

1 | Rethinking Economic Behavior

Economics, Microeconomics, and Ideology

There are pressing reasons to call for a microeconomics of greater empirical veracity and more methodological scrupulousness, thus of greater descriptive as well as analytical power. In this study I present and develop an alternative paradigm for general economic theory, which will, I hope, contribute to that double aim.

In the first instance such a microeconomics is needed in order to characterize an economy and an economics in which the productive qualities of the work force are not simply a given factor of production but are produced within the economy, produced, that is, in no way fundamentally different from other producer commodities. Of itself, this point is deeply inconsistent with much of the way in which we theorize a modern capitalist economy.

One of the main implications of this point is that the structure of consumer demand is itself altered by the production of a work force subject to qualitatively and quantitatively different social and other investments. Accordingly, I present a microeconomic analysis that rejects customary atomic and prescriptive individualism, substituting in its place an archetypal analysis of the production of the work force that is both social and materialist in character. Analytically speaking, I want to introduce a logic of partially constrained behavior into the theory of final or consumer demand. Crudely, people may freely choose how and when to spend today's income, but they are constrained by its size (and security), whatever debts and obligations they have previously incurred, their own social and cultural views and values, and institutional constraints of various kinds.¹

There has been a revival since the last decades of the nineteenth century of "free market" ideology and its associated political/social concept, the "Open Society." But if the economies of the advanced countries are as

I characterize them in this study then the “freedom” and social spontaneity that market and Open Society theorists claim to discover are critically illusory. Accordingly, I point up as appropriate the general tendency in modern societies for “free” and spontaneous phenomena to recede before those that are essentially fabricated according to the program and needs of one or more large institutions. Or, more simply, I underline the multiple ways in which general social, cultural, and political relations are being absorbed into and reorganized by relations of production emanating from very large institutions, preeminently the transnational corporate firms and their allied states.

That this vast subject can be dealt with only fragmentarily in these pages shouldn’t belie its importance for economics and, indeed, for social theory and politics generally. The emergence of an institutionally fabricated society or, as I’ve expressed it elsewhere, of a “postsociety industry,” is among the dominant tendencies of contemporary history. Mainstream microeconomics, with its doctrines of consumer sovereignty and “free choice in a free market,” serves powerfully to erase the very existence of this development, and to that extent, too, it must be faulted.

A Socially Fabricated Work Force: Implications

It is, of course, widely understood that it is precisely in the most advanced and successful economies that the production and alteration of the productive qualities of the work force are most marked. We accept that it is not the quantity of commodities consumed nor the opulence of their physical infrastructures that distinguishes the advanced from the developing economies but the relative size, amplitude, and variety of the skills and knowledge deployed, the health, the ethos and morale, and the adaptability of their respective work forces. And, to a greater rather than a lesser degree, these productive qualities have largely developed, been maintained, and been altered over time in the advanced countries as a result of deliberation and intent, not as a product of market or other forms of spontaneity. But, if this great fact is well understood, its implications for economic analysis are not.

The existence of a work force with more or less socially fabricated productive characteristics carries at least nine implications for both economics and economic science, each of which is quite substantial and none of which fit particularly well within the dominant economic paradigm, that is, neoclassical “microeconomics” as promulgated in the major universities and economics associations:

1. There is an economic system or order in the production of the work force. Interestingly, this is a major subject of interest in development economics and a major topic in the economic policy sciences, but it has not entered into fundamental theory. There the standpoint is only static and subsocial: (a) static in that the productive qualities of the work force are taken as a given in the analysis, as exogenous inputs solely, and not conceived within an interactive circuit with other productive forces and relations; and (b) subsocial in that one is concerned primarily with the productive qualities of a firm or industry's work force and not of the economy per se.

2. This in turn implies that human capital theory ought to be raised to the social level and not, as it is now, treated from the standpoint of this or that individual acquiring personal human capital that he or she may individually deploy. We therefore need an analytical treatment of human capital formation as it occurs at both the macro- and microlevels of economic analysis.

3. But this in turn implies that the very concepts of a "labor force" or "work force" are inadequate. Both concepts assume, and hence obscure the processes that determine which parts of the population will be trained, socialized, and employed, in what relative numbers, with what rewards, and with what menus of skills and knowledge. We need a more basic or generic concept that can then be analytically developed as needed. From Marx I've borrowed the (excessively generic) concept of "labor-power" but with the aim of developing the more concrete concept of "the Social Labor-Power." The latter refers to all of the potential labor exertions of a society that could or do contribute to the production of goods or services or, equally, that help to alter the productive characteristics, directly or indirectly, of other producing persons. Obviously, parenting and teaching must be included in the activities that constitute the social labor-power. It follows that points (1) and (2) will have to be discussed in terms of the social production of the social labor-power.

4. To produce a social labor-power is, of course, to produce some elaborate system of division of labor. And in a capitalist economy that division of labor, rather than another, ought to offer a special advantage to the process of private capital accumulation. That is, the produced division of labor, one would imagine, ought to offer a greater advantage to the capitalist economy than other notional possibilities or historical divisions do. In short, we need to analyze the social labor-power and its division of labor as forms of productive capital that interact within the wider circuit of productive capital taken as a whole.

