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ABSTRACT
Dominion of the scarcity principle as the basis for economic analysis is virtually absolute in teaching the introductory course in economics. This supremacy is neither valid nor desirable. Two compelling alternative foundational concepts for economics are *uncertainty* and *inequality*. These alternatives lead to vastly different implications for the development of economic analysis than scarcity and vastly different implications for the teaching of economics.

KEYWORDS
Inequality; scarcity; stratification economics; uncertainty; unlimited wants

JEL CODES
A10; A11; A13; A20; B10; B20; B50; Z13

Scarcity, customarily, is identified as the cornerstone concept of economics (Raiklin and Uyar 1996). It establishes a particular frame of reference and implies a singular, unified approach for the field. The ubiquity of the scarcity principle as the launching point for the discipline proceeds in our teaching as an unquestioned eternal truth.

Lionel Robbins' (1935, 15–16) introductory lectures at the London School of Economics always opened with the assertion that scarcity is the defining characteristic of economics:

> Economics is the science which studies human behavior as a relationship between ends and *scarce* means which have alternative uses. (emphasis added)

> Economics is not about certain *kinds* of behavior [but about] the form imposed by the influence of *scarcity*. (emphasis in original)

Robbins' message reverberates through subsequent years, particularly in the textbooks that provide students with their first exposure to the field.

Paul Samuelson's *Economics*, the most widely sold textbook in its multiple editions, maintained Robbins' message. For example, the 19th edition, coauthored by Samuelson and William Nordhaus (2010), informs its readers in bold print on its fourth page:

> ***Economics*** **is the study of how societies use scarce resources to produce valuable goods and services and distribute them among different individuals.** (emphasis in original)

In the glossary, Samuelson and Nordhaus (2010, 673) define an economic good as "scarce" in the sense "not that it is rare but only that it is not freely available for the taking. To obtain such a good, one must either produce or offer other economic goods in exchange." Ascribing scarcity to the status of a "law," they (Samuelson and Nordhaus) assert it embodies, "The principle that most things that people want are available in limited supply.…Thus goods are generally scarce and must somehow be rationed whether by price or some other means" (673). For Samuelson and Nordhaus, economic goods are juxtaposed against "free goods," those so "abundant" it is costless to procure them. Free goods have a market price of zero (662–63).

Again, on page four, Samuelson and Nordhaus contrast the world of scarcity, the world in which they say we live, with "an Eden of affluence," a world "where all goods are free, like sand in the desert or

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seawater at the beach." Under those conditions, "All prices would be zero, and markets would be unnecessary. Indeed, economics would no longer be a useful subject." Instead, they argue, we live "in a world of scarcity, full of economic goods."

In a 2009 interview on *PBS News Hour*, when the journalist Paul Solman asked Samuelson, "Why do economists talk about scarcity, since we are the most abundant economy in history?" Samuelson's response indicated that the concept was organic to his personal understanding of economics as a scholarly project:

> Well, human wants and human needs are pretty much insatiable. If we were condemned, you and I, to go back for a day and live in 1850—it's only 150 years ago, that was the peak of Queen Victoria on the throne, great progress being made—and if we were put down in the aristocracy we would feel incredibly deprived. Once you've been in Paree, World War soldiers, how do you get them back on the farm? You think, if you ask people, what would it take to make you happy economically, they say a 25% increase in pay. And they're right. For about three months. (*PBS News Hour* 2009, online)

While Samuelson generally was viewed as a "liberal" voice in economics, although hardly on the left, his notion of what makes economics "economics" is no different from the position taken by "conservative" economist Thomas Sowell in the first chapter of his introductory text, *Basic Economics*. Sowell (2015, 3) even echoes some of the themes in Samuelson and Nordhaus' *Economics* when presenting what he takes as the essential foundation for economics as a discipline:

> The Garden of Eden was a system for the production and distribution of goods and services, but it was not an economy because everything was available in unlimited abundance. Without scarcity there is no need to economize—and therefore no economics.

He then cites "a distinguished British economist named Lionel Robbins" as the source of "a classic definition of economics," highlighting in bold type, "Economics is the study of the use of scarce resources which have alternative uses." Sowell (2015, 4) adds the following comments to reinforce the insatiability premise underlying the notion of scarcity:

> What does 'scarce' mean? It means that what everybody wants adds up to more than there is.
>
> There has never been enough to satisfy everyone completely.

