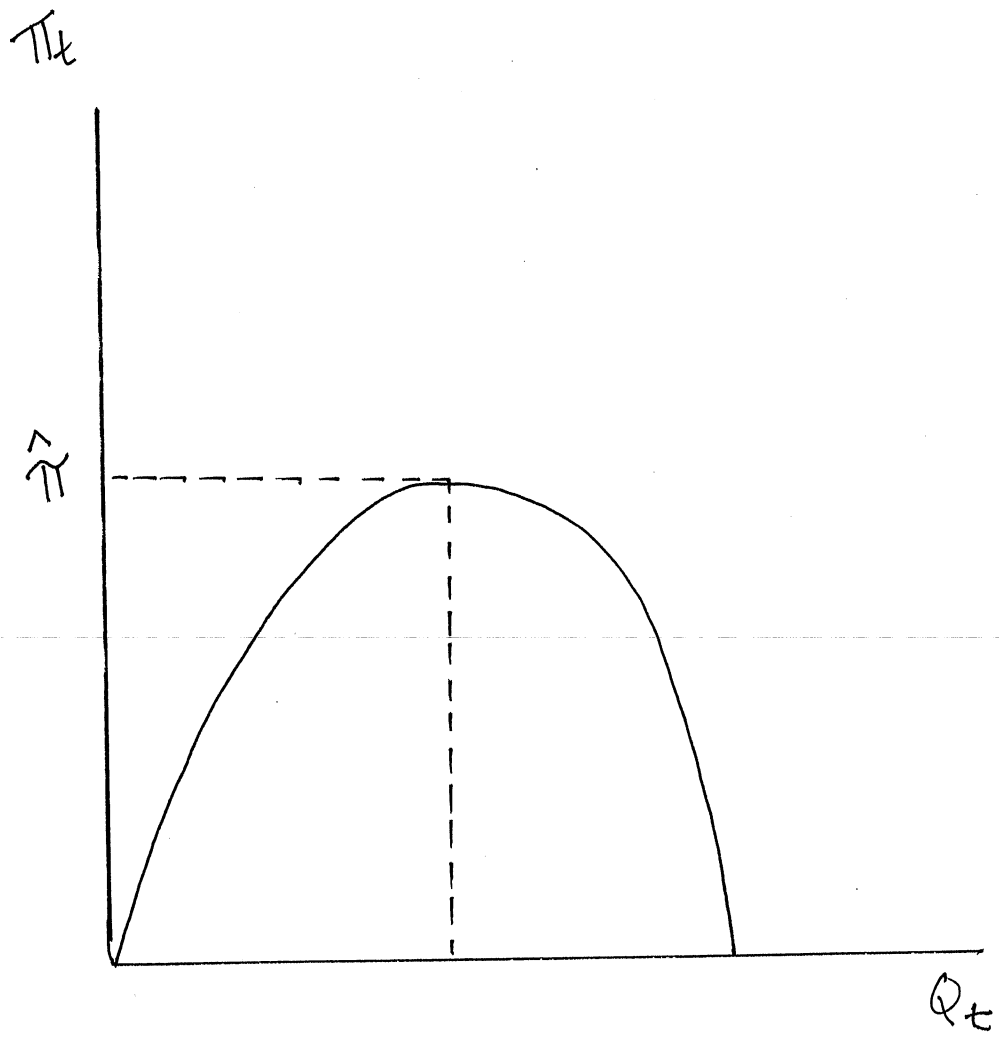


Fig. 1

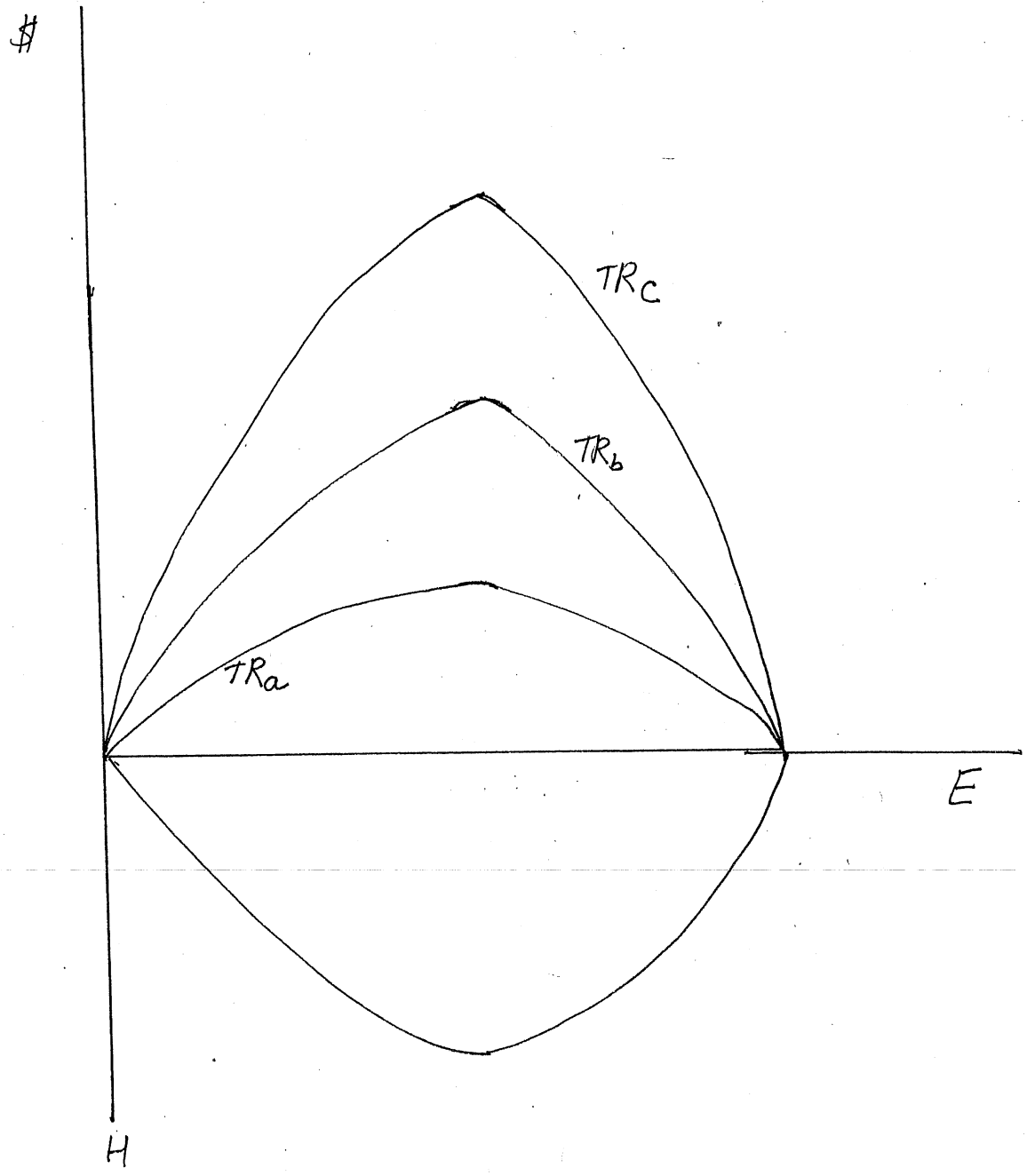


Fig. 2a

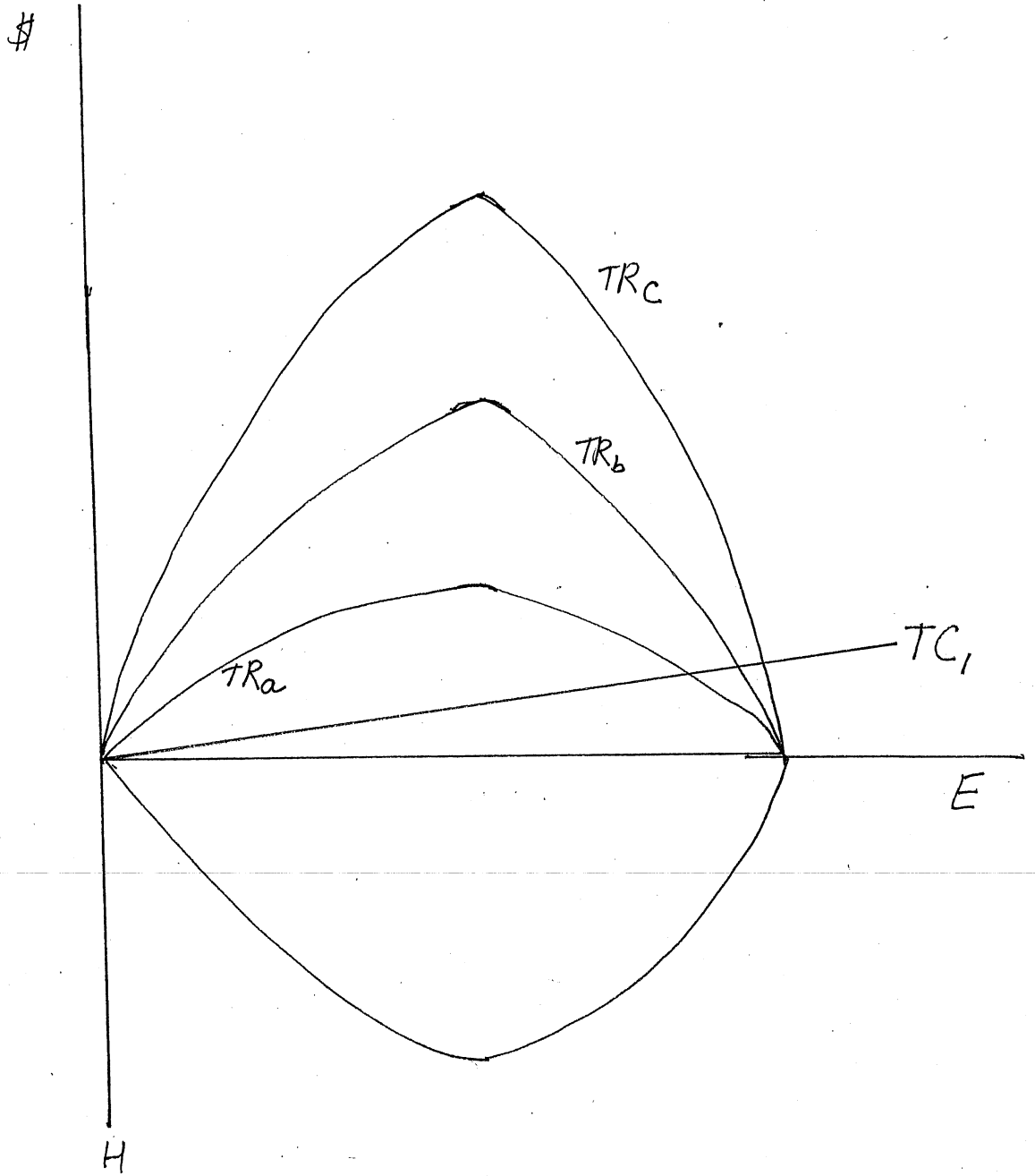


Fig. 2b

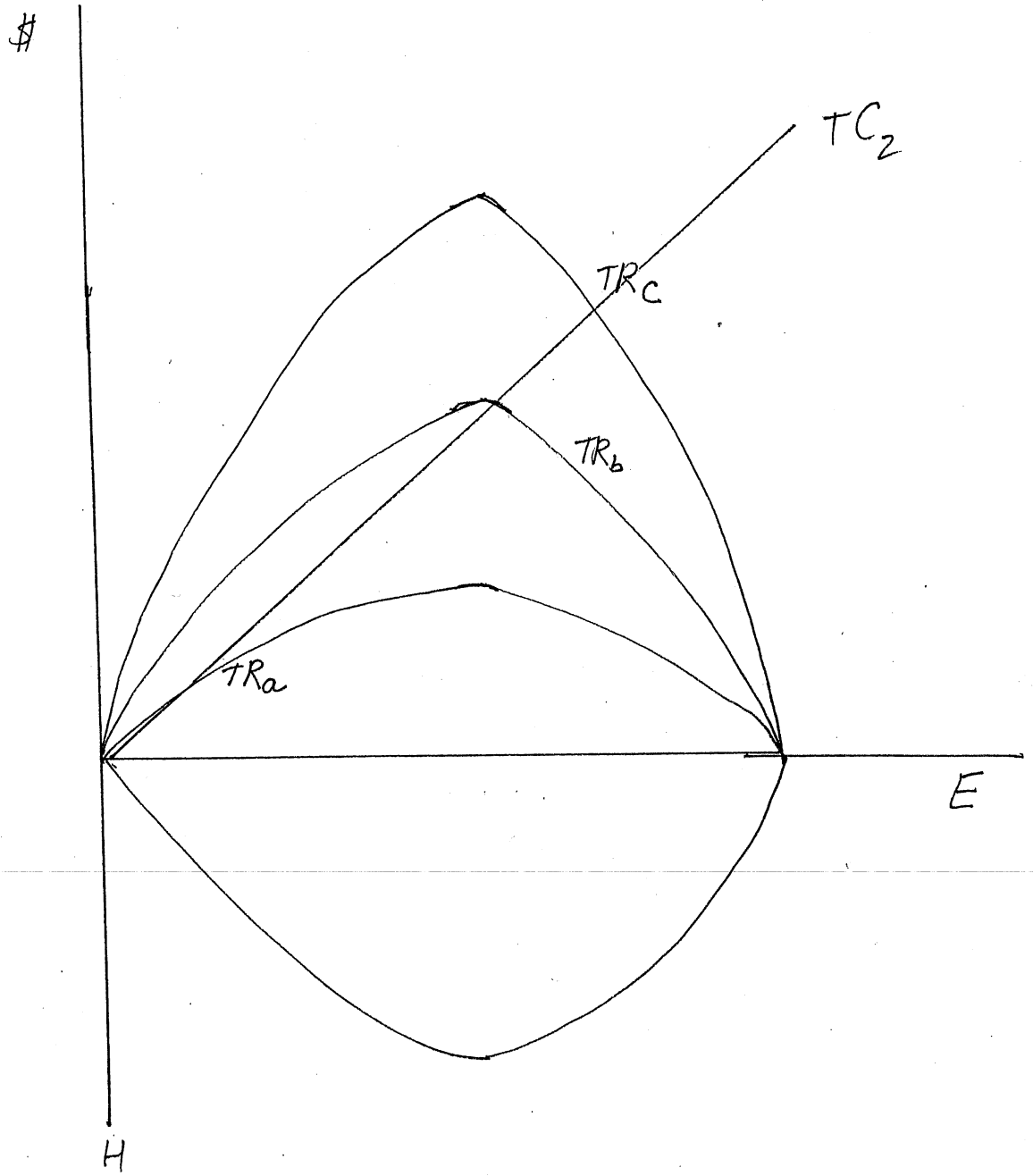


Fig. 2c

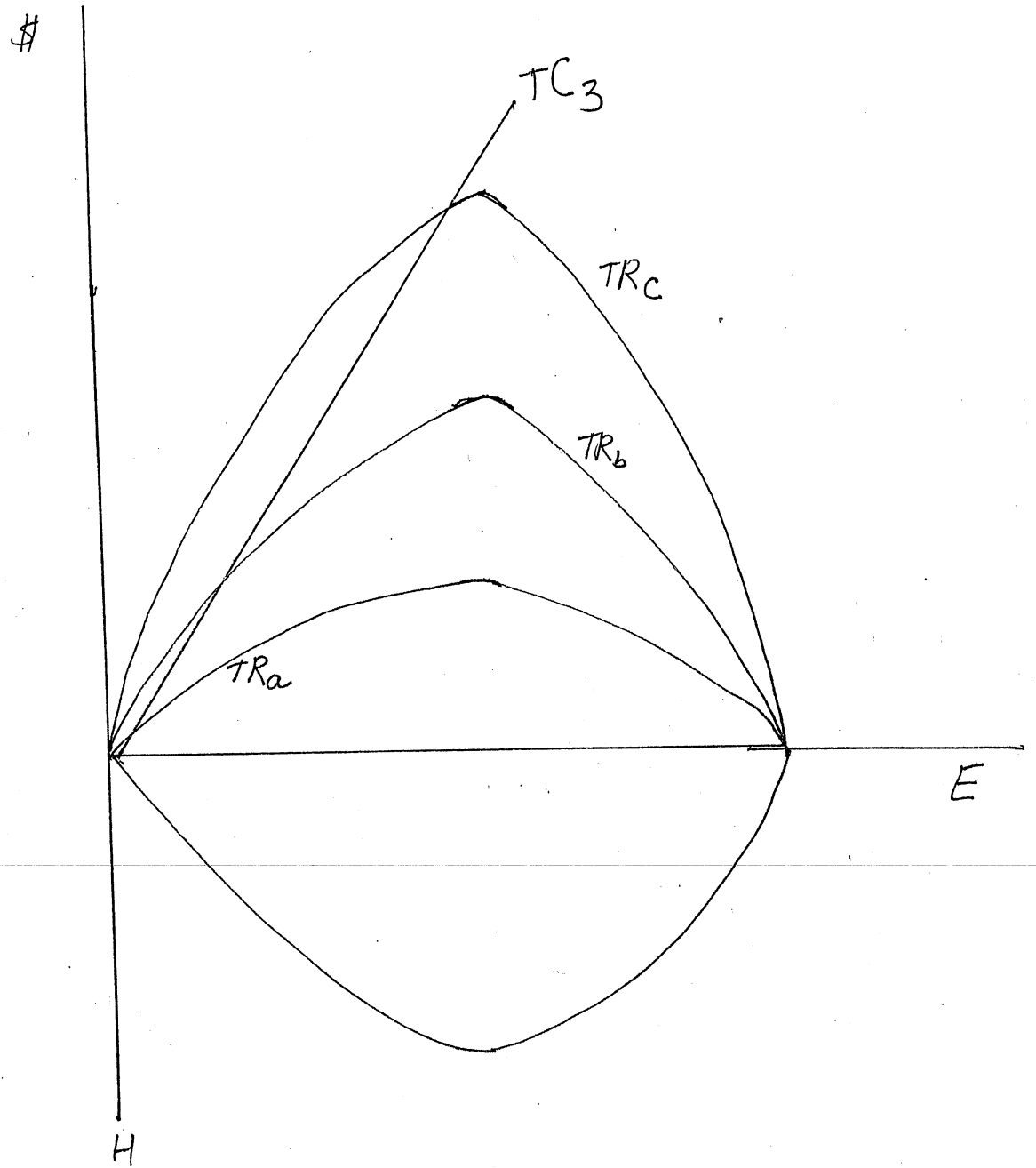


Fig. 2d

A Conversation with Daniel Gilbert; [Interview]

Claudia Dreifus. New York Times. (Late Edition (East Coast)). New York, N.Y.: Apr 22, 2008. pg. F.2
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At Harvard, the social psychologist Daniel Gilbert is known as Professor Happiness. That