5. If in the production of a modern capitalist work force we assume

that differential investments are made to produce the different parts of the division of labor, then these investment patterns will divide consumer preference patterns into various types. This, of course, implies an analysis of consumer or final demand that differs somewhat from what we find in textbooks and the familiar “micro” course; in place of the essentially “free” or unconstrained nature of consumer demand, which we see in the textbooks, we must explore the implications of partially constrained demand, that is, constrained at least to the degree that it supports the reproduction of a diversely skilled and equipped division of labor.

6. Further, if at least some consumer preferences, expenditures, and consumption behavior are socially constrained, however indirectly and mildly, with a view toward producing a worker who is in some sense “better” than his or her predecessors, it follows that at least some consumer or final consumption has a productive character and is a form of productive consumption. Then the question becomes: What social forms does this productive consumption take and how do they reveal empirically that they are in fact a form of productive consumption?

7. In neoclassical economics, the demand for producer goods is a derived demand—derived, that is, from consumer preferences. These preferences are conceived of as autonomous and sovereign within the economy. But a socially fabricated work force implies, as we have seen, that consumer preferences themselves will be altered in patterned ways by investments made in light of the needs or desires of the existing and prospective economy. Accordingly, we must conceive of a dynamic microeconomics in which, so to speak, supply and demand more or less continually refashion each other. We must not, I hasten to add, conceive of a microeconomic analysis that, say, traces an equilibrium state that gives way to disequilibrium and then moves toward a new equilibrium. Instead we require an analysis in which equilibrium conceptions have no place. In short, an intrinsically dynamic analysis seems called for, an analysis in which qualitative change over time is the “normal” situation. Among the requirements that this imposes on the theorist is that duration of time must be positively introduced into, rather than assumed out of, fundamental microeconomic analysis. This introduction of so-called real time into microeconomics is the most important paradigmatic root of the present study.

8. From the previous point it follows that we must alter our concept of price and the price system. Briefly, to a modern economist of virtually any persuasion the price system is both a univocal indicator of underlying economic “reality” and a measure of the relative worth of each good denominated within it. The key terms here are *univocal* and *measure*. The

price at which a given good or service is exchanged is understood—at least “in principle”—to be uniquely determined by underlying economic processes. And that price is, “all things holding equal,” conceived to be a genuine measure of relative worth and not merely a useful index. It is difficult to understand how these claims can be justified in an economy that is intrinsically dynamic.² As we pursue the matter further, it will prove both necessary and fruitful to conceive of the “price” of any good or service as having no more than situational validity and of being but one among several equally significant indices of relative worth. In the terminology I adopt, we will speak of a relativist rather than a determinist microeconomics, of price nominalism rather than the (present day) microeconomics of price realism.

9. In the main, economists have treated the distribution of goods and services under the rubric of “The Market,” a notional space in which free persons *exchange* equal amounts of goods and services in instantaneous time. If the medium of money is introduced into the analysis, it is assumed to have equal marginal utility for each participant. Since Walras, the narrative image called to mind in the categorical schema is that of an auction in which both would-be purchasers and would-be sellers bid against one another (Walras [1926] 1977: 83ff.; 169ff). However, a pattern of differential investments made to produce and alter the labor force implies that some modes of distribution of goods and services are not well or, more to the point, accurately depicted in this bid/ask schema. One of the logical requirements on a new microeconomics is that it must analyze and develop forms other than the “free” forms of price-denominated buying, selling, and other kinds of distribution.

It seems clear that we need to revamp microeconomic analysis. But it follows, especially from point (6), that this “micro” be in the descriptive and epistemological senses a richer one than that presented in the current textbooks. In short, we need a microeconomic analysis that takes into account all the ways in which an existing economic organism skews different consumer preferences and so-called final consumption with a view toward producing a social labor-power with differing productive—hence earning and thus consuming—characteristics. Obviously, the treatment of time within microeconomics must be reconsidered.

Bringing Time into Microeconomics: Alternate Approaches

In the neoclassical mainstream, one theoretically introduces duration of time through the rate of interest or some other parameter representing

the cost of capital. Then fundamental theory is developed on the basis of microeconomic propositions holding only for instantaneous time. It is possible, however, to formulate an alternate microeconomics that incorporates positive durations or intervals of time in the analysis. This “microeconomics in real time” does not have the theoretical elegance of the neo-classical edifice (see note 6, however). But it does appear to offer other advantages. First, the new analytical apparatus can be shown to generate every valid proposition of the neoclassical view. Second, it points up in a newly compelling way certain conundrums associated with the mainstream “microeconomics.” Third, as intended, it allows us to bring into microeconomic analysis the production and reproduction, the uses and rewards, of the social labor-power and its various subsets, including, of course, the labor force.