Another example of the complete identification of economics with scarcity appears in the Case, Fair, and Oster (2012) text *Principles of Economics*. In the second chapter, titled, tellingly, "The Economic Problem: Scarcity and Choice," they write:

> This entire chapter *is* the definition of economics. It lays out the central problems addressed by the discipline and provides a framework that will guide you through the rest of the book. The starting point is the presumption that *human wants are unlimited but resources are not*. Limited or scarce resources force individuals and societies to choose among competing uses of resources—alternative combinations of produced goods and services—and among alternative final distributions of what is produced among households. (25, emphases in original)

Even some texts written by heterodox economists are susceptible to giving primacy of scarcity in structuring the fields of economics. For example, while the preceding section of the text provides a refreshing survey of competing approaches in economics, the seventh chapter of Riddell et al.'s (2011) *Economics: A Tool for Critically Understanding Society* that opens the section of the book called "Microeconomics" is titled "Scarcity: You Can't Always Get What You Want."

Moreover, a variety of Internet-based sites providing an introduction to economics give scarcity pride of place. Here are just a few examples:

- A *National Geographic* encyclopedic entry reads: "One of the defining features of economics is scarcity, which deals with how people satisfy unlimited wants and needs with limited resources." (*National Geographic* n.d., online)
- The Lumen Learning introductory instructional article on economics opens with: "The resources that we value—time, money, labor, tools, land, and raw materials—exist in limited supply. There are simply never enough resources to meet all our needs and desires. This condition is known as scarcity." (Lumen Learning n.d., online)

- *Investopedia* (2021, online) tells its readers: "Scarcity refers to a basic economic problem—the gap between resources and *theoretically* limitless wants." (emphasis added)
- "Scarcity is the foundation of the essential problem of economics: the allocation of limited means to fulfill unlimited wants and needs." (Beattie 2022, online)

Scarcity unraveled

When economics positions scarcity as its point of origin, it necessarily gives great emphasis to a set of concepts that follow scarcity's lead, all driven by the basic premise that societal wants always exceed society's capacity to meet those wants. If we dispense with the preeminence of scarcity, we diminish the emphasis on concepts we teach our students mechanically, virtually by rote: choice as the central human activity (consider the cereal aisle of any major grocery store), rationing, tradeoffs, tastes, preferences, and opportunity cost.

We also dispense with the irritating question used as an obstacle to any new public spending, especially expenditures promising significant transformative change, "How are you going to pay for it?" The latter question is a constant, despite the fact of the U.S. government's vast anti-recession and anti-pandemic spending without raising taxes.

Scarcity presents as a natural, universal, and permanent condition. It is a condition informed by the vision of Classical political economy's diminishing returns pessimists, Ricardo and Malthus. Their perspective, in turn, frames the contemporary Club of Rome limits to growth perspective.[1]

A critical dimension of the concept is the premise of non-satiation of desire, which, presumably, is the reason the *Investopedia* definition inserts the term "theoretically" in their definition of scarcity. However, we can conceive of societies with limited wants. The anthropologist Marshall Sahlins (1972) argued that there were several pre-industrial societies where wants were so limited that a great deal of time could be devoted to activities other than the labor required to enable a community to sustain itself. He described these as the "original affluent societies."

Indeed, a condition of unlimited wants can be viewed as contextual, even a product of social manufacture to produce infinitely expanding desires. Our "theoretically" limitless wants can be engineered. John Kenneth Galbraith (1967) raised a firestorm in the profession when he argued that advertising could create a "dependence effect," with suppliers driving demand by want creation.[2] The reaction to Galbraith's hypothesis may have been attributable, at least in part, to the adverse implications for the cornerstone assumption, scarcity.

If wants can be created, the hedonistic imperative of wants exceeding available resources need not be a natural, universal, nor a permanent state of affairs. While asceticism is no more attractive than the hedonistic imperative that undergirds scarcity, the existence of communities organized around the principles of frugality and simplicity indicates that scarcity need not shape lived experiences in all societies. The norms of social emulation need not be a perpetual race to "keep up with the Joneses," especially when the Joneses have no stopping point.

Indeed, Samuelson and Nordhaus (2010, 169–86) acknowledge that scarcity can be contrived in their treatment of firm behavior under monopolistic conditions. Firms with monopoly power can reduce the availability of their product intentionally to enhance their profit position (also see Porter [1965]).

Scarcity as a function of infinite wants is socially constructed. It need not apply in all times and all places—and even if it does, we still can question the legitimacy of building social analysis (and identifying ideal types of societies) on the pillar of limitless desire and the inability of humans to reach satisfaction.

Less common is the challenge to the scarcity problem on the grounds that resources could be adequate to meet wants. This broaches the realm of science fiction, although in a world with three-dimensional copiers, artificial intelligence, microelectronics, and nanotechnology, who knows what may be possible in either a utopian or dystopian future.

