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Contradictions in the Teaching of Neoclassical Theory

THEA M. LEE

I'm standing at the blackboard, chalk in hand, listening to the sound of my voice rattling off a rote explanation of something I don't believe to a roomful of skeptical students. "Profits are zero," I'm saying as forcefully as good conscience permits, "because entry is free. Remember how we *defined* perfect competition and long-run equilibrium." Most of the students do not, in fact, remember how "we" defined perfect competition the week before, and will show an annoying tendency to forget the assumptions that define the model several more times before the semester is out.

Most radical economists get stuck teaching neoclassical economics at some point in their career. And most radical economists who have taught neoclassical economics have experienced the weird contradiction of resenting their students for being too slow to grasp something that they themselves find objectionable and problematic. This article is about teaching introductory microeconomics, with a focus on those concepts that students almost invariably have difficulty grasping. There are two important lessons to be learned from looking closely at these trouble spots and the ways in which teachers learn to deal with them.

The first is that the inability of introductory students to grasp certain concepts highlights some of the weaknesses in the theory itself. In other words, students tend to balk at those points at which neoclassical theorists make extraordinarily broad leaps of faith. These may be the areas of the theory's greatest vulnerability.

The second interesting point relates to the pedagogical process itself — and what happens to both teacher and student during that process. In order to convince students to swallow micro theory, teachers must break down some of the barriers of logic and common sense that students bring with them to college and then lose along the way. This process is not all that different from what happens to students in other phases of their "education." And its effect may be just as corrupting for the teacher as for the student. In the majority of academic situations, there is a lot of pressure — both from the economics department and from the students themselves — to teach the standard stuff in the standard way. Those combined pressures tend to encourage teachers to internalize the goal of "getting the material across," regardless of the teacher's own lack of faith in the material. Thus, the resentment or annoyance that we sometimes experience towards our students is really a signal that things are going well, that the students are still awake, and that there has been a glitch or a slowdown in the indoctrination process.

In my experience of teaching introductory microeconomics over the course of about four years at a large state university, I have found that the concepts students almost without exception object to, or have trouble learning, include the zero-profit equilibrium in perfect competition, profit maximization as a

University of Michigan, Ann Arbor, 80 Kirkland St., Cambridge, MA 02138.

marginal concept, and allocative efficiency. The difficulty does not occur because the students are unintelligent or poorly trained, nor because these particular topics are especially complex or mathematically rigorous. The problem lies rather in the material itself — and its contradiction of the students' own limited experience of the economic world. Most students have enough basic intuition or anecdotal evidence to reject the sterile, over-simplified, pre-packaged version of the economy that emerges from economics textbooks.

The source of this dissonance is the conflict between the stated purpose of neoclassical economics — to explain economic decision-making and the "natural" functioning of markets — and its only barely concealed true agenda — to prove that laissez-faire capitalism is the best (most efficient, most desirable) of all possible economic systems. Since this true goal represents a political, and not a scientific, mission, it is inevitable that confronting reality would be a weak point for neoclassical economics. Forecasting is one place in which this weakness shows up. Teaching at the introductory level is a second.

The core of a standard microeconomics course is perfect competition. As Joan Robinson (1962) wrote, "[I]t is competition which equates the margins, distributes resources so as to maximize utility, and generally makes the whole scheme work." Perfect competition underlies all supply and demand analysis at the introductory level, including international trade and labor markets. It is the glowing ideal compared to which all government intervention (in the form of minimum wages, rent control, or agricultural policy) is made to look sloppy and "distorting." And yet it is practically impossible to teach.

The standard method is to set up the model by outlining a set of assumptions that describe a certain kind of market: there are "many" firms; each firm is too small to affect the market price; the product sold by these firms is homogeneous or perceived to be so by consumers; entry into the market is free in the sense that any outsider could start producing the good, using the same method as the incumbents, if it were perceived as profitable to do so; and, last but not least, all the players — consumers and firms — have "perfect information" about prices, products, and costs. Each of these assumptions "buys" some desirable result. For example, free entry allows us to deduce zero profits (in equilibrium); and the assumption that each firm is too small to affect the price, in conjunction with the assumption that firms maximize profits, yields allocative efficiency.

Students often object at this stage. The sheer number of assumptions bothers them, in addition to the very serious problem that they cannot, off the top of their heads, identify any markets that even come close to satisfying these criteria. Some textbooks devise creative ways around these objections. For example, one standard textbook, Lipsey, Steiner, and Purvis' *Microeconomics* (8th edition), sets up the perfectly competitive model with only two assumptions, instead of the usual four or five. In the Instructors' Manual, they explain their logic: students always get "hung up" on the assumptions that the firm's product is homogeneous and that there are "many" firms in the market. So the authors left them out. They make a half-hearted argument that these assumptions are sufficient, but *not necessary*. This is just wrong, however, and they end up sneaking the assumptions in several chapters later, where they are needed to clarify the distinctions between perfect and monopolistic competition, and between perfect competition and oligopoly.

In addition to the explicit assumptions, there are numerous hidden assumptions that are necessary to make this model work smoothly. Students usually don't get the opportunity to challenge these, however, because they are deep beneath the surface. The most striking is the implicit assumption of long-term stability of the model itself. Long-run equilibrium is defined as a state in which there is no pressure to change, by which is narrowly meant, no desire to enter or exit the market. Yet the scenario presented to students as *the* basic market structure — perfect competition in long-run equilibrium — is nonsensical, given the assumptions of the model and the definitions of the terms. If firms really want to maximize their profits, as we assume they do, then a zero-profit equilibrium would not be a situation in which there was no pressure to change. Firms would have every incentive, as well as opportunity, to alter their market structure by reducing the number of firms or by differentiating their product. The profit-maximization assumption clashes with long-run equilibrium in the perfectly competitive scenario.