The development of a microeconomics in real time will be easier to follow if we recall the salient features of the instantaneous micro now dominant. If, in the familiar mainstream manner, the modal *exchange* relationship between seller and purchaser is understood to occur in *instantaneous time*, then:

1. The relationship is characterized as occurring between a single seller and a single purchaser, a *one-to-one* relation.
2. In this relationship both seller and purchaser are *free* to make the exchange or not.
3. They are both *equal* in the exchange relationship.
4. They are able to *fully transfer* properties, goods for goods in a barter transaction, and money for goods in a sale/purchase exchange.

Then all *exchange relationships* in a given economy in a given instant may be conceived as follows.

5. They are readily conceived as parts of single *system* of exchanges that mutually condition each another, as described, for example, in the market narrative.³
6. They yield the logical possibility of a *general equilibrium model* of the entire economy.
7. Under suitable conditions, this economy can yield an orderly cosmos of ratios of exchange, that is, *comparable prices*.
8. This possibly may result in a *Pareto optimum* with respect to the final distribution of goods (and services).⁴

Both the narrative plausibility and the inferential power of each of these 1 + 8 propositions are crucially dependent on the assumption of instanta-

neous exchange, that is, the assumption that exchange per se occupies no positive interval of time.

The first, conditional claim—that is, *exchange*—is of course merely a definition. In a narrative mode one would speak of an “agreement,” with the moment of agreement between seller and purchaser constituting the reality of the exchange. From a purely analytical standpoint what is central is that exchange is here logically imagined to occupy no positive duration of time.

Proposition 1 (*one-to-one*) is simply part of that definition, that is, that an exchange is defined as a relationship occurring between two parties. Of course, in actual exchange relationships one or more of the parties may consist of a group (e.g., a partnership or consortium) or institution (e.g., a corporation or government agency) or there may be three, four, or more parties acting as middlemen (brokers, factors, estate executors, etc.) or even principals. In the neoclassical representation of these things, an empirical multiplicity of different parties in an exchange or linked sets of exchanges can be reduced in principle, without distortion, to a set of discrete one-to-one exchanges, each with no further analytical content than that a unit-set party has freely exchanged something with another unit-set party. Here the assumption of instantaneousness provides the reduction with both narrative and analytical plausibility.

Propositions 2 (*free*) and 3 (*equal*) overlap their meanings. In the analytical mode, the assumption of instantaneous time is essential here, for it gives a formal character to the freedom and equality of the exchangers, that is, it excises from the exchange relationship any possible material disparities in need between the parties or in their relative power—say, in their bargaining power. All that is analytically essential here is that the exchange relationship is understood to be symmetrical in its logical form, that $x E(x\text{changes with}) y$ is equivalent to $y E x$.

In proposition 4, the weight of the assertion is not on legal property per se but on the *full transfer*, that is, whatever services are alienated in an exchange are fully alienated. If a good, G , is transferred from seller to purchaser, all of G 's services are thereby transferred. This stipulation doesn't exclude the buying and selling of, say, leases, futures, or shares in a company. What it does exclude is the possibility that the seller, in spite of the sale of some service of G , nevertheless retains a proprietary claim in that same service.⁵

As to propositions 5 (*system*) and 6 (*general equilibrium*), the latter's analytic equivalent 7 (*comparable prices*), and 8 (*Pareto optimum*), their narratives are too familiar to bear repeating. However, none hold in the neoclassical “micro” unless one assumes only instantaneous time.⁶

Logically, the situation in proposition set *Inst* {1 + 8} is as follows. The proposition subset, 1–4 constitutes the necessary condition for the validity or “truth” of propositions 5, 6, 7, and 8. Moreover, the truth of proposition 5 is the necessary condition for 6, proposition 6 is analytically equivalent to 7, and proposition 7 is the necessary condition for 8.⁷

Introducing Positive Time

At the narrative level, at least five classes of contemporary goods and services appear to require “exchange in time” in order to render their microeconomic properties without essential distortion. We have already pointed to the role of time in the shaping of the productive qualities of the social labor-power. We will take up that subject later. Here I want to focus on four classes of goods that we normally conceive to be meant for “final consumption.” These include (1) automobiles and other mechanical appliances, (2) electronic goods such as personal computers, (3) semi-prepared foods, and (4) medical, retirement, and kindred plans. Because I want to conceive of such microeconomic transactions in these goods as occurring in positive time, the narrative will be clarified if we speak of sale/purchase rather than exchange. The reason for the terminological shift will become apparent shortly.

Before going on, three other observations should be taken into account. First, we must make explicit the implicit assumption of *Inst* {1 + 8} that, as is conventionally assumed, a good or commodity is comprised of some definite ensemble of services (or Marxist use-values) and that it is these that are transferred in the exchange. Second, we should note in passing that these four classes of goods are distinguished by the fact that they, unlike Victorian cotton cloth or classroom “widgets,” represent goods that are both qualitatively characteristic of a modern economy and of quantitative significance within it. Finally, in the neoclassical edifice it is held that the role of final consumers is ultimately decisive. Accordingly, in the discussion below I initially conceive of the sale/purchase in each case as occurring between the producer/seller and the purchaser/(final)consumer.