is because the 50-year-old researcher directs a laboratory studying the nature of human happiness. Dr. Gilbert's "Stumbling on Happiness" was a New York Times paperback best seller for 23 weeks and won the 2007 Royal Society Prize for Science Books.

Q. HOW DID YOU STUMBLE ONTO YOUR AREA OF STUDY?

A. It was something that happened to me roughly 13 years ago. I spent the first decade of my career studying what psychologists call "the fundamental attribution error," which is about how people have the tendency to ignore the power of external situations to determine human behavior.

Why do many people, for instance, believe the uneducated are stupid?

I'd have been content to work on this for many more years, but some things happened in my own life.

Within a short period of time, my mentor passed away, my mother died, my marriage fell apart and my teenage son developed problems in school. What I soon found was that as bad as my situation was, it wasn't devastating. I went on.

One day, I had lunch with a friend who was also going through difficult times. I told him: "If you'd have asked me a year ago how I'd deal with all this, I'd have predicted that I couldn't get out of bed in the morning."

He nodded and added, "Are we the only people who could be so wrong in predicting how we'd respond to extreme stress?"

That got me thinking. I wondered: How accurately do people predict their emotional reactions to future events?

Q. HOW DOES THAT RELATE TO UNDERSTANDING HAPPINESS?

A. Because if we can't predict how we'd react in the future, we can't set realistic goals for ourselves or figure out how to reach to them.

What we've been seeing in my lab, over and over again, is that people have an inability to predict what will make us happy -- or unhappy. If you can't tell which futures are better than others, it's hard to find happiness. The truth is, bad things don't affect us as profoundly as we expect them to. That's true of good things, too. We adapt very quickly to either.

So the good news is that going blind is not going to make you as unhappy as you think it will. The bad news is that winning the lottery will not make you as happy as you expect.