The world of 2030 that Keynes envisioned in a commentary originally published in 1930 in the *Nation and Atheneum* was one in which, at minimum, "basic needs" would be met for everyone:

> Now it is true that the needs of human beings may seem to be insatiable. But they fall into two classes—those needs which are absolute in the sense that we feel them whatever the situation of our fellow human beings may be, and

> those which are relative in the sense that we feel them only if their satisfaction lifts us above, makes us feel superior to, our fellows. Needs of the second class, those which satisfy the desire for superiority, may indeed be insatiable; for the higher the general level, the higher still are they. But this is not so true of the absolute needs—a point may soon be reached, much sooner perhaps than we are all of us aware of, when these needs are satisfied in the sense that we prefer to devote our further energies to non-economic purposes. Now for my conclusion, which you will find, I think, to become more and more startling to the imagination the longer you think about it.
>
> I draw the conclusion that, assuming no important wars and no important increase in population, the economic problem may be solved, or be at least within sight of solution, within a hundred years. This means that the economic problem is not—if we look into the future—the permanent problem of the human race. (Keynes 1930, 3-4).

Note that in the final paragraph, Keynes also embraces the view that "the economic problem" is determined by scarcity. However, his own work suggests an altogether different foundation for "the economic problem," indicating that it will persist beyond the stage of scarcity. The competing Keynesian option for the foundation of economics is uncertainty (Darity and Horn 1993).

In what follows, I advance two alternatives as cornerstones for the field of economics, first, uncertainty, and second, inequality.

Uncertainty instead of scarcity

Critics of the scarcity principle face the charge that they must be proclaiming the fundamental social condition is the opposite condition of permanent abundance (Porter 1965). Yet abundance is no less contextual and contingent than scarcity. Sahlins' (1972) hypothetical "original affluent societies"—where wants were so limited that they lived under "abundance"—were not necessarily communities of plenitude. Lives still might have been, á la Thomas Hobbes, "nasty, brutish, and short" (*Oxford Reference* n.d., online), but they were not plagued by scarcity.

In Keynes' prognostication for 2030, we no longer will confront the conventional "economic problem." For Keynes, scarcity is not an eternal human circumstance. However, for Keynes, something else is omnipresent in human societies: uncertainty. The Keynesian replacement for decision-making under the pressure of scarcity is decision-making under uncertainty.

To be clear, Keynes had in mind *subjective* rather than *objective* uncertainty. The latter treats future outcomes as probabilistic, reducible to the odds associated with each stage of games of chance, and transforming tomorrow into a set of certainty equivalent predictions. The former, the object of Keynes' concerns, involves an unknowable future where decisions have to be made without the ability to calculate the odds of the outcomes:

> By "uncertain" knowledge, let me explain. I do not mean merely to distinguish between what is known for certain and what is only probable. The game of roulette is not subject, in this sense, to uncertainty, nor is the prospect of a Victory bond being drawn. Or again, the expectation of life is only slightly uncertain. Even the weather is only moderately uncertain. The sense in which I am using the term is that in which the prospect of a European war is uncertain, or the price of copper and the rate of interest twenty years hence, or the position of private wealth-owners in the social system of 1970. About these matters there is no scientific basis on which to form any calculable probability whatever. We simply do not know. (Keynes 1936, 213–14)

Nevertheless, "[t]he necessity for action and decision" compels us to make commitments on the basis of expectations that are not formed by a "calculus of probability … supposed to be capable of reducing uncertainty to the same calculable status as that of uncertainty itself" (213–14).

In his *General Theory,* Keynes (1936, 149–50) focused squarely on the dark veil masking tomorrow encountered by those making the decision to invest:

> The outstanding fact is the extreme precariousness of the basis of knowledge on which our estimates of prospective yield have to be made. Our knowledge of the factors that will govern the yield of an investment some years hence is usually very slight and often negligible. If we speak frankly, we have to admit that our basis of knowledge for estimating the yield ten years hence of a railway, a copper mine, a textile factory, the goodwill of a patent medicine, an Atlantic liner, a building in the City of London amounts to little and sometimes to nothing, and even five years hence.