We can begin by noting that for at least these classes of goods or commodities all of their services (e.g., those of the personal computer) are not passed to the purchaser via the initial purchase (i.e., they are not instantaneously and fully alienated in an exchange). In part, the PC, of course, is like a piece of capital equipment, which yields a stream of services over time. But there is more to it than that. One buys certain potential services

of the PC at the initial sale/purchase—typically that it will be adaptable to future peripheral add-ons and software changes—but at least some of those services are not transferred to the buyer, nor can they be, at the point of sale. They will be transferred later, when that equipment or software is invented, produced, and marketed. Thus, the transfer of the entirety of the PC's normal services to the purchaser here occupies a positive interval or intervals of time. This interpretation is supported, moreover, by the observation that the PC is engineered to be adaptable to future software and equipment, that is, to future markets that can only be conceived as generic, not specific. These are possible future markets for as yet undesigned equipment or software and not identifiable markets for goods or services of established characteristics.⁸

A new car purchase has perhaps somewhat the same character since it will involve subsequent purchases of parts, repair services, and auxiliary equipment. However, it is not uncommon for those who wish to drive new vehicles to lease the car, with the lease including arrangements that relieve the lessee of proprietary responsibility to service and repair the car. Even the risk of a "lemon" is obviated by such contracts. Obviously, then, there are no impassable barriers preventing PC makers from offering similar leasing arrangements to their customers, and it is theoretically possible to conceive of all new car and PC purchases *as if* they were covered by such futures contracts, thus bringing this area of sale/purchase under *Inst* {1+ 8}.

One can analogously deal with health, dental, life insurance, and retirement plans: One contracts instantaneously in the present to make a stream of timed payments in exchange for a stream of timed services. Of course, as we know from the headlines today, the vendor may impose changes in the plan via bankruptcy or by unilaterally changing coverage, delaying retirement age, or reducing benefits. But on the model, say, of trip cancellation insurance, one could conceive of various insurance schemes with an actuarial basis that would compensate for such eventualities. Of course, there is a certain paradox in representing theoretically a free, unregulated market system within which uncertainty and risk have been insured out of existence. Be that as it may, from a theoretical standpoint the axioms represented by *Inst* {1 + 8} need not be jettisoned on account of any of these new varieties of buying and selling, although they do begin to put greater theoretical strain on the other levels of the neo-classical model, particularly on how we "interpret" the model.

This observation is further reinforced by the fact that the relationship between seller and purchaser for these classes of goods is not modally one-to-one but *many-to-one* since the producer/sellers of the software or

printer, scanner, or discs need not be and often are not identical to the PC manufacturer and yet become necessarily involved, at the point of the initial sale/purchase in the (eventual) passage of the PC's services, or use-values, to the purchaser. Similarly, one enters into real but similarly tacit future relations with the petroleum and tire industries when one purchases a car; with doctors, nurses, and hospitals when one buys a health plan; and with semiprepared food producers when one purchases a microwave.

Here we face a theoretical quandary of sorts. One could treat the purchase of the car, repairs, and gasoline as autonomous economic purchases in one-to-one, unrelated relationships with as many different sellers. Prima facie this gambit would analytically bring the automobile purchase securely within the neoclassical "micro," although it makes no narrative sense to imagine that, say, gasoline prices and availability have no significant effect on auto purchases. We'll return to this issue shortly.

Even more stressful for *Inst* {1 + 8} is the fact that at the initiation of the sale/purchase the purchaser/consumer of a PC, for example, actually pays a bit extra for the potential services of the PC, although some of those services may not pass to him or her until later in the sale/purchase interval, for example, when he or she goes on-line or acquires the latest laser printer. To this extent, then, the purchaser has not merely exchanged money for goods but has made an *advance* (i.e., advanced money) to the seller for what are still only potential services, with the latter passing to the purchaser only later and typically by means of some further expenditure of money to one or more producers/sellers.

Here we begin to run seriously afoul of proposition 4 of *Inst* {1 + 8}. Looking again at the PC: the buyer buys it, takes it home, and uses it when and as he or she likes. It's his or her property. Or is it? Clearly not all the normal services that the buyer paid for and presumably wanted to possess have passed to his or her proprietary control via the initial sale/purchase; the buyer has to make payments to another producer/seller to get laser printing, go on the Web, or "enjoy" e-mail.

We can adjust our conception of what is and is not our "property" to cover this sort of case under proposition 4 (*transfer*) of *Inst* {1 + 8}, but in doing so we are stretching the meaning of *property* into areas that are relatively unfamiliar even to the most permissive property theorist, the most litigious property lawyer, the most avant-garde copyright specialist, and so forth. At any rate, the PC, considered as an ensemble of services, is not "mine" at the point of initial sale in anything like the same sense that, say, a pencil or typewriter is mine. And, of course, I have made a payment for services I can't yet enjoy, quite literally an advance payment.

This advance, with the consequent need to realize its value with further expenditures later, entails a kind of effectual *lien* on at least some of the future earnings of the purchaser/consumer for gasoline, repairs, and insurance for the car; on-line services for the PC; or, more prominently, regular payments into the health plan.