Q. ARE YOU SAYING THAT PEOPLE ARE HAPPY WITH WHATEVER CARDS ARE DEALT TO THEM?

A. As a species, we tend to be moderately happy with whatever we get. If you take a scale that goes from zero to 100, people, generally, report their happiness at about 75. We keep trying to get to 100. Sometimes, we get there. But we don't stay long.

We certainly fear the things that would get us down to 20 or 10 -- the death of a loved one, the end of a relationship, a serious challenge to our health. But when those things happen, most of us will return to our emotional baselines more quickly than we'd predict. Humans are wildly resilient.

Q. DO MOST OF US HARBOR UNREASONABLE NOTIONS OF WHAT HAPPINESS IS?

A. Inaccurate, flawed ideas. Few of us can accurately gauge how we will feel tomorrow or next week. That's why when you go to the supermarket on an empty stomach, you'll buy too much, and if you shop after a big meal, you'll buy too little.

Another factor that makes it difficult to forecast our future happiness is that most of us are rationalizers. We expect to feel devastated if our spouse leaves us or if we get passed over for a big promotion at work.

But when things like that do happen, it's soon, "She never was right for me," or "I actually need more free time for my family." People have remarkable talent for finding ways to soften the impact of negative events. Thus they mistakenly expect such blows to be much more devastating than they turn out to be.

Q. SO, IF WE DIDN'T HAVE THESE MECHANISMS, WOULD WE BE TOO DEPRESSED TO GO ON?

A. There may be something to that. People who are clinically depressed often seem to lack the ability to reframe events. That suggests that if the rest of us didn't have this, we might be depressed as well.

Q. AS THE AUTHOR OF A BEST SELLER ABOUT HAPPINESS, DO YOU HAVE ANY ADVICE ON HOW PEOPLE CAN ACHIEVE IT?

A. I'm not Dr. Phil.

We know that the best predictor of human happiness is human relationships and the amount of time that people spend with family and friends.

We know that it's significantly more important than money and somewhat more important than health. That's what the data shows. The interesting thing is that people will sacrifice social relationships to get other things that won't make them as happy -- money. That's what I mean when I say people should do "wise shopping" for happiness.

Another thing we know from studies is that people tend to take more pleasure in experiences than in things. So if you have "x" amount of dollars to spend on a vacation or a good meal or movies, it will get you more happiness than a durable good or an object. One reason for this is that experiences tend to be shared with other people and objects usually aren't.

Q. HAVE YOU JUST EXPRESSED A VERY ANTI-AMERICAN IDEA?

A. Oh, you can spend lots of money on experiences. People think a car will last and that's why it will bring you happiness. But it doesn't. It gets old and decays. But experiences don't. You'll "always have Paris" -- and that's exactly what Bogart meant when he said it to Ingrid Bergman. But will you always have a washing machine? No.

Today, I'm going to Dallas to meet my wife and I'm flying first class, which is ridiculously expensive. But the experience will be far more delightful than a new suit. Another way I follow what I've learned from data is that I don't chase dollars now that I have enough of them, because I know that it will take a very large amount of money to increase my happiness by a small amount.

You couldn't pay me \$100,000 to miss a play date with my granddaughters.

And that's not because I'm rich. That's because I know that a hundred grand won't make me as happy as nurturing my relationship with my granddaughters will.

Q. SO YOU HOLD WITH THE NOTION THAT "MONEY CAN'T BUY YOU HAPPINESS"?

A. I wouldn't say that. The data says that with the poor, a little money can buy a lot of happiness. If you're rich, a lot of money can buy you a little more happiness. But in both cases, money does it.

Q. ARE YOU, DAN GILBERT, HAPPY?

A. I am. I think good things are happening to me and will continue. I am not optimistic about the rest of the species, but I'm so blessed, it's almost scary. I'm sorry to disappoint you, but I have a wildly sunny disposition. I love to laugh. My book is full of jokes.

At Harvard, the social psychologist Daniel Gilbert is known as Professor Happiness. That is because the 50-year-old researcher directs a laboratory studying the nature of human happiness. Dr. Gilbert's "Stumbling on Happiness" was a New York Times paperback best seller for 23 weeks and won the 2007 Royal Society Prize for Science Books.