How are expectations formed in an environment of subjective uncertainty? Keynes (1936, 152–53) argues that humans adopt "conventions" to cope with an unknowable future, highlighting three types:

1. We assume that the present is a much more serviceable guide to the future than a candid examination of past experience would show it to have been hitherto. In other words we largely ignore the prospect of future changes about the actual character of which we know nothing.
2. We assume that the existing state of opinion as expressed in prices and the character of existing output is based on a correct summing up of future prospects, so that we can accept it as such unless and until something new and relevant comes into the picture.
3. Knowing that our own individual judgment is worthless, we endeavor to fall back on the judgment of the rest of the world which is perhaps better informed. That is, we endeavor to conform with the behavior of the majority or the average. The psychology of a society of individuals each of whom is endeavoring to copy the others leads to what we may strictly term a conventional judgment.

While mainstream economics has devoted inordinate attention to the development and refinement of the rational expectations mechanism, predicated on complete, albeit probabilistic, knowledge of the future, the Austrian School largely has shared Keynes' view that the pertinent notion of uncertainty involves a tomorrow shrouded in mystery. However, Austrian analysis frequently takes the position that market processes can contain the associated difficulties (Manish and Jones 2017), particularly because subjective expectations about tomorrow are incorporated into today's prices (e.g., Rothbard 1993). From Keynes' perspective, the Austrians simply are adopting the second of his three conventions.

Frank Knight (1921) even proposed the specific market for insurance could handle the risks involved with investment under subjective uncertainty.[3] But Keynes' third convention, conformity, leads to the creation of a genie that cannot be forced back into the bottle—the genie of speculation.

Under a regime where everyone is trying to emulate everyone else, some will break with the norm and make their investment decisions based upon assessing and forecasting the psychology of the market instead. Keynes' (1936, 154) remarkable newspaper beauty contest metaphor captures the challenge for the devoted speculator:

> Professional investment might be likened to those newspaper competitions in which the competitors have to pick out the six prettiest faces from a hundred photographs, the prize being awarded to the competitor whose choice most nearly corresponds to the average preferences of the competitors as a whole; so that each competitor has to pick, not those faces which he himself finds prettiest, but those which he thinks likeliest to catch the fancy of the other competitors, all of whom are looking at the problem from the same point of view. It is not of choosing among those which, to the best of one's judgement, are really the prettiest, nor even those which average opinion genuinely thinks the prettiest. We have reached the third degree where we devote our intelligence to anticipating what average opinion expects average opinion to be. And there are some, I believe, who practice the fourth, fifth, and higher degrees.

Further, Keynes (1936, 159), answering his own rhetorical question, indicated why the dominance of speculation matters:

> Why does speculation undermine the efficacy of the market system to manage subjective uncertainty? It is because of the recurrent, deleterious economy-wide impact of speculation in destabilizing financial markets. The consequence is a collapse in asset prices and widespread recession or depression.

If economic analysis begins with subjective uncertainty, potentially, it can lead to the study of the adoption of coping conventions, their fragility and durability, and their consequences for our lives, particularly their *macroeconomic* consequences. Indeed, we may no longer need stress choice-theoretic microfoundations for macroeconomics at all. Furthermore, we might be led in the direction of thinking about the importance of imagination, creativity, and *surprise* (rather than simply "shock") as we seek to wrestle with a world with an impenetrable tomorrow (Shackle 1972). Uncertainty is a powerful alternative to scarcity as an inception for economics.

Inequality instead of scarcity

Inequality as an alternative point of origin for economics is inspired, in large measure, by the work of Amartya Sen (1973, 1992, 2009). Disparities in human societies are universally evident, more often than not, due to inequities in power and resources.

Indeed, we can conceive of inequality as a driver of scarcity insofar as a situation of imparity may impose "scarcity" on a subset of a community, usually a numerical majority, while the numerical minority experiences "abundance." Here, scarcity is a contrived product of social policy and practice, creating *deprivation* for some and not for others.

An economics based upon inequality and all of its ramifications as an alternative to an economics based upon scarcity and all of its ramifications leads to establishing important distinctions between the measure and sources of disparities across individuals, households, ethnic, racial, and gender groups, regions, and nations.

Group-based inequalities, in particular, lead to consideration of the salience of unfair discrimination. Under inequality-based economics, discrimination becomes a major topic rather than a subject buried in the module of a principles course that provides the student's first exposure to labor economics. The assertion that differences in group-based outcomes are due to differences in behavior and practices (Sowell 2015) can be confronted directly with the contrary view that differences in group outcomes are due to (inequitable) differences in treatment (Darity and Mason 1998). Moreover, the emerging subfield of stratification economics (Darity 2005; Lewis, Asare, and Fields 2021) can take a lead role in the further study of group-based inequality.