Following this logic, full transfer or alienation of this classic private property does not occur until the completion of the sale/purchase interval, with at least some of the services that comprise the goods in question remaining effectively within the proprietary ambit of one or more of the sellers. The simple identity between sale/purchase and full transfer of services does not hold. Taken as a whole the services of the good in question are not well described as being exchanged to the purchaser. As their transfer is distributed over time, the process is more accurately characterized as a complex, serial *distribution* of the PC's services than as a simple, instantaneous exchange.

Insofar as the services of the good in question (say, the microwave oven or CD player) must be complemented with semiprepared foods and microwavable dishes or CDs, respectively, the purchaser to that degree is dependent on the future behavior of the food or disc manufacturer, which is to say on producers/sellers with whom one has no sale/purchase relationship within the overt terms of the initial sale/purchase. At this point the assumption of full freedom and equality between seller and purchaser begins to become not merely theoretically strained but importantly counterfactual. There is *material inequality* within the sale/purchase relationship, with implications for the future sale/purchase relationships into which the parties will enter.⁹

It follows that having purchased the car or the health plan one gains a stake in enjoying its services. Preservation of the stake skews the decision to make certain complementary sales/purchases such as servicing the car or continuing with the health plan. To that precise extent these complementary sale/purchase relationships are *partially constrained*, that is, the purchaser faces an unequal choice in deciding whether to undertake them or not.

In the larger theoretical picture, it is at least arguable that while many of the features of contemporary sale/purchase can be incorporated within *Inst* {1 + 8} we can see via the preceding analyses that the actuarial basis to do so is becoming increasingly attenuated. Moreover, in order to stay within the stipulations of *Inst* {1 + 8} one must make further ad hoc theoretical adjustments, which, to this observer, seem very like those clever epicycles that long preserved the Ptolemaic system of the heavens against the flood of later, apparently discordant evidence. One thus preserves the

parsimony of the neoclassical edifice but paradoxically only by means of extra theoretical improvisations.

It follows that if we allow positive intervals of time into microanalysis then the familiar extrapolation to a general equilibrium model is no longer warranted. Hence, all prices are not mutually/simultaneously determining in principle, and therefore they have only a possibly situational comparability.

Methodologically speaking, by conceiving of sale/purchase as occurring through positive intervals of time, one thereby accepts (and introduces) nonactuarial uncertainty into the microeconomic analysis itself as well as the possibility (indeed, the likelihood) of discontinuous demand functions, hence of discontinuity on the supply side. Under those circumstances, one appears to logically nullify one of the necessary conditions under which a Pareto optimum can hold.¹⁰

Thus, one can characterize modern sale/purchase for at least some classes of goods and services as occupying positive intervals of time within which the sellers retain various proprietary rights in the goods and/or services ostensibly sold. Here the seller/purchaser relationship is modally a many-to-one relationship, sometimes materially unequal, and/or one in which the purchaser/consumer is sometimes under a degree of material constraint. The purchaser often makes advances against the good's or service's use-value and to the same degree accepts liens on his or her future income. Hence, we should speak of sale/purchase not as an exchange relationship but as a distribution in time. The initial sale/purchase relationship is not concluded until all of the expected, normal, and conventional potential services of the good in question have been serially alienated to the buyer. It follows that in general sales/purchases-in-time are not mutually determining with a general equilibrium model in mind, that their prices would be at best only situationally comparable, and that no Pareto optimum is indicated by the analysis.

To bring out the contrast with the propositions of *Inst* {1 + 8}, and for convenience of reference, we can speak of the proposition set *Dur* {1 + 10}, referring, respectively, to *distribution + many-one, partially constrained, not formally equal, serial transfer, advances, liens, nonsystem, nonequilibrium, price relativity*, and *nonoptimal*, as indicated in the narration just concluded.¹¹

Before going on we should observe that sale/purchase between modern firms has some of the features of the consumer purchases we've just discussed, especially that it occurs over some duration in time. For example, air transportation service is a joint product of, say, American

Airlines (organization and human services), Boeing (the aircraft), General Electric (the engines), and one or more communications services (booking and payment). These are not ad hoc or one-off relationships between the firms but are semipermanent and integrated into their business dealings. Boeing, for example, develops follow-on aircraft in continuous consultation with General Electric and the air carriers. These are seldom only occasional, top-level consultations—as in conventional “monopoly” theory—but are carried out continuously by midlevel “tech” representatives (sometimes also called technical observers). As was indicated earlier, I’ve stressed sale/purchase relations with final consumers because of the theoretical importance assigned to the sovereign consumer in the neoclassical theory, not because the relations are so fundamentally different in form from vertical supplier/user relations in industry or horizontal ones involving firms that traditionally cooperate.¹²

What Is the Relationship between the Two Microeconomics?

In looking at this question, we want to put aside their different narratives but at the same time see how their formal/analytical properties serve both to represent and then possibly to investigate “real world” economic behavior. We can limit the discussion to the “interpretation” of *Inst* {1 + 8} and *Dur* {1 + 10}, as in the interpretation of a model. Taking the question in those terms, there are several possibilities.