Although students don't usually make this exact argument at this stage, this is the concept that slows them down. Many of them would like to be entrepreneurs or executives, and they cannot picture themselves sitting around docilely, running a crummy little widget-producing company that can't even afford to advertise. No one they know runs or aspires to run a perfectly competitive firm, so it is understandably difficult for them to accept perfect competition as the norm in the economy.

Teachers of introductory economics tend to use pedagogical methods that are designed to finesse the flaws and vulnerabilities of the theory. For example, students are often very resistant to marginal analysis, especially when it is applied to profit maximization. Marginal analysis is counter-intuitive because it requires drawing a global conclusion from tiny, isolated pieces of information. Consider what we ask students to believe: If they have information about the cost and the revenue of a single unit (the *last* unit produced), they know enough to say whether or not this firm is earning the maximum profits possible. These two items of information (marginal cost and marginal revenue) are assumed to summarize all necessary information about technology, tastes, and competition.

I always dread teaching profit maximization because of the inevitable protests and the puzzled frowns it elicits. Interestingly enough, it is often the students with the most prior business experience — many of them successful entrepreneurs — who are the most confused by this section. They never seem to believe that profits are necessarily greatest where marginal revenue equals marginal cost. I usually "prove" it to them three ways. I use calculus, a numerical example, and graphs to demonstrate the point. This technique — of using several allegedly distinct methods to prove a point — is common not only at the introductory level in economics, but all the way up to graduate school. The catch is that all three methods rest on the same shaky assumptions, and it is in these assumptions that the doubt and confusion lay. Rather than address the versimilitude of the assumptions, teachers are trained to throw mathematical techniques and geometric tricks at the blackboard, so that the students are too busy scribbling in their notebooks to ask any relevant questions. But in fact, they are right to be skeptical. Unless the marginal revenue and marginal cost curves happen to be shaped the way they are drawn in the textbook and on the

blackboard, there is no guarantee that the point at which they cross is a global maximum. Furthermore, there is little reason to believe that real-life cost and revenue curves are smooth and continuously differentiable with single maxima or minima.

Finally, believe it or not, I have trouble convincing students that micro theory conclusively proves that capitalism is the best of all possible economic systems. Most of them are big fans of capitalism, but for all the "wrong" reasons. They like capitalism, because they want to be rich one day, and everyone knows communists don't get rich, or if they do the government takes their money away. Neoclassical economists never make such selfish and unsophisticated arguments in favor of capitalism. The mission of neoclassical microeconomics is to make a better, less selfish-sounding case for laissez-faire capitalism. Economists wouldn't get very far if they advised politicians and lobbyists to argue that unregulated capitalism is desirable because it allows them and their friends to get rich. They argue instead that any government meddling is insidious and likely to backfire — "to hurt the very people it is trying to help."

A vague concept of Pareto optimality underlies the basic economist's argument that competitive markets maximize social welfare. This is usually taught at the introductory level by defining "allocative efficiency" as a state in which there is no reallocation of resources that would make any one person better off without making someone else worse off. In other words, you're not allowed to take anything away from a rich person to make a poor person better off, but you are allowed to implement policies that impoverish a whole group of people. Allocative efficiency requires perfect competition in *every* market, no externalities, and no government intervention.

I take some pride in the fact that I have never successfully taught the concept of allocative efficiency. Getting this concept across requires two things that my students seem to lack. The first is acceptance of the perfectly competitive model. The second is a value placed on social welfare. For students who are single-mindedly concerned with their own money-making potential, talk about efficiently allocating *all* of society's resources seems like a waste of time.

I once spent about an hour talking to a student who could not see what was "wrong" with monopoly. He seemed to suspect me of making some leftist critique of big business, when all I had presented was the neoclassical argument about allocative inefficiency and deadweight loss.

The basic problem is that micro theory is *too* socially self-conscious to be of any use in explaining the economy. The students are ideologically receptive to the policy recommendations of neoclassical economics, but they are perhaps too young for its social message. As freshmen and sophomores in college, no one has yet asked them to justify capitalism — and without that need to apologize or to justify, neoclassical microeconomics is, simply, irrelevant.

In some ways, introductory microeconomics is a crucial turning point, especially for politically conservative students. It is a point at which a student must choose between pragmatism and ideological purity. Students can either go to business school and learn about advertising, aggressive marketing, investment banking, and how to get rich through speculation, or they can choose the path of the academic defender and embrace the perfect-competition fantasy. Of course, most business people have enough academic economics background to

hold their own at cocktail parties, but the "tools" they learn in Intro Econ are not the tools they use to run their businesses. The absolute irreconcilability of the two paths is clear if one tries to imagine a business school that *assumed* perfect competition in all of its classes, including marketing and investment.

Teaching introductory microeconomics is like witnessing a head-on collision between the values and beliefs students have grown up with and the sheer unbelievability of the models needed to support those values and beliefs. Our job is to cherish and nurture their skepticism, so that it survives the semester intact. We need to remind them constantly what the explicit and implicit assumptions for each model are and to expose the tricks that textbooks and teachers use to make the material seem more reasonable than it is.

REFERENCES

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