The inequality principle as the foundation for economics also will reorient the emphasis and content of macroeconomics. The functional distribution of income—the shares of national income going to physical capital, financial capital, the working class, and professional managerial income—can be given greater weight in understanding the relationship between distribution and both the business cycle and economic growth. In turn, this can lead to renewed attention to the analytical approach of classical economics' emphasis on the social "surplus"—the "production and distribution of the social net product, where the latter is understood to be net of necessary labor consumption as well as necessary inputs in the more usual modern sense" (Aspromourgos 1998, 159).

In addition, inequality as the fundamental principle for economic analysis affords a basis for considering the impact of macroeconomic policy on subgroups of a society, e.g., the effect of accommodative or tight monetary policy on the degree of racial inequality or the effect of income tax policy on the degree of gender disparity. The consequences of macroeconomic outcomes on social subgroups also can be an object for study, e.g., the disproportionate impact of a recession on Blacks or Latinos.

It also will be possible to shine a spotlight on effects running in the reverse direction, including the causal impact of racial or ethnic cleavages on macroeconomic performance. For instance, whether employment discrimination against Black Americans affects overall productivity can become an important question to explore, rather than treating it as a mere sidebar to teaching the first course in macroeconomics.

Finally, economics as inequality studies means the full integration of philosophical questions about the nature of justice, fairness, and equity into the core of the field. As one illustration, it would provide an entirely fresh, critical context for teaching the Pareto principle, which now stands as an ethical barrier to redistributive policies. Recognizing that any policy with a redistributive consequence will benefit some and impose losses on others must lead to a deep analysis of standards for policy change that go beyond the Pareto criterion.

This long has been Sen's project, well represented by his 2009 book, *The Idea of Justice.* It is a project well worth pursuing.

Implications for pedagogy

Moving economics from a unitary foundation on the scarcity principle means moving economics from a single frame of reference. Students no longer will be taught the study of economics means solely learning an analytical framework based upon utility maximization, the laws of supply and demand, and the individual as the key agent of social action. They will learn, instead, that scarcity-anchored economics does not exhaust the field. They will learn that "neoclassical" economics (or the "marginalist" tradition) is only one of the multiple approaches to understanding social production, consumption, and the distribution of wealth and well-being.

A new mode of instruction will center on giving students a comprehensive sense of how these multiple approaches have evolved over time and the reasons why different approaches achieve supremacy at different points in time. The introductory economics class should begin with a careful account of the history of the field. This account should be in the spirit of Krishna Bharadwaj's (1978) analysis of economics' move from the classical school's emphasis on growth and the functional distribution of income to the neoclassical school's emphasis on markets as allocators of *scarce* goods and services.

Per Krishna Bharadwaj (1978), transitions in dominant approaches did not occur merely because newer developments corrected the flaws in older theoretical frameworks and necessarily meant progress in economic analysis. Transitions often occurred because the social context produced political pressure to suppress approaches that raised vexing questions in the first place, particularly about the legitimacy and the stability of the prevailing economic system. For example, the surplus approach that emerged from the Classical political economy (Aspromourgos 1998) pointed directly at a class cleavage between capital and labor, a focus not desired by 19th-century proponents of the rising industrial order (Bharadwaj 1978).

Recognition that economics need not mean just one thing—the ways in which human communities address an alleged ubiquitous problem of scarcity—opens the door for an exciting comparative analysis of where different starting spots can lead. The introductory class will give students a rich sense of point and counterpoint driven by contrasting perspectives on the foundational premise for economics.

Economics can transform into a richer and more "social" social science once freed from the manacles of the scarcity principle, especially when there are robust replacements. As argued here, the uncertainty principle and the inequality principle are viable alternatives.

The time is long overdue for building a new "Basic Economics" that recognizes there is no one type of economics. The challenge for economic education is having instructors prepared to navigate their students skillfully and accurately through more than one way of doing economics. Given the richness of insights drawn from understanding multiple approaches to economics, it is a challenge well worth meeting.

Notes

1. The prevalence of scarcity as a guiding principle for economics has led many to assert that economics has been dubbed "the dismal science" precisely because of that principle. But the phrase "the dismal science" has origins unconnected to the scarcity principle. It was a derogatory term applied to economics in the mid-19th century by Thomas Carlyle who opposed its laissez-faire, free market orientation, particularly with respect to mobilization of labor. Carlyle favored *enslavement* of Blacks in the West Indies over the hiring of free labor to perform the work required in colonial plantation agriculture (see Dixon 2006).
2. Anderson and Dunn (2006) provide a compelling illustration of Galbraith's want-creation hypothesis in the practices of the corporations making tobacco products.
3. For a valuable taxonomic treatment of categories of risk and uncertainty, see Hoffman (2018).

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