One can consider *Inst* {1 + 8} as the model or paradigm for microbehavior in general, while in *Dur* {1 + 10} we relax certain stipulations in the interest of not microeconomics per se but a variant interpretation apt to marketing structures for at least the four special classes of goods we’ve commented on and any others that are kindred to them.

Reversing that primacy, we can readily conceive that as the duration of a transaction under *Dur* {1 + 10} narrows—for example, buying a soft drink instead of a PC—the potential richness of the sale/purchase relationships described in micro-in-time gradually simplify. In that procedure, the proposition set *Inst* {1 + 8} could be taken as the subcase of *Dur* {1 + 10} for the condition that the time duration approaches a limit of zero. Only a very slight modification in the formulation of either *Dur* {1 + 10} or *Inst* {1 + 8} would be required to allow for this. To the extent that this time restriction was imposed, it would follow as a simple corollary that every true proposition in economics generated by the proposition set *Inst* {1 + 8} would be generated by the more inclusive proposition set *Dur*

{1 + 10}. Something like this is true—that “something” is clarified later—and to that extent it confirms point (I) presented earlier.

Ideal Types and Conundrums

There is another option that is only superficially similar to the one just discussed. Maybe *Inst* {1 + 8} and *Dur* {1 + 10} are altogether different, with the first representing exchange as an ideal type and the other representing possible “real world” scenarios—one, in the spirit of Schumpeter, a “logic of pure exchange” and the other a more or less economic anthropology of certain concrete kinds of exchange.

In a challenging essay written a few years back, Daniel Bell (1981) argued, in effect, that exchange (or sale/purchase), as it is characterized and represented here by *Inst* {1 + 8}, has an ideal, fictive, or “as if” character and should not be considered—contra, say, Marshall—a set of generalizations about human behavior (Bell 1981: 69, 53, 70, 69, respectively). Bell’s argument is too complex to summarize here, but his conclusion will suffice for our present purposes. He writes that

economic theory should not be taken as a “model” or template of how human beings behave, for these will always be inadequate, but as a “Utopia”, a set of ideal standards against which one can debate and judge different policy actions and their consequences. (80)

This view seems consistent with the idea that proposition set *Inst* {1 + 8} embodies an “ideal type” for exchange in general, which can then be interpreted to fit a variety of real world scenarios, of which *Dur* {1 + 10} is one instance. While this seems to be a convenient and intuitively satisfactory characterization of *Inst* {1 + 8}, and apparently one in accord with Bell’s own views of economics theorizing, it is not as plausible on analytical grounds as a narrative account of it might seem to indicate. At that purely formal level, the differences between proposition set *Inst* {1 + 8} and *Dur* {1 + 10} are at least twofold, and each poses theoretical hurdles to Bell’s view.

For a start, the elemental exchange relationship, to which all exchanges are theoretically reducible, must be formally one-to-one and symmetrical, but the sale/purchase relationship is possibly (and often) many-to-one and nonsymmetrical. The left-hand member of the elemental exchange relationship must be a unit set; in sale/purchase-in-time it need not be and often isn’t. Whatever else may hold between them it is

clear that *Inst* {1 + 8} cannot be an “ideal type” for the buyer/seller relationships characterized in *Dur* {1 + 10}.¹³

The second problem is at once more subtle and farther reaching. I think it is consistent with Bell’s argument to say that of course real buying and selling occurs in real time durations but we can conceptually shrink those durations toward zero time so as to isolate not the real empirical nature of exchange but its analytical character, that is, to focus on the concept of exchange as it functions in the analytical and inferential realm of economic theory per se. Or, in Bell’s words, exchange is a “logical action” (1981: 69), not an empirical representation. In other words, we here conceive zero time as if it were a mathematical limit, and by doing so we can plausibly explicate the theory implicit in proposition set *Inst* {1 + 8}, which itself then functions as an ideal typification for microtheory in general, and so on, as in the mainstream texts.

The problem here is that the limit of a function is not among the values that the function assumes. To say that an exchange approaches zero time is not to say that it occurs in zero time, but unless we allow that it occurs in zero time the interpretation of the model will not be consistent with the formal analytical characteristics of the neoclassical “micro.” That is, proposition subset *Inst* {1, 2, 3, 4} logically requires instantaneous time; small intervals just won’t do. And the truth of proposition subset *Inst* {5, 6, 7, 8}, the crowning achievement of neoclassical microeconomics, hinges on the same stipulation of instantaneous time.¹⁴

There is an analogous problem when one uses the familiar classroom term *perfect competition*. Conceptually, one asserts in this usage that there is a (mathematically continuous) order or scale in which competitive situations can be ranked in terms of a set of conditions that specify what one means by *competitiveness*. Thus, for every two possible exchanges, no matter how complex and multifaceted, there is an algorithm that in principle ranks one as more competitive than the other, less so, or equally so. Hence, all exchanges can be ranked in the order of their greater or lesser competitiveness, and thanks to that order one can identify the most and least competitive situation—but not more! There is no such animal as “perfect” competition on that scale. Perfect competition functions here somewhat like a mathematical limit, that is, one extrapolates to it. Like the mathematical limit of zero time, perfect competition is a value in relation to the scale (or function) taken as a whole, but it is not a value on the scale. The latter is needed for the interpretation of the ideal type of “perfectly competitive economy” to be consistent with the proposition subset *Inst* {5, 6, 7, 8}.

If this argument is correct, as I think it is, exchange in zero time is not

a possible instance of an exchange and neither is perfect competition a kind or species of competition. Forgetting the narratives we make in explaining them, a mathematical limit of zero time and an instanced zero time, or a comparative extrapolation to most competitive and an instanced perfect competition, are not formally interchangeable; their inferential properties are manifestly different, for one will support, and the other won't, the proposition set $\text{Inst} \{1 + 8\}$. These are two of the conundrums mentioned under the second point earlier.

A Further Conundrum

Although it is not readily apparent, this discussion has wider logical significance. The issue has to do with using contrary-to-fact assumptions. Here one has to distinguish between using contrary-to-fact assumptions as an investigative tool and, a quite different case, using them at the level of pure theory, as with zero time or perfect competition.

One might hypothesize, to take a simple instance, that, say, the domestic steel market will exhibit a stable equilibrium in the next quarter and construct a model to express that, taking into explicit account all the seemingly relevant factors such as inflation rates, domestic production capacity and utilization, wages, imports, capital markets, demand for steel, and so forth. That assumption would lead to the expectation (conclusion) that steel prices will remain relatively stable. If, in the event, steel prices were to fall or rise substantially, that would call into question the truth of the initial assumptions. Either one or more of the assumptions were incorrect or some other factor or factors, not hitherto taken into account, were falsifying the initial expectation from the model.

This commonsensical procedure actually reflects a wider point in formal inference, namely, that assumptions held to be true should inferentially generate only true conclusions. Hence, a false conclusion falsifies the set of assumptions, and this provides the signal that the investigator should check out his or her assumptions, not only their truth or falsity but their completeness or incompleteness. All of this is perfectly straightforward and aching familiar.

The situation is different when one is doing purely theoretical work because of an elementary theorem in modern logic. One can readily show that in a formal system of inference the addition of even a single false proposition to a set of assumptions will generate as true (i.e., as a theorem) every proposition expressible in the language of the system. In other words, one will thereby validly generate all the genuine theorems but also

validly generate as theorems all the false propositions and all the propositions whose truth or falsity is indeterminate. The point is that in such a situation the fact that something is validly deduced ceases to bear any import as to its truth.¹⁵

One routinely says in microeconomics that there is no such thing as perfect competition or, here, zero time; that is, a proposition asserting perfect competition or zero time is false. Nevertheless, one just as routinely assumes such propositions and draws inferences from them. But, as in the study of formal inferences, the inferred propositions, however valid the inference, may be true, false, or indeterminate. More or less typically, if the conclusion does not *prima facie* appear to hold, or in order to “cover all bets,” one adds the phrase “all things holding equal” or its equivalent. But those expressions merely assert that there is some set of conditions, not specified in the axioms and claimed to exist in the transformation rules or the rules of interpretation, under which the ostensibly false propositions would be true or that would provide a supplemental assumption or assumptions to make them true.

It is the lack of specification that is at issue here. In the earlier, investigative case one uses the falsity of an inference as a signal indicating that one must reconstruct one’s assumptions and thereby add to our knowledge of the question at issue. That very obviously is what one does not do with expressions such as “all things holding equal” or “*pari passu*.” They in fact insulate the initial assumption about perfect competition or zero time from having to be adjusted under any circumstances. Methodologically and as they stand, the initial false assumption of perfect competition or zero time will always be rescued by “*ceteris paribus*.” That is, the assumption will be made *as if* true and thus will also guarantee the truth of whatever one validly infers from it. This is another conundrum generated, in this case, by Bell’s interpretation of a familiar mode of economics theorizing. It seems plausible to narratively describe such ideal types, as he does, as fictive devices, but their inferential qualities are either positively inconsistent with the inferential purposes that shaped their creation or appear to represent a kind of possibly paradoxical inferential overkill.

What Is Lost in a Micro That Encompasses Real Time?

We’ve already answered this question. Nothing is lost. Or, more technically, while the propositions of instantaneousness function in *Inst* {1 + 8} as the necessary conditions for propositions 5, 6, 7, and 8 (*system, general*

equilibrium, fully comparative prices, and Pareto optimum), one can use analogues of those four characteristics without assuming instantaneous time. There is in general no barrier to assuming that some sets of economic phenomena should be aggregated, treated as a temporary or partial equilibrium with fully comparable prices and exhibiting some sort of optimally efficient allocation of resources. There is no barrier if one is in the investigative mode, that is, prepared to test and adjust those assumptions in accordance with their consonance with their implicates (i.e., empirical or analytical findings). Obviously, specification of time is key here, and, with different investigations in mind, one may assume a positive time interval to be as long or as short as is appropriate. A concept of zero time is never needed in actual investigative work; an assumption that some phenomena are invariant for a specified duration is more than adequate and serves methodologically all of the normal theoretical or investigatory uses that one requires from an assumption of partial or even general equilibrium.

But to say this is to reiterate the argument that *Dur* {1 + 10} provides an inferential apparatus for micro in general and that a modified *Inst* {1 + 8} represents the special subcase in which one holds invariant not time per se but changes over time in the operative factors in a problem under investigation.

That understanding of the relationship of the two micros has the additional merit of being conundrum free, which, as the earlier discussion seems to indicate, is not the case if we assume that *Inst* {1 + 8} is the appropriate model for microeconomics in general, even when we interpret it via the sort of methodologically sophisticated theory of ideal or fictive types of economic “logical actions” that Bell proposes.

The microeconomics currently dominant claims that it subjects a particular area of human behavior to scientific analysis, but, if my arguments hold, it is strained both as science and as analysis. On the other hand, a microeconomics rooted in the conception of sale/purchase states-in-time has stronger expressive qualities. To give a trivial illustration, which we’ve already addressed from another vantage point: if, where appropriate, we allow the duration of the some sale/purchase states to approach zero, we can incorporate without change every conundrum-free proposition of neoclassical microeconomics.¹⁶

Free Markets and Free Society?

The dominant theory of consumer demand has been used in intellectual support of a genre of social/political theories of which the archetype is

Karl Popper's Open Society. By this he means a society characterized—analogueous to “the market”—by spontaneous, self-correcting competition for influence from many, many individuals, subgroups and institutions so that none of them—no political party or state apparatus, for example—can exercise a monopoly of power or even a significant measure of control over the others.

Popper himself has written, approvingly, that “only a minority of social institutions are consciously designed while the vast majority have just ‘grown’ as the undersigned results of human action” ([1957] 1967: 65). This position seems to me to be grossly inadequate in a society whose labor force is socially constructed by a vast education industry and by, say, the media, hence whose demand (and therefore many other social) characteristics cannot be conceived as unchanging and of purely “natural” or spontaneous origin.

Hayek, too, maintains “The fundamental principle that in ordering our affairs we should make as much use as possible of the spontaneous forces of society.” He continues, in an oft-cited passage, stating that “the limits of our powers of imagination make it impossible to include in our scale of values more than a sector of the needs of the whole society . . . since, strictly speaking, scales of value can exist only in individual minds. . . . It is this recognition of the individual as the ultimate judge of his ends, the belief that as far as possible his own views ought to govern his actions, that forms the essence of the individualist position” (1944: 17, 59, respectively). But to accept this as a political position one must also imagine that the “individual” in question has a socially and historically transcendent character. He or she (“it,” really), must be conceived as not in any fundamental sense being influenced by “its” place in the economy and society.

Unlike Mr. Robinson Crusoe, who daily faced a fictional natural wilderness, persons who live in modern societies are surrounded by physical objects, material environments, and social relationships that predate their own lives and today are almost wholly of human fabrication. For example, virtually every consumer item now in everyday use has been invented and its societywide utilization brought about by the action of identifiable corporate firms. Moreover, we live within social arrangements that Gramsci termed “Americanism,” a kind of social, economic, and cultural system in which a person's fate and fortune are decided not by nature, tradition, or premodern social and other structures but by his or her role in the economy or, for the young, by their prospective place in it.¹⁷

Can we speak, like Popper and Hayek, of a “society” existing apart from and more or less autonomous with respect to the modern economy? In

our society it does appear that spontaneous phenomena are in decline and socially constructed ones on the increase. In my view, the transcendent economic “individual” of the Jevonian/Walrasian variety is not only poor science but a blinding fiction.¹⁸

Clearly, we’ve raised a very large question. What is the limit, if any, to this remaking of society in the name of property, if so we may term it? In some past time it did seem empirically plausible to treat society as having a largely spontaneous character subject to multifaceted and indecipherable sources of change. Then Popper’s and Hayek’s views could be read as an extrapolation of experience, namely, that the history and evolution of different human societies tended of their own accord to purge, alter, or encourage, as the case may be, the sort of human institutions that were found within them. “Society,” that mysterious, infinitely faceted, rich, obscure reality, was conceived as an “all” more potent by far than the sum of its parts. But this no longer seems to be a supportable view.

As Gramsci’s concept of “Americanism” hints, there is a totalizing influence within modern society that stems from its economic activities. If there are limits to this “Americanist” totalizing, we have yet to see them. But what follows? Surely to view the future as populated with corporately fabricated people is at least as unattractive (and more plausible) than to see the future in the hands of massed Brown Shirts or ranks of obedient Kom-somols. Moreover, if this is even an approximately correct reading of the trajectory of the present, what if anything can be done to prevent, deflect, or even moderate it if society, that once infinite reservoir of difference and variety, is being overwhelmed by all-consuming property?¹⁹

This reflection points up the social and political imperative to develop an economics, especially a microeconomics, of greater and more benevolent realism. The social and political implications of that altered economic science cannot be explored within the present study, but we should remain aware of the “deep” social and political importance of the theoretical and methodological issues to which